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Judicial Impartiality and Artificial Intelligence from the Perspective of Article 6 of ECHR

[Bezstronność sądu a sztuczna inteligencja z punktu widzenia art. 6 EKPC]

Abstract

Recent developments in artificial intelligence (AI) have introduced systems that analyze legal information, identify correlations across documents, and support decision-making. New possibilities for automation present opportunities and challenges for the administration of justice. These possibilities raise complex questions about the compatibility of the deployment of AI in courts with fair trial guarantees under the European Convention on Human Rights (ECHR).

This article examines whether and under what conditions the use of AI systems in courts may create legitimate doubts as to a court's impartiality within the meaning of Article 6 (1) of the ECHR. Drawing on the case law of the European Court of Human Rights, a distinction was made between the subjective and objective elements of impartiality, and an analysis was carried out of how the use of AI in the decision-making process might affect each of them.

The paper argues that the use of AI in courts is a question of confidence in the justice system, and perceived impartiality may stem from limited transparency about the role of AI in decision-making, insufficient oversight, and excessive reliance on AI outputs.

Keywords: artificial intelligence, impartiality, legitimate doubts, right to a fair trial.

Introduction

The use of digital technologies in European courts and tribunals is not a new phenomenon. In previous decades, the courts began using computers, legal databases, videoconferencing systems, and various digital tools to sup-

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port the administration of justice and the work of judges. However, earlier stages of court digitalization¹ did not significantly affect the impartiality of the court because these tools did not directly impact the decision-making process.

The proliferation of artificial intelligence (*hereinafter* “AI”) systems offers a variety of possibilities to automate court activities, including assistance in the decision-making process by analyzing information, determining conflicting points in pleadings, and pointing to case-law, and drafting the decision. The automation of the decision-making can span from a research assistant role to full automation.² It is unlikely that autonomous³ AI systems will be introduced in European courts and tribunals, as their use may be incompatible with Article 22 of the General Data Protection Regulation (*hereinafter* “GDPR”) and Article 14 of the EU Artificial Intelligence Act (*hereinafter* “AIA”). However, the widespread use of AI systems in a supporting role may only be a matter of time.

The courts in a democratic society must inspire public confidence.⁴ An independent and impartial court is the core of the right to a fair trial and constitutes a component of the principle of the rule of law. The use of an AI system, even in an assisting role, should not interfere with fair trial rights guaranteed by the European Convention of Human Rights (*hereinafter* “ECHR”).

The risks associated with the use of AI for impartial and independent decision-making were acknowledged for quite some time. In 2018, the European Commission for the Efficiency of Justice (*hereinafter* CEPEJ) after conducting a study on the impact of AI systems on judiciary, adopted the first-ever European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their environments, which included five key principles for the use of AI, among which, the principle of transparency, impartiality, and fairness.

The right to an impartial court denotes the absence of bias and prejudice.⁵ According to the case-law of ECtHR, impartiality can be tested in various ways, but primarily a distinction should be made between its subjective and objective elements.⁶ These aspects are functionally interconnected.⁷ As courts move forward to the development, integration, and use of AI systems, it becomes necessary to assess whether a judge’s reliance on such tools could give

¹ For example, automation of registers, electronic filing systems, and remote hearings.

² T. Sourdin, *Judges, Technology and Artificial Intelligence: The Artificial Judge*, Elgar Law, Technologies and Society, Cheltenham 2021.

³ By “autonomous” it is understood an AI system that is capable of making judgments without human supervision.

⁴ Judgment of the ECtHR of 15 October 2009, *Micallef v. Malta*, application no. 17056/06, § 98.

⁵ Judgment of the ECtHR of 1 October 1982, *Piersack v. Belgium*, application no. 8692/79, § 30.

⁶ *Ibid.*, § 30; Judgment of the ECtHR of 12 January 2016, *Miracle Europe KFT v. Hungary*, application no. 57774/13, § 54.

⁷ Opinion of Advocate General of 11 May 2006, *Graham J. Wilson v. Ordre des avocats du barreau de Luxembourg*, C-506/04, ECLI:EU:C:2006:31, § 75.

rise to legitimate doubts about the subjective or objective element of judicial impartiality. This article explores whether, and under which conditions, the use of AI may raise such concerns for the purposes of the meaning of Article 6 (1) of the ECHR. The article consists of three parts, starting with addressing the reasons and forms of AI integration in courts, moving to an analysis of each element of impartiality in turn.

The Rationale and Functional Models of AI in Courts

The increasing interest in AI in the justice system relates to issues of organisation and administration of justice. As courts confront expanding caseloads, procedural complexity, and growing necessity for efficiency, the introduction of AI technologies is increasingly viewed as a solution. The rationale for the integration of AI systems in courts is multifaceted and includes such reasons as pursuing institutional objectives and societal changes.

There are internal and external factors that can influence the consideration of deploying an AI system in courts. Internally, such initiatives may be driven by efforts to digitalize courts, reduce the duration of proceedings and workload of judges, lower costs, and improve the quality and consistency of judgments. Externally, the pressure to integrate AI systems may come from legal professionals who already use various AI tools to prepare pleadings. This assumption could be compared and supported by an example of the development and widespread use of legal databases. When legal databases were created and became commonly used, they changed the format, length, and structure of pleadings. The structure of pleadings lost “the hierarchical order” of presentation of the arguments and became less principle-oriented and more case-based.⁸ Consequently, judges had to invest additional time and effort to engage with case-law cited by parties who relied on these databases. Similarly, large language AI models (*hereinafter* “LLM”) can produce very long and detailed texts that could serve as the basis for pleadings submitted to courts.⁹ Lengthy submissions require judges to devote considerable time to analyzing and extracting the essential information from case files. In this respect, AI systems could offer a supportive role to identify and summarize evidence and law, and even draft a judgment.

⁸ European Commission for the Efficiency of Justice (CEPEJ), Guidelines on how to drive change towards Cyberjustice, CEPEJ-GT-QUAL, 7 December 2016, § 44.

⁹ A large language model (*hereinafter* “LLM”) is a “type of artificial intelligence model that has been trained through deep learning algorithms to recognise, generate, translate, and/or summarise vast quantities of written human language and text”. European Commission, Knowledge Center on Translation and Interpretation, available online at <https://knowledge-centre-translation-interpretation.ec.europa.eu/en/news/what-large-language-model>.

Logic-based and machine learning AI systems could be deployed in the court to support decision-making in the case. Logic-based system is an AI system that consists of an algorithm, source code, and a knowledge base. It is designed and programmed on the basis of the rules of logic. It produces the output by finding correlations between different elements following the programmed algorithm.¹⁰ The particular feature of the logic-based system is that the algorithm, source code, and data can be verified.

Recently, the greatest interest has been devoted to the second type of AI systems – machine learning AI systems. Unlike the previous generation of logic-based systems, machine learning systems have the ability to process large volumes of information, make inferences from data, learn, and generate recommendations and decisions.¹¹

The machine-learning system consists of a neural network (algorithm) and data. Machine learning system is categorized as “black box” or “opaque systems” in the sense that it is difficult to construct a step-by-step pattern or logic of the decision-making process of such systems. The cause of this difficulty lies in the architecture and design of the system. It processes information against billions of different parameters that make the process of determining the decision-making path complicated.¹² In machine learning systems, differently from logic-based systems, the approach to understanding the decision-making process shifts to analyzing the data it is trained on and testing its output.

According to Article 3 of the EU AIA, read in conjunction with Annex III (8a), both logic-based and machine-learning systems are considered to be high-risk AI systems if they are being used to assist the court in “researching and interpreting facts and the law and in applying the law to a concrete set of facts.”¹³ If the AI system is developed and integrated for such purposes, the court and the state body responsible for the integration and management of such tools have to implement guarantees and comply with obligations under Chapter III of the EU AIA. Most of these obligations ensure that an AI system functions properly and is free of errors, and developers and deployers of AI systems put in place quality,¹⁴ risk management,¹⁵ and cybersecurity meas-

¹⁰ G. Sartor, F. Galli, *AI Approaches to Predictive Justice: A Critical Assessment*, ‘Humanities and Rights Global Network Journal’ 2023, vol. 5, 2; J. V. Fernandez, *Artificial Intelligence in Government: Risks and Challenges of Algorithmic Governance in the Administrative State*, 30 Ind. J. Global Legal Stud. 2023, 65, p. 75.

¹¹ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) (hereinafter, AIA), 12 June 2024, OJ L, 2024/1689, Article 3.

¹² A. Christian, L. Biedebach, A. Küpfer, and M. Neunhoffer, *The Role of Hyperparameters in Machine Learning Models and How to Tune Them*, ‘Political Science Research and Methods’ 2024, 12, 4, pp. 841–848.

¹³ AIA, Annex III (8a).

¹⁴ AIA, Article 17.

¹⁵ AIA, Article 9.

ures.¹⁶ Some of the obligations, such as fundamental rights impact assessment¹⁷ and effective human oversight,¹⁸ can also strengthen the independence and impartiality of the judicial system in relation to impact of AI on the decision-making process.

An AI system can be used as an assistant in two distinct roles. It can act as a “court officer,” ensuring the procedural efficiency of the court, similar to a court clerk or a registrar’s administrative assistant. In this role, the AI system can support the justice system, for example, in document management, legal research, fact-finding, and drafting simple decisions.

The legal system and procedural rules of a particular country may define the role and functions of court administrative personnel. There is also some research on the role of the court registry and its impact on the work of international courts.¹⁹ For example, at the ECtHR, registry lawyers “enjoy considerable discretion in how they conduct their activities.”²⁰ Their general instructions outline their work, which focuses on facilitating case processing. Their main role is to ensure continuity and coherence of case law.²¹ The AI system can take over part of this role in the court.

An AI system can also act as an “expert” that is capable of providing a substantive evaluation of a case and delivering an informed opinion, similar to the functions of the “Advocate General,” a body known in some European legal systems and also employed by the Court of Justice of the European Union (hereinafter “CJEU”). The Advocate General at the CJEU offers reasoned opinions that are not binding but carry persuasive authority. Similarly, the AI system can be used to provide substantive legal analysis, evaluation, and recommendations on the decision that could inform the judge without it being a formal decision-maker.

The analogy with court officers and experts describes two distinct functional models of AI in court – one is instrumental and the other is advisory. The comparison illustrates the functional position an AI system may occupy in courts. Fewer issues may arise in connection with using the AI system as a “court officer” because, in this role, the AI system is intended to perform specific procedural tasks. The AI system that is designed to complete a series of tasks such as evaluate evidence, research, and find relevant provisions of law and case-law, and apply the law to concrete facts to generate a reasoned opinion on the case may raise concerns about the extent to which it can influence the outcome of the case. However, to determine whether the use of an

¹⁶ AIA, Article 15.

¹⁷ AIA, Article 27.

¹⁸ AIA, Article 14

¹⁹ C. D. Creamer, Z. Godzimirska, *Trust in the Court: The Role of the Registry of the European Court of Human Rights*, ‘The European Journal of International Law’ 2019, vol. 30, 2, Oxford University Press.

²⁰ C. D. Creamer, Z. Godzimirska, *Trust...*, p. 677.

²¹ *Ibid.*

AI system can have an impact on the decision-making of the judge or create legitimate doubts as to the impartiality of the court, it is important to examine the two elements of impartiality established in the case-law of the ECtHR and used by the Court as criteria for analyzing complaints on Article 6(1) of the ECHR.

Subjective Element of Impartiality and AI Bias

Subjective impartiality is linked to personal convictions regarding the subject matter of the legal issue or persons involved.²² The subjective element requires determining and collecting evidence about the personal views of a judge in a particular case.²³ AI systems are perceived as technology that does not have emotions or personal preferences. However, research has documented that AI can produce biased recommendations or decisions.²⁴ The biased outcomes of the AI system have their origin in training data or may emerge during the training process.²⁵

An AI system that is used to perform smaller tasks, such as searching for law or drafting simple procedural decisions in the case, is unlikely to have a significant negative impact because, in this role, it is assigned to do a fragment of the work on the case. It is for the judge to decide the case. However, a system that can provide a comprehensive assessment of evidence, research law, apply law to concrete facts, and generate an opinion about the substance of the case may influence the outcomes of the case if the judge decides to incorporate the generated suggestions into the text of the judgment. If the AI system generates biased recommendations, it can potentially impact the subjective element of impartiality.

The judge may use a public AI system or an AI system specifically designed, developed, and integrated in courts. There is a difference between these two models, especially as regards the quality of the output. Public AI systems, such as ChatGPT, Claude, or Mistral AI, are trained on a vast amount of information from the internet. Their use as assistants in courts is possible but limited. At the same time, the availability of public AI systems to anyone, including judges, makes it easy to create an account and use it for professional activities.

²² Micallef v. Malta, § 93; Judgment of the ECtHR of 21 December 2000, *Wettstein v. Switzerland*, application no. 33958/96, § 43.

²³ Micallef v. Malta, § 95; Judgment of the ECtHR of 23 April 2015, *Morice v. France*, application no. 29369/10, § 74.

²⁴ E. Ferrara, *Fairness and Bias in Artificial Intelligence: A Brief Survey of Sources, Impacts, and Mitigation Strategies*, 'Sci' 2024, 6, 1, 3.

²⁵ K. Mavrogiorgos, A. Kiourtis, A. Mavrogiorgou et al., *Bias in Machine Learning: A Literature Review*, 'Applied Sciences' 2024, 14, 19, p. 8860.

Public AI systems are designed to perform a range of different tasks and can make mistakes. For example, an AI system can analyze the case based on the legislation of another country and generate an incorrect assessment of the case.²⁶ Moreover, the use of a public AI system for working with documents that contain personal data and private information may be contrary to the EU's personal data protection rules.²⁷

Courts can integrate an AI system that was designed to be operated in a concrete legal system. Creating such a system involves further training of the general-purpose AI system so it should be able to do specific tasks.²⁸ Legislation and case-law of a specific legal system should be uploaded or added to the AI training data.

There is a general presumption that legislation and previous case-law of courts are neutral and free from bias. Hence, one might conclude that the recommendations and decisions generated by an AI system are also neutral and objective. There is indeed less risk that the system can be biased if the data itself is carefully selected and does not contain personal opinions, but this assumption merits further scrutiny.

Bias arising from the training data

Data is an essential element of an AI system because it defines and shapes the recommendations and decisions made. It has been recognized that the risks of bias and discrimination arise from the data AI system is trained on.²⁹ For this reason, the EU AIA places great emphasis on the collection, assessment, and verification of the training data for AI systems operating in high-risk environments.³⁰

During the training process, an AI system can identify bias patterns and correlations within previous judgments. They may be attributable to conscious or unconscious biases that have been introduced into the text.

²⁶ For example, in 2024, a Spanish lawyer submitted a document to the court containing references to the Colombian Penal Code rather than the Spanish one. This happened because the text was generated using ChatGPT, which included an existing provision but from the wrong jurisdiction. Conde E., The risk of using ChatGPT: Navarrese Justice reprimands a lawyer who accused...using Colombian law, 2024, available online at <https://www.noticiasdenavarra.com/sociedad/2024/11/12/riesgo-chatgpt-justicia-navarra-reprende-8919455.html?> (translated into English by Google translate).

²⁷ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), 4 May 2016, OJ L 119.

²⁸ A general-purpose AI system is an AI system trained to perform a variety of tasks. Such a model can be multimodal and can generate text, picture, video, and recognise human speech.

²⁹ D. Verona, J. L. Suarez, *Discrimination, Bias, and Trustworthy AI*, 'Applied Sciences' 2022, 12, 12; High-Level Expert Group on Artificial Intelligence, *Ethics Guidelines for Trustworthy AI*, European Commission, 2019.

³⁰ AIA, Article 10.

Conscious bias is a situation where the person is aware of his or her opinion, and it can be determined based on statements or actions.³¹ For example, Michael Benesty in the *Supra Legum* Project used machine learning techniques to evaluate decisions in asylum cases in France.³² As a result of the project, the system identified patterns of decision-making for specific judges, possibly reflecting personal opinions of judges. This assumption was justified by the fact that certain judges had rejected the majority of asylum applications, thereby giving rise to a presumption of bias. As a response to this project and to prevent further judge profiling, France passed a law criminalizing the evaluation, analysis, comparison, and prediction of the behavior of individual judges.³³

Unconscious bias is a situation where the person is not fully aware of personal prejudice or preference. Unconscious bias is an inherent characteristic of human beings. Well-documented reasons for unconscious biased decisions could arise due to physiological and biological reasons, such as being tired, hungry, or under stress.³⁴ The human brain tends to classify individuals and objects as a means of conserving cognitive resources and facilitating rapid decision-making.³⁵ Hence, some judgments may contain bias as a consequence of such underlying factors described above.³⁶ Biased patterns are often difficult to spot when reading individual judgments. By contrast, an AI system is capable of analyzing a large volume of text and be able to detect these patterns.

Bias in the training data may also result from socio-economic factors reflected in past decisions. The *U.S. State v. Loomis* case is an example of this type of biased AI system. In the *Loomis* case, the defendant challenged the use of the Correctional Offender Management Profiling for Alternative Sanctions (hereinafter ‘COMPAS’) system. COMPAS is an AI system that assesses the risk of recidivism used in the U.S. criminal proceedings. The system relied on a proprietary algorithm that assessed various factors, including an individual’s criminal history and socio-demographic information, to generate risk scores.³⁷ Critics argue that COMPAS may reinforce racial and socio-economic biases due to its reliance on historical data patterns.³⁸ In *Loomis*, the

³¹ J. Holroyd, *Implicit Bias, Awareness and Imperfect Cognition*, ‘Consciousness and Cognition’ 2015, May, vol. 33, pp. 511–523.

³² D. Ghezelbash, K. Dorostkar, Sh. Walsh, *A Data Driven Approach to Evaluating and Improving Judicial Decision-Making: Statistical Analysis of the Judicial Review of Refugee Cases in Australia*, ‘University of New South Wales Law Journal’ 2022, 45, 3, p. 1085.

³³ *Ibid.*; Article L111–13 to the Code de l’organisation judiciaire, France.

³⁴ J. Ch. Bubltz, *What Is Wrong with Hungry Judges? A Case Study of Legal Implications of Cognitive Science* [in:] Law, Science, and Rationality, A. M. Waltermann, D. Roef, J. Hage, and M. Jelcic (eds.), Eleven International Publishing, Maastricht Law Series 2019.

³⁵ A. D. Redish, *The Mind within the Brain*, Oxford University Press 2013.

³⁶ J. Ch. Bubltz, *What Is Wrong...*, *ibid.*

³⁷ I. M. Beriain, *Does the Use of Risk Assessments in Sentences Respect the Right to Due Process? A Critical Analysis of the Wisconsin v. Loomis Ruling*, ‘Law, Probability and Risk’ 2018, March, vol. 17, 1, pp. 45–53.

³⁸ A. Chouldechova, *Fair Prediction with Disparate Impact: A Study of Bias in Recidivism Prediction Instruments*, ‘Big Data’ 2017, 5, 2, pp. 153–163.

Wisconsin Supreme Court ruled that the use of COMPAS did not violate principles of due process, emphasizing that the system served only as an advisory tool.³⁹ The court held that judicial discretion was preserved, as judges were not bound to follow COMPAS assessments and retained the authority to make independent decisions.

The reasoning of the U.S. court in the *Loomis* case is similar to the provisions of the EU AIA.⁴⁰ Specifically, the AIA provides that human decision-makers retain control over the decision-making and may override AI recommendations.⁴¹ However, the guarantee that the judge remains in control of the final decision does not itself give assurance of impartiality. The question of AI's indirect impact on judicial impartiality and independence remains complex.

Hence, embedded conscious or unconscious bias can be learned by the AI system, reinforced, and amplified in its recommendations. The AI system has a tendency to simplify complex information and form generalized correlations, which may inadvertently lead to subjective statements. The bias in an AI system may also form during the training process.

Bias arising from the process of training

Bias in recommendations or decisions may also result from the process by which an AI system is trained. It is important to distinguish between the training of logic-based AI systems and that of machine learning AI systems.

The development of a logic-based system starts with defining the logical pattern of the decision.⁴² Such a pattern is determined by a human expert and subsequently implemented in the source code by a software developer. Legal or technical issues may emerge either during the formulation of the algorithm or in the course of its programming. However, a key advantage of logic-based AI systems is that the algorithm and source code can be examined and verified, which allows errors to be detected and corrected.

Machine learning AI systems are developed and trained differently. They are trained using one of the three approaches.⁴³ First, unsupervised learning is a training process in which a large volume of data is provided to an AI model, and it finds patterns and correlations autonomously. General-purpose AI models are typically trained using this approach. However, when an AI

³⁹ Judgment of the Wisconsin Supreme Court, *State v. Loomis*, 881 N.W.2d 749, Wis. 2016.

⁴⁰ AIA, Annex III.

⁴¹ AIA, Article 14, § 3(d).

⁴² H. Prakken, G. Sartor, *Law and Logic: A Review from an Argumentation Perspective*, 'Artificial Intelligence' 2015, vol. 227, Elsevier, pp. 214–245.

⁴³ *Machine Learning: An Artificial Intelligence Approach*, R. S. Michalski, J. G. Carbonell, T. M. Mitchell (eds.), Berlin–Heidelberg 1983.

system is intended for applications in the justice system, it must be further refined through supervised or reinforcement learning methods.

Supervised learning is a training process in which a person prepares labelled or annotated data and inputs it into the system so that the AI may learn from human-defined examples. This process requires experts to identify and mark relevant sections of judgments, indicate important parts in the reasoning section, and classify cases according to their subject matter.⁴⁴ During this stage of data preparation, experts inevitably rely on their own interpretative judgments and professional experience, which may introduce the potential for both human error and subjective bias. Because an AI system lacks the capacity for critical reasoning or self-reflection, it cannot evaluate or challenge the assumptions embedded in the data on its own initiative. It therefore derives its output from the patterns it has learned, reproducing the biases and limitations present in its training data.

Reinforcement learning is a training method in which an AI system receives feedback in the form of rewards or penalties based on the quality of its decisions. In this model of learning, a human expert evaluates whether the system's outputs are correct or appropriate.⁴⁵ As in supervised learning, the evaluative judgments of the human expert may influence the training process because personal views and implicit biases become embedded in the system's decision-making.

These models of learning demonstrate that, despite the varying approaches to training, human involvement remains part of this process and the development of AI systems. It is, therefore, wrong to assume that decisions produced by an AI system are purely algorithmic or artificial. If the person involved in the training has certain opinions, these opinions can be reinforced and amplified by the AI system.

In May 2025, UNESCO adopted Draft Guidelines for the use of AI systems in courts and tribunals⁴⁶ that represent international ethical standards regarding the use of AI systems in courts. Principle 2.1.1 reflects the challenge of training an AI system and envisages that judges should be involved in the development and deployment stages of AI systems in courts. Their participation is important to make sure that the training of AI systems to be used in courts reflects the realities of legal reasoning and limits the risk of embedding subjective biases or oversimplified representations of decision-making.

⁴⁴ A. S. Deeks, D. B. Hollis, *Large Language Models and International Law*, 'Chicago Journal of International Law' 2025, vol. 26, 1, p. 6.

⁴⁵ G. Sartor, F. Galli, *AI Approaches...*, *ibid.*

⁴⁶ UNESCO, Draft UNESCO Guidelines for the Use of AI systems in Courts and Tribunals, CI/DIT/2024/GL/01, 2024.

An AI system, even if developed and designed for the justice system, is not immune to bias. Such bias may be detected during testing, yet it may also infiltrate the system and manifest in the form of draft judgments. As with the assessment of subjective impartiality of human judges, identifying bias within an AI system poses difficulties and presents an even greater evidentiary burden for the parties. Therefore, the analysis of the impact of AI systems on the impartiality of the court may focus on the objective element, which provides a further important guarantee.⁴⁷

Objective Element of Impartiality and Legitimate Doubts

The objective element of impartiality concerns the composition of the tribunal, which should offer sufficient guarantees to ‘exclude any legitimate doubt in respect of its impartiality’.⁴⁸ This element relates to issues of the appearance of bias.⁴⁹ That is to say, the test asks whether there exists a legitimate reason to fear a lack of impartiality⁵⁰ and whether such fear could be objectively justified.⁵¹ This test concerns the links of the judge with other actors in the proceedings.⁵² The use of an AI system in an assisting role for decision-making in the case should be arranged in a manner that does not create legitimate reasons to fear a lack of impartiality. The parties must have confidence that their right to be heard, adversarially, is effectively protected and the principle of “equality of arms” is respected. This confidence in the court’s impartiality may be at issue where the use of AI lacks sufficient transparency, human oversight, or explainability.

The right to be informed about the AI system

The right to be informed is an important safeguard for the “appearance of an impartiality” element. In this respect, the special account is given to the internal organization of a tribunal established by law.⁵³ The right to be

⁴⁷ Micallef v. Malta, § 95; Morice v. France, § 119.

⁴⁸ Judgment of the ECtHR of 24 February 1993, Fey v. Austria, application no. 14396/88, § 28 and § 30; Wettstein v. Switzerland, § 42.

⁴⁹ Consultative Council of European Judges (CCJE), Opinion No. 3 of the Consultative Council of European Judges (CCJE) to the attention of the Committee of Ministers of the Council of Europe on the principles and rules governing judges’ professional conduct, in particular ethics, incompatible behaviour and impartiality, CCJE (2002) Op. No. 3, 19 November 2002.

⁵⁰ Piersack v. Belgium, § 30.

⁵¹ Judgment of the ECtHR of 24 May 1989, Hauschildt v. Denmark, application no. 10486/83, § 48.

⁵² Micallef v. Malta, § 97.

⁵³ Piersack v. Belgium, § 30 (d).

informed about the use of an AI system entails that the parties are made aware of the system's involvement in the decision-making, its role, and the extent to which it may influence the outcome of the case. The use of an AI system in this context is closely linked to the transparency principle envisaged in the EU AIA⁵⁴ and guidelines for the ethical use of AI.⁵⁵

The understanding of transparency in relation to AI has evolved in recent years. The 2018 European Ethical Charter on the use of artificial intelligence emphasizes that data processing methods of AI systems have to be accessible and understandable so as to enable external audits.⁵⁶ Transparency in this ethical framework is understood as the ability to comprehend the functioning of the AI system and the reasoning process underlying its outputs.⁵⁷ This approach to transparency is better suited for logic-based systems than machine learning systems.

Transparency under the EU AIA is understood from a different angle. Its Article 13 requires providers of a high-risk AI system to accompany it with concise instructions that describe capabilities, limitations, level of accuracy, and other functional features of the AI system.⁵⁸ This obligation is distinguished from the right to explanation envisaged in Article 86 of the Act. This Article provides that, where a decision producing legal effects is based on the output of an AI system, the affected persons have “a right to obtain a clear and meaningful explanation from the deployer of the role of the AI system in the decision-making and the main elements of the decision taken”.⁵⁹ In essence, this right imposes an obligation to inform individuals that a decision has been taken with the assistance of an AI system and explain the role of the AI system in the decision-making process.⁶⁰

The AI system could be used at the preparatory stage of the proceedings. It can analyze evidence, research, and summarize relevant court jurisprudence and produce a preliminary legal assessment. The UNESCO Draft Guidelines on the use of AI in courts suggest disclosing the use of generative AI and using quotation marks and a citation system for text generated by an AI system.⁶¹ Moreover, the Guidelines recommend attaching an annex

⁵⁴ AIA, Article 13.

⁵⁵ CEPEJ, European ethical Charter on the use of Artificial Intelligence in judicial systems and their environment, 3–4 December, 2018, Principle 4; High-Level Expert Group on Artificial Intelligence, Ethics Guidelines for Trustworthy AI, European Commission, 2019, § 1.4; Draft UNESCO Guidelines for the Use of AI Systems in Court and Tribunals, § 3.3.7.

⁵⁶ CEPEJ, European Ethical Charter, Principle 4, p. 7.

⁵⁷ CEPEJ, Principle 4 explanations, p.11; UNESCO Draft Guidelines for the use of AI in courts and tribunals, § 1.9.

⁵⁸ AIA, Article 13.

⁵⁹ AIA, Article 87 § 1.

⁶⁰ Similar recommendation is included in Draft UNESCO Guidelines for the use of AI systems in courts and tribunals, § 3.2.4.

⁶¹ Draft UNESCO Guidelines for the use of AI systems in courts and tribunals, § 3.3.7.

with the prompts and the AI system's answers to these prompts if the text produced by AI was used in the judgment.⁶² In the *Kress v. France* case, the ECtHR assessed the role of the Government Commissioner in administrative proceedings in France. The Commissioner presented independent legal opinions at the preparatory and hearing stages, without prior disclosure of the legal position to the parties.⁶³ The ECtHR found that, although the Commissioner was independent, the inability of parties to comment on the observations breached the equality of arms and adversarial principles under Article 6 of the ECHR. Analogously, disclosing the legal evaluation of the case produced by the AI system that might have an impact on the decision in the case is also relevant not only from a transparency perspective, but also according to Article 6 of the ECHR.

Recent emerging practices provide illustrative examples of transparent use of AI in courts. In 2024, a Dutch court explicitly indicated in its reasoning that ChatGPT had been used to estimate the average lifespan of solar panels.⁶⁴

There are several approaches to informing the public on the use of AI. Courts may publish information on the court website describing the AI system and its role. In this respect, the Council of Europe's Resource Center on Cybersecurity and Artificial Intelligence plays an important role by collecting and documenting practices concerning the use of digital and AI-based tools.⁶⁵ This open-access resource is continuously updated and contributes to the transparency, monitoring, and evaluations of the use of AI in justice systems.

If the AI system is used to perform more complex tasks, and is able to semi-autonomously evaluate cases and the law, and deliver an "opinion", such use of the AI system has to be envisioned in the procedural rules of the court according to the "established by law" principle. The procedural rules should define and delineate the role of an AI system in court proceedings and establish a procedure for disclosure of the use of AI.

Safeguards for judicial impartiality

Effective human oversight is a central safeguard to ensure that the use of AI does not undermine the integrity of decision-making. The obligation to exercise an effective human oversight of high-risk AI systems is included in Article 14 of the EU AIA. This provision has its origins in Article 22 of GDPR,

⁶² Ibid.

⁶³ Judgment of the ECtHR of 7 June 2001, *Kress v. France*, application no. 39594/98, § 63.

⁶⁴ Gelderland Court, 10664071 CV23-2321, 7 June 2024, ECLI:NL:RBGEL:2024:3636, § 5.7.

⁶⁵ Council of Europe, Resource Center on Cybersecurity and Artificial Intelligence – available online at <https://www.coe.int/en/web/cepej/resource-centre-on-cyberjustice-and-ai>.

which envisages the right to human intervention when an automated decision-making system is used⁶⁶ to produce legal effects or significantly affect the rights of an individual.⁶⁷ Hence, the human oversight is linked to the operation of an autonomous or semi-autonomous AI system. Conversely, the use of an AI system in an assisting role or as a “legal expert” does not endow the AI system with the function to deliver judgments. Its primary role is to gather legal information, spot inconsistencies, and suggest possible decisions.

The relationship between the human oversight of an AI system and, *vice versa*, the impact of the AI system on decision-making is complex. Even in cases where AI systems are not making decisions autonomously but are used in assistive roles, they may influence the final decision. Therefore, the effective human oversight includes “awareness of the possible human tendency to rely and over-rely on the output of the AI system.”⁶⁸ This particularity of technology is what distinguishes it from a human court officer or expert. The AI system is able to generate a persuasive text. It can generally present several options of the text for the judge to read and select the one he or she prefers. This can sometimes lead to what is known as algorithmic bias. Algorithmic bias occurs when an AI system produces biased output, which is then relied upon by a human decision-maker because it, for example, confirms preexisting conceptions of a human.⁶⁹

There is also an additional concern in that the judge may feel bound to comply with the recommendations generated by an AI system, particularly if institutional practices implicitly or explicitly encourage its use. This dynamic can create subtle pressure to align decisions with the system’s output, which potentially can narrow the scope for independent reasoning. However, judicial autonomy is an important element of impartiality and independence. Judges are bound to decide cases free from external influence and based solely on the law, facts, and their own professional assessment.

Article 14 of the EU AIA stipulates that human oversight measures should be implemented, taking into account the level of automation and the context where the high-risk AI system is used. To mitigate the risks of overreliance on technology, it is important to understand the capacities and limitations of an AI system, interpret the result correctly, and decide when not to rely on the AI system.

⁶⁶ General Data Protection Regulation, Article 22, § 3.

⁶⁷ General Data Protection Regulation, Article 22, § 1.

⁶⁸ AIA, Article 14, § 4 (b).

⁶⁹ S. Alon-Barkat, M. Busuioc, *Human-AI Interactions in Public Sector Decision Making: “Automation Bias” and “Selective Adherence” to Algorithmic Advice*, *Journal of Public Administration Research and Theory* 2023, 33, pp. 153 and 155.

AI literacy skills

Understanding the capacities and limitations of the AI system means that a judge possesses AI literacy skills and understands what the AI system can and cannot do. The EU AIA prescribes that the providers and deployers of AI systems should ensure a sufficient level of AI literacy skills for persons who are using the AI system.⁷⁰ Similarly, the UNESCO Guidelines for the use of AI systems in courts and tribunals point out the necessity to provide training opportunities for court administrators and judges to learn about different types of tasks that can be performed with the assistance of AI, to learn how to use these tools and what kind of impact they can have on fundamental rights, and to learn how to interpret the output critically.⁷¹ Both Article 4 of the EU AIA and the UNESCO Guidelines contain a rather broad obligation. AI literacy obligation encompasses various uses of AI systems, regardless of whether they fall under the definition of a high-risk system or not. This obligation appears particularly justified in light of the increasing availability of various public AI tools, integration of AI systems with Microsoft, as well as the growing use of AI by parties in proceedings to draft submissions and potentially to generate or manipulate evidence.

Neither the EU nor the Council of Europe's legal acts nor UNESCO recommendations provide a comprehensive list of AI literacy skills. The UNESCO Guidelines for the use of AI in courts and tribunals, under the section on AI awareness, AI literacy, and capacity building, suggest that AI literacy should allow individuals to understand AI fundamentals, identify its functionalities, and understand the limits and risks of AI systems, including how to use these systems ethically and assess their output and performance.⁷²

Understanding AI fundamentals may include basic knowledge of essential elements of AI, such as its architecture and data, principles of how the text is generated, and particularly the probabilistic and statistical approaches. Although these are technical aspects of AI, they equip judges with a comprehension of the origins of bias in the output of the AI systems, why the output could be incorrect, and set the foundation for using AI systems effectively. Understanding the role of the "prompt" and the relations between the prompt and the system's output, together with knowledge of the functionalities of the AI system, can help understand various ways in which the AI system can be used.

Knowledge of the functionalities of the AI system, apart from prompting, can also include skills such as working with text analysis, summarization,

⁷⁰ AIA, Article 4.

⁷¹ Draft UNESCO Guidelines for the use of AI systems in courts and tribunals, § 2.3.1.

⁷² Draft UNESCO Guidelines for the use of AI systems in courts and tribunals, § 3.1.1.

and other practical skills on how the system can be used effectively. It can also cover the role of the input data in the performance of the AI system. Under Article 14 of the EU AIA, the user of the system bears the responsibility for the input data as part of the human oversight obligation.⁷³

Comprehension of limits and risks of the AI system can already be addressed in the AI fundamentals section and main functionalities because they arise mainly from the ways in which the system is designed, the quality and type of data, and the training process. The focus of this set of skills is on further understanding different types of bias and the risks of overreliance on technology, including confirmation bias. Most AI systems do not perform with absolute accuracy. All AI systems occasionally, to a varying extent, provide incorrect information. An additional problem is that the AI systems used in the legal field are trained on the legislation and case law at the time of creation of the system. If the legislation or case law changes, it is necessary to update the system. This may not take place immediately after legislation or case-law changes were introduced. Before the system is updated, its output can therefore contain dated information. Hence, the knowledge of level of accuracy of AI systems seems necessary to enable human oversight and to interpret AI output correctly.

Explainability and interpretation of AI output

Transparency and explainability in AI systems are often presented together. UNESCO Draft Guidelines encourage courts to “adopt, deploy, and use AI systems that can explain the rationale behind their outputs and decisions and how they use inputs for such purposes.”⁷⁴ Explainable AI consists of three elements – understandable, interpretable, and traceable for humans.”⁷⁵ These three elements are interconnected. As described earlier in this paper, determining the precise logic of a machine learning AI system is challenging. Presently, it is difficult to achieve the level of transparency in machine-learning systems similar to that in logic-based systems. It is an inherent characteristic of a machine learning AI system.

On the other hand, the evaluation of the AI system output could be approached similarly to the evaluation of human beings. For instance, it is not precisely known how thoughts and ideas arise in the human mind, but they can be communicated to others, tested, and assessed. Similarly, LLMs are able to communicate in natural language, explain their “thinking” process, and provide information on which factors were taken into account and became the basis for the decision or recommendation. Hence, the underlying

⁷³ AIA, Article 26 § 4.

⁷⁴ Draft UNESCO Guidelines for the use of AI systems in courts and tribunals, § 1.7.

⁷⁵ Ibid.

criteria and the quality of the output could be verified, assessed, and understood.

Correct interpretation of the output may encompass the ability to identify machine errors through knowledge and experience.⁷⁶ The AI system does not possess contextual awareness or social understanding. An AI system operates as a probabilistic system that recommends the most likely course of action based on patterns in data. Each case may involve unique circumstances and contexts that must be considered in decision-making. Interpreting output correctly may only be possible if the system justifies the decision.⁷⁷ A judge, drawing on her or his extensive experience, is well-positioned to assess whether the output produced by the AI and its accompanying explanations appear reasonable and whether they can be effectively used in drafting a judgment. Additionally, it is important to note that AI may be best suited for relatively simple and repetitive cases that require less complex reasoning. In such instances, the interpretability of the AI system's output is unlikely to present significant challenges.

However, the process of verifying AI outputs requires time. In situations where judges have a heavy workload, it is not easy to find time to meaningfully assess the output of the AI system⁷⁸ and decide whether to rely on this information. Hence, effective human oversight is interdependent on the conditions and environment in which the judge works. Since in many European courts the workload of a judge is high, it is possible to assume that it may be difficult to maintain effective human oversight in all situations when AI is used, thereby providing an opportunity for an AI system to influence the judgment.

Proportional use of AI

The most important element of human oversight is the right not to use an AI system.⁷⁹ This right guarantees that even if an AI system is integrated into the court as technology, a judge has the right not to rely on it. Article 14 (4-d) of the EU AIA envisages that the person using the AI can decide when not to use it. This right can be exercised when appropriate and proportionate. When Article 14 of the EU AIA is read in conjunction with ethical guidelines on the use of AI in courts and tribunals, this provision may be interpreted broadly as delineating both the conditions under which AI may appropriately be employed and those in which reliance upon its outputs should be restrained

⁷⁶ M. Fink, *Human Oversight Under Article 14 of the EU AI Act* [in:] *AI Act Commentary: A Thematic Analysis*, G. Malgieri, G. G. Fuster, G. Zanfir-Fortuna (eds.), Hart-Bloomsbury, Oxford 2026, May; https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5146118.

⁷⁷ M. Fink, *Human...*, *ibid.*

⁷⁸ B. Green, *The Flaws of Policies Requiring Human Oversight of Government Algorithms*, 'Computer Law & Security Review' 2022, 45.

⁷⁹ AIA, Article 14 § 4 (d).

or avoided altogether. To delineate these situations, the ethical standard of proportionality is of assistance.⁸⁰

AI systems can help courts work more efficiently. It can support case management or assist with preliminary analysis of the case. However, the use of AI systems to achieve efficiency should be proportional and should not undermine fundamental procedural rights. For instance, the AI system can be used to determine legal issues in the case and suggest relevant legal provisions and case-law. However, the court should retain control of the legal qualification in the case.

AI can help handle large sets of information or recurring disputes more effectively. For instance, in consumer protection cases that involve many applicants, an AI system might assist the court by summarizing patterns across individual claims, helping the judge identify systemic issues. AI can also help detect disparities in case outcomes or reference existing high-court jurisprudence. In this instance, the AI system is used in an advisory function and does not substitute for the judge's interpretative role.

An AI system can help find gaps in doctrine, especially when courts are confronted with new social issues. For instance, in administrative proceedings, the court or tribunal might use an AI system to track how frequently higher courts annul administrative decisions on certain grounds. In this example, using the AI system proportionately implies that the AI system only provides insights and does not determine how the case should be solved.

Deciding when and how to use AI requires assessment of necessity, purpose, and the use of AI proportionately. AI can be an invaluable instrument for managing information, identifying patterns, or supporting interpretation. The choice to use AI can be made based on a balance between innovation and maintaining integrity.

Conclusion

When an AI system is used to evaluate evidence, conduct legal research, and apply the law to concrete facts, the boundary between assistance and influence on the decision-making may become blurred. Nonetheless, the mere presence of technological assistance does not, by itself, affect the impartiality of a judge. As with the role of a court officer or an advocate general, an AI system may support the court in various ways. Such assistance, however, does not equate to an ability to influence the judge's opinion in a manner that makes the court not impartial.

⁸⁰ UNESCO, Recommendation on the Ethics of Artificial Intelligence, SHS/BIO/PI/2021/1, 23 November 2021, Principle III.2, §25.

At the same time, the use of AI cannot be completely analogized to the roles of “court officer” or “advocate general”. These actors themselves must be independent and impartial, and their status, functions, and guarantees are determined by law. Although the use of AI in court should, in principle, be regulated by law, in accordance with Article 6(1) of the ECHR, the risk of bias inherent in such a system remains a distinct concern.

Perceived impartiality of the court in the context of using an AI system is a matter of trust and confidence in the judicial system. If parties believe that a judge relies excessively on the output of the AI system rather than exercising independent judgment, they may perceive that justice has not been done. This, in turn, may raise concerns about the role of AI in decision-making and the safeguards in place to ensure impartiality.

Several measures could strengthen trust in the justice system and mitigate doubts regarding impartiality. First, uncertainty may arise when parties are unaware that an AI system is being used to analyze pleading and evidence, conduct legal research, or recommend case outcomes. If the AI system qualifies as a high-risk system under EU AIA, parties are entitled to receive an explanation from the court about the involvement of the AI system. Article 86 of the AIA does not specify whether such explanations should be provided on the initiative of the court or only upon request from parties. The ethical principle of transparency in this respect encourages to disclosure of information about the use of AI for decision-making. It can be accomplished through the court’s website or by including a statement within the judgment.

Second, the lack of participation of judges in the development and training of the AI system may create doubts regarding the integrity of the training process and its potential influence on the system’s outputs. The AI system functions based on the training data and can make decisions based on the training process. Because an AI system functions on the basis of training data, involvement of judges in its development may enhance the system’s quality and relevance. On the other hand, insufficient training for judges on the capabilities, limitations, and implications of AI systems, particularly when combined with other factors, may undermine the autonomy of the judge to deliver impartial and independent decisions in the case.

Third, the absence of independent testing and auditing of the AI system for quality, accuracy, and subjectivity may call into question the reliability of the system’s recommendations. Finally, a requirement obliging judges to rely upon the outputs of an AI system or to justify any departure from them may significantly undermine the impartiality and independence of the judicial decision-making.

Addressing all these issues at the time of development, deployment, integration, and the use of AI systems in courts can increase transparency and improve understanding by parties and society in general, the role of AI systems

and its impact on case outcomes, and inspire trust and confidence in courts in a democratic society.

Abstrakt

Najnowsze osiągnięcia w dziedzinie sztucznej inteligencji (AI) zaowocowały powstaniem systemów, które analizują informacje prawne, rozpoznają powiązania między dokumentami oraz wspierają proces podejmowania decyzji. Nowe możliwości automatyzacji stwarzają zarówno szanse, jak i wyzwania dla wymiaru sprawiedliwości. Rodzą one złożone pytania dotyczące zgodności wdrażania sztucznej inteligencji w sądach z gwarancjami rzetelnego procesu sądowego wynikającymi z europejskiej Konwencji praw człowieka (EKPC).

W niniejszym artykule zbadano, czy i na jakich warunkach stosowanie systemów AI w sądach może budzić uzasadnione wątpliwości co do bezstronności sądu w rozumieniu art. 6 ust. 1 EKPC. Opierając się na orzecznictwie Europejskiego Trybunału Praw Człowieka, dokonano rozróżnienia między subiektywnymi a obiektywnymi elementami bezstronności oraz przeanalizowano, w jaki sposób na każdy z nich może wpływać udział AI w procesie podejmowania decyzji.

W artykule stwierdzono, że wykorzystanie sztucznej inteligencji w sądach jest kwestią zaufania do systemu wymiaru sprawiedliwości, a postrzegany brak bezstronności może wynikać z ograniczonej przejrzystości co do roli AI w procesie decyzyjnym, niewystarczającego nadzoru oraz nadmiernego polegania na wynikach generowanych przez sztuczną inteligencję.

Słowa kluczowe: sztuczna inteligencja (AI), bezstronność, uzasadnione wątpliwości, prawo do rzetelnego procesu sądowego.

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