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*Dejan Bodul, PhD**

CAN ARTIFICIAL INTELLIGENCE (AI) REPLACE THE JUDGE?

Even though the current financial situation of the judiciary in terms of working conditions means that a few courts have relatively satisfactory working conditions, while the majority are regularly faced with unfilled judicial and administrative positions, a lack of basic material and technical resources for smooth work, and lack of or inadequate premises for staff accommodation and work, the author will ask a doctrinally quite topical question: Can artificial intelligence replace the judge? EU law does not specify the concept of the court but leaves this question to the legislature of each state, which is why this question is regulated differently in EU states and thus represents a greater challenge for the future. In addition, the dynamic normative activity in this area at the European level requires further study and adaptation of the regulation. The main objective of this text is to present some of the potential problems, so a sketch of the challenges and possible answers that this text will offer can be considered as a modest contribution to the discussion on the inclusion of AI in litigation.

Key words: *Judgment. – Artificial intelligence. – Paradigm shift.*

"We live in a place where change happens so fast that we don't notice the present until it starts to disappear." – R. D. Laing

1. PAPER METHODOLOGY

On one level of life, the problem with the future is that it usually arrives before we are prepared for it. Therefore, it is extremely important for legal scholars and practitioners to begin discussing the position of artificial intelligence (AI) (as judges) so that future debates do

* Associate Professor at the University of Rijeka Faculty of Law, Department of Civil Procedural Law, *dejan.bodul@pravri.uniri.hr* (Republic of Croatia).

not take undesirable traits and directions. The limiting factor in the context of this analysis is the fact that AI has not played a significant role in litigation to date. For this reason, the analysis is not based on practical problems, but on identifying potential problems related to AI in litigation. After presenting the methodological framework of the study, a summary of previous literature is provided. Since the legal and institutional framework of court organization is mostly a consequence of the reception of European norms in the relevant field, an attempt is made to define more precisely the functional and personnel aspect of the concept of court. The chapter on open questions analyzes the possible problems, and the conclusion summarizes the results of the analysis. From the series of legally insufficiently resolved issues mentioned in the paper, i.e., the unresolved issues, the extent of deficient AI in the studied segment becomes apparent. The analysis ends with recommendations that suggest possible solutions to problems already identified, in the hope that they will stimulate discussion in professional circles about new, innovative models that could provide a more comprehensive picture of the work, failures, and challenges of AI and justice interaction.

2. REVIEW OF PREVIOUS LITERATURE

In recent years, the Council of Europe and the European Union have adopted a number of documents on certain aspects of the legal regulation of artificial intelligence, including aspects of the protection of human rights. These also include professional codes of conduct at the national level, as well as recommendations and declarations, mainly from international organizations.[1] EU documents state that AI AI

1 Some of them are, European Parliament, Resolution on Civil Law Rules on Robotics, 2015/2103(INL), accessed June 25, 2023, *https://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html*; European Commission, "Artificial Intelligence for Europe", COM (2018) 237 final, accessed June 25, 2023, *https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CO%3A2018%3A237%3AFIN*; European Commission, "Coordinated Plan on Artificial Intelligence", COM (2018) 795 final, accessed June 25, 2023, *https://digitalstrategy.ec.europa.eu/en/policies/europeanapproach-artificial-intelligence*; European Parliament, "Resolution on a Comprehensive European industrial policy on Artificial intelligence and robotics", 2018/2088 (INI), accessed June 25, 2023, *https://www.europarl.europa.eu/doceo/document/TA-8-2019-0081_*

can help solve many societal problems, provided the technology is of high quality and its development and use gains the trust of citizens but it is noted that it is very risky and even problematic to introduce

EN.html; High-Level Expert Group on Artificial Intelligence, "Ethic Guidelines for Trustworthy AI", accessed June 26, 2023, *https://digital-strategy.ec.europa.eu/en/library/ethicsguidelines-trustworthy-ai*; European Commission, "White Paper – A European approach to excellence and trust", COM (2020) 65 final, accessed June 27, 2023, *https://ec.europa.eu/info/files/white-paperartificial-intelligence-european-approachexcellence-and-trust-en*; European Commission, "Commision Staff Working Document Impact Assessment Accompanying the Proposal for a Regulation of the European Parliament and the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts", SWD (2021) 84 final, accessed June 24, 2023, *https://digital-strategy.ec.europa.eu/en/library/impact-assessment-regulation-artificial-intelligence*; European Parliament, "Resolution on a framework of ethical aspects of artificial intelligence", robotics and related technologies, 2020/2012 (INL), accessed June 25, 2023, *https://www.europarl.europa.eu/doceo/document/TA-9-2020-0275_EN.html*; European Parliament, "Resolution on a civil liability regime for artificial intelligence", 2020/2014 (INL), accessed June 22, 2023, *https://www.europarl.europa.eu/doceo/document/TA-9-2020-0276_EN.html*; European Parliament, "Resolution on intellectual property rights for the development of artificial intelligence technologies", 2020/2015(INI), accessed June 25, 2023, *https://www.europarl.europa.eu/doceo/document/TA-9-2020-0277_EN.html;* European Commission, "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Fostering a European approach to Artificial Intelligence", COM (2021) 205 final, accessed June 25, 2023, *https://digitalstrategy.ec.europa.eu/en/library/communication-fostering-europeanapproach-artificial-intelligence*; European Commission, "Coordinated Plan on Artificial Intelligence 2021", COM (2021) 205 final Annex, accessed June 25, 2023, *https://digital-strategy.ec.europa.eu/en/library/coordinated-plan-artificial-intelligence-2021-review*; European Commission, "Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial intelligence Act) and Amendung Certain Union Legislative Acts", European Commission, Brussels, 21.4.2021. COM(2021) 206 final, accessed June 25, 2023, *https://eur-lex.europa.eu/resource.html?uri=cellar:e0649735-a372–11eb-958501aa75ed71a1.0001.02/DOC_1&format=PDF*; European Parliament, "Report on artificial intelligence in education, culture and the audiovisual sector", 2020/2017 (INI),accessed June 25, 2023, *https://www.europarl.europa.eu/doceo/document/A-9-2021-0127_EN.html*; European Parliament, "Report on artificial intelligence in criminal law and its use by the police and judicial authorities in criminal matters", 2020/2016(INI), accessed June 25, 2023, *https://www.europarl.europa.eu/doceo/document/A-9-20210232_EN.html*; Proposal for a Regulation of the European Parliament and of the Council

into the judiciary (*exempli gratia,* application of the law to a specific set of facts).[2] However, an adequate approach to the protection of human rights in services based on AI technologies is included in the proposal for an EU regulation on AI. The legal solutions contained in this future EU regulation will certainly be the basis for regulating this issue in the national framework (EU member states), so it is likely that there will be an expansion of the range of human rights and freedoms and (protection from or for) AI due to the evolution of society and the development of the understanding of what societal values should be protected. In the domestic legal literature, there are perhaps only a few specialized texts that address the vast and complex topic of AI in litigation.[3] Moreover, there is not even a monograph on the subject of AI in litigation, unlike major works and scholarly articles found, for example, in foreign legal literature.[4] Empirical and literary analy-

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Laying Down Harmonised Rules on Artificial Intelligence (Artificial intelligence Act) and Amendung Certain Union Legislative Acts, European Commission, Brussels, 21.4.2021. COM(2021) 206 final, accessed June 25, 2023, *https://eur-lex.europa.eu/resource.html?uri=cellar:e0649735-a372–11eb-9585-01aa75ed71a1.0001.02/DOC_1&format=PDF*; European Commission, "Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial intelligence Act) and Amendung Certain Union Legislative Acts", Brussels, 21.4.2021. COM(2021) 206 final, accessed June 25, 2023, *https://eurlex.europa.eu/resource.html?uri=cellar:e0649735a37211eb958501aa75ed71a1.0001.02/DOC_1&formatpPDF*.

2 Available on the following website: *https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/excellence-and-trust-artificial-intelligence_hr,*accessed, June 25, 2023.

3 Available on the website: *https://legaltech.bug.hr/,*accessed, June 25, 2023.

4 Mario Lenz; Andre Hübner; Mirjam Kunze, *Textual CBR,* in: *Case – Based Reasoning Technology,* (*eds.* Mario Lenz, Brigitte Bartsch-Spörl, Hans-Dieter Burkhard, Stefan Wess), Berlin, Springer Verlag 1998; Lilian, Edwards; Michael Veale, "Slave to the algorithm? Why a 'right to an explanation' is probably not the remedy you are looking for", *Duke Law & Technology Review (DLTR) 2018,* accessed June 25, 2023, *https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2972855*; Joe Tomlinson, "The Policy and Politics of Building Tribunals for a Digital Age: How 'Design Thinking' Is Shaping the Future of the Public Law System", *U.K. Const. L. Blog* 2017, available on: *https://ukconstitutionallaw.org/*, accessed, June 25, 2023; Tal Zarsky, "The trouble with algorithmic decisions: An analytic road map to examine efficiency and fairness in automated and opaque decision making, Science", *Technology and Human Values (THV)* 41(1)/2016, 118–132.; Stuart J. Russel, Peter Norvig, *Artificial Intelligence: A*

ses were only included in the presentation by Prof. *Uzelac*.[5] From a research perspective, the literature is more or less unanimous in pointing out the positive effects of the procedural law reforms to date, but also the problems and limitations of the functioning of the existing legal framework. They point out that we are in a period of greater social and economic change, so that old problems are caught up with new ones and, together with them, form extremely complex challenges that the state must address in order to protect violated and threatened rights. The authors studied point out that the issue of AI in litigation is a complex one, so that the statement about the existence of a crisis is always relevant in terms of the need for changes in existing practice. They point to the need to improve the legal framework based on existing international human rights documents in order to protect individuals and their fundamental human rights from potential threats posed by AI technology-based products and/or services. Thus, although it is undeniable that the procedural rules with accompanying regulations are characterized by modern solutions, it should not be forgotten that the system is far from complete in the legal sense. From what has been said, it is clear that the existing literature does not provide answers, definitive explanations, and appropriate approaches to the problem of artificial intelligence in judicial proceedings. Therefore, this research will be one of the first systematic and scientifically sound analyses of possible reforms related to AI in litigation.

3. CONCEPTUALIZATION OF THE TOPIC

The authoritative sources state that the term "e-justice" encompasses a wide range of initiatives, including the use of electronic mail, the filing of motions on the Internet, the provision of information on the Internet (including court practice), the use of video hearings and videoconferencing, online monitoring of the registration and progress of cases, and the ability of judges or other decision makers to access

Modern Approach (2nd ed.), New Jersey: Prentice Hall, 2003; Stuart J. Russel, Norvig, Peter, *Artificial Intelligence: A Modern Approach (3rd ed.),* New Jersey: Prentice Hall 2009.; Orla Lynskey, *The Foundations of EU Data Protection* Law, Oxford University Press, Oxford 2015.

5 See: Alan Uzelac, "(Ne)premostive prepreke za pametno digitalno pravosuđe", *https://legaltech.bug.hr/*, accessed June 25, 2023.

information electronically.[6] Although the idea and even the norm supporting e-justice has existed in national legislation for about 20 years, we see that the concept of e-justice has existed in comparative legislation for much longer, for 60 years.[7] In 1963, the American Bar Association newsletter published the article "What Computers Can Do: Analysis and Prediction of Judicial Decisions" in which the author asserts that in the future, judicial decisions will be based on a digital analysis of the legal rules and facts of each case based on scientific methods to be able not only to analyse, but also to predict with a high percentage of probability.[8] In the paper "Prediction of ECHR decisions: The perspective of natural language processing", the group of authors claims that digital language processing with binary classification can predict the outcome of European Court of Human Rights (hereinafter: ECHR) decisions with a probability of 79%, and that this is a reflection of the theory of so-called "legal realism".[9] The European e-Justice Portal currently allows individuals to initiate cross-border small claims or payment orders online in accordance with relevant EU secondary legislation. The Court of Justice of the EU (hereinafter: CEU) stated that "electronic means" must not be the only means offered for access to proceedings, as this could prevent some individuals from exercising their rights.[10] There are already AI systems from private companies that decide what is hate speech and who should be excluded from social media platforms. In

6 Vijeće Europe, *Priručnik o europskom pravu u području pristupa pravosuđu,* Luxembourg: Ured za publikacije Europske unije 2015, 179.

7 Estonia, for example, is considered one of the most advanced e-countries in the world. The success of Estonia's digital transformation was first recognized in the early 2000s, when Estonia surpassed much richer countries in terms of online service delivery and digital governance. Moreover, in 2000, the Estonian Parliament passed a law-making Internet access a basic human right. See: *https://s3platform.jrc.ec.europa.eu/region-page-test/-/regions/EE accessed* June 25, 2023.

8 Reed C., Lawlore, "What computer scan do: Analysis and prediction of judicial decisions", *American Bar Assosiation Journal (ABAJ)* 49(4)/1963, 337–344.

9 Nikolaos Aletras, Dimitrios Tsarapatsanis, Daniel Preoțiuc-Pietro, Vasileios Lampos, "Predicting judicial decisions of the European Court of Human Rights: a Natural Language Processing perspective", *PeerJ Computer Science (PCS)* 2016.

10 *Loc. cit.* CEU, connected cases, C-317/08, C-318/08, C-319/08 and C-320/08, Rosalba Alassini protiv Telecom Italia SpA, Filomena Califano protiv Wind SpA, Lucia Anna Giorgia Iacono protiv Telecom Italia SpA and Multiservice Srl protiv Telecom Italia SpA, 3. 8. 2010, par. 58.

this way, they "take over" the role of the courts and threaten the rule of law. Similarly, private companies offer automated/accelerated online dispute resolution services under their own rules that do not provide consumers with the same protections afforded by law and the courts (e.g., Amazon). Thus, the further accumulation and acceleration of scientific discoveries and technological innovations will undoubtedly have a decisive impact on the further development of the judiciary. It is not only necessary to set the rules of the game by passing certain laws and rounding out the legal framework. This is only the first step. However, due to the complexity of the globalization process, the development of technology, information systems and communications, and the related changes in all spheres of economic and social life, it is currently difficult to accurately predict the future forms and content of AI in litigation, as well as the role of the state as a legislator in future changes in (procedural) legislation. Without being able to give a definitive answer to the question of whether AI can replace the court/judge, many questions are therefore raised, only some of which will be presented here.

3.1. On the (r)evolution of the term court/tribunal

The right to a fair trial,[11] is guaranteed by Art. 29 of the Constitution of the Republic of Croatia.[12] Art. 6, par. 1 of the Convention for the Protection of Human Rights and Fundamental Freedoms[13] determines "1. In order to determine their civil rights and obligations ... everyone has the right to an independent and impartial court established by law..."[14] The right to access the court in the sense of Art. 6 was

11 On this topic in more detail, Maria Dymitruk, "The Right to a Fair Trial in Automated Civil Proceedings", 13(1)/2019, available at: *https://journals.muni.cz/mujlt/article/view/11624/10663*, accessed May 5, 2023 and Paweł Marcin Nowotko, "AI in judicial application of law and the right to a Court", *Procedia Computer Science (PCC),* 192/2021, 2220–2228, *https://www.sciencedirect.com/science/article/pii/S1877050921017324,* accessed June 21, 2023.

12 *Official Gazette*, no. 56/90, 135/97, 8/98 – revised text, 113/00, 124/00 – revised text, 28/01, 41/01 – revised text, 55/01 – corrected, 76/10, 85/ 10 – refined text and 5/14.

13 *Official Gazette*– International Treaties, no. 18/97, 6/99 – revised text, 8/99 – correction, 14/02, 1/06, 2/10 and 13/17, hereinafter: Convention.

14 Dejan Bodul, *et al.*, "O pravu sudova da ulaze u meritum predmeta u kojem donose odluku slučaj predstečajnih nagodbi", *Zbornik radova, Dvanaesto međunarodno savjetovanje, Aktualnosti građanskog i trgovačkog zakonodavstva*

defined in the case of the ECHR *Golder v. United Kingdom*.[15] Referring to the principles of the rule of law and the avoidance of arbitrary action by public authorities, on which the Convention is based, the ECHR considered that the right of access to justice is one of the guarantees of Article 6.[16] However, the "right to court" and the right of access to court are not absolute rights. They may be subject to limitations, but those limitations may not restrict the individual's access to justice in such a way or to such an extent as to violate the essence of that right. What is noticeable in the definition of the term "court" is the tendency of the Constitutional Court of the Republic of Croatia and the ECHR to strive for an evolutionary interpretation, which allows them to interpret the Convention and the Constitution of the Republic of Croatia as legal acts, in addition to the requirement of protection of human rights and fundamental freedoms, which imposes the requirement of real, not only formal, protection. So, the protection of human rights and fundamental freedoms must be not only formal, but must be understood in the context of real-life situations and circumstances in which human rights and fundamental freedoms are realized, threatened or prevented from being realized.[17] In this context, the genesis of the solution shows that the term court is not necessarily to be understood as a court in the classical sense, integrated into the normal judicial apparatus of a given country (see Article 2 of the Judiciary Act),[18] but as a body that decides, on the basis of legal norms and according to a duly conducted procedure, on the issues falling within its competence.[19] Moreover, the Court

*i pravne prakse,*Mostar, Pravni fakultet Sveučilišta u Mostaru 2014, 336–352; Dejan Bodul, Sanja Grbić, "O međusobnoj komplementarnosti pojmova "sud" i "javni bilježnik" u praksi Europskog suda za ljudska prava", *Javni bilježnik (JB)* 18(40)/2014, 35–52.

15 ECHR, February 21, 1975, Series A, no. 18, par. 28–36.

16 ECHR, *Zubac v. Croatia* [VV], no. 40160/12, April 5, 2018, par. 76. *et seq*.

17 Mato Arlović, "Ustavnosudski aktivizam i europski pravni standardi", *Zbornik radova Pravnog fakulteta u Splitu (ZPFST)* 51 (1)/2014, 10. *et seq*.

18 Official Gazette, no. 28/13, 33/15, 82/15, 82/16, 67/18, 21/22, 60/22, 16/23.

19 Let us recall, for example, the delegation of enforcement to notaries, where it is extremely difficult for the doctrine to abandon the traditional approach according to which enforcement belongs to the narrower scope of judicial activity and it is natural for the court to exercise the enforcement function. It seems that the reason for overcoming this prejudice lies in the analysis of the ECHR case law and, in particular, in its correct interpretation. The case law of the ECHR makes it clear to us that enforcement does not belong to the field of

of Justice of the EU (hereinafter: CEU) will only consider the question posed earlier if it finds that the body raising the question has the status of a court or tribunal.[20] These two courts refer in some cases to each other's statements and interpretations of certain common fundamental rights. *Exempli gratia,* the CEU has formally integrated the case law of the ECHR into part of its general principles of EU law.[21] The jurisprudence of the European courts, but also of the Constitutional Court of the Republic of Croatia, has developed over time and has extended the scope of application of the aforementioned Art. 6 Convention in accordance with the understanding that the Convention is a living organism capable of responding to all changes in society.[22] So it remains to be seen whether AI can fall under the concept of court?

"disputes concerning rights and obligations of a civil nature", which, according to Article 6 of the Convention, fall within the competence of an independent and impartial court.In more detail: Dejan Bodul, "Refleksije o nekim hrvatskim modelima dejudicijalizacije", *Harmonius – Journal of Legal and Social studies in South East Europe*, Dosije studio, Beograd 2017, 56–71.

20 Regardless of the specific design of the judicial system of the Member States, the requesting authority is deemed to be a court if it meets the following criteria, which are derived from the interpretation of Union law by the EU Court of Justice. Prof. *Martinović* refers to the CEU case, exempli causa, C-96/04 (*Standesamt Stadt Niebuell*), in which the Court ruled that the German Amtsgericht was not a court or tribunal within the meaning of Article 267 TFEU because in the specific case it only exercised administrative powers and did not decide on the dispute between the parties. The *Vaassen* case, on the other hand, involved a Dutch appellate body that decided on appeals in disputes relating to pension reform in the mining sector. Although this body was not a court or tribunal under national law, the Court nevertheless concluded that it was a court or tribunal within the meaning of Art. 267. UFEU (Case 61/65 (*Vaassen*)). See also Case 246/80 (*Broekmeulen*), in which the Dutch General Practise Appeals Board (an appeal body within the Medical Association) was held to be a "court or tribunal" within the meaning of Art. 267, even though it is not part of the Dutch judicial system. See: Adrijana,Martinović, "Postavljanje prethodnog pitanja Sudu Europske unije", *Građansko pravo– sporna pitanja i aktualna sudska praksa – 2018., Zbornik radova, Tuheljske Toplice, Vrhovni sud Republike Hrvatske i Pravosudna akademija Republike Hrvatske* 22–23. studenoga 2018, 223–250; Dinka Šago, "Postupak prethodnog odlučivanja pred europskim sudom – problemi i moguća rješenja", *Zbornik Pravnog fakulteta Sveučilišta u Rijeci (ZPFRI)* 36 (1)/2015, 381–408.

21 CEU, A. K. v. National Judicial Council and CP and DO v. Supreme Court, judgment pronounced on November 19, 2019, cases no. C-585/18, C-624/18 and C-625/18.

22 See: Jasna Omejec, *Konvencija za zaštitu ljudskih prava i temeljnih sloboda u praksi Europskog suda za ljudska prava,* Strasbourški acquis, Zagreb 2013.

3.2. On the problem of appointing judges and whether AI can have the attributes of independence and impartiality

The current model *de lege lata* provides for the possibility of becoming a trainee at the court after graduation from law school and after the announcement of the selection process. This is regulated by the Law on Trainees in the Judiciary and the Bar Examination.[23] After passing the bar exam and completing the selection process, a person may acquire the status of court counsel. Their status under labor law, as well as the status of trainees, is governed by the Civil Service Act, the General Labor Law Regulations, and the Collective Bargaining Agreement.[24] By placing legal advisors in the category of civil servants, they report directly to the executive branch, more specifically to the Ministry of Justice and Administration. There is neither a clear and transparent procedure nor a time frame that regulates their promotion to higher positions or to higher level courts.[25] Again, after the competition, the court advisor can be elected as a judge.[26] A person holding Croatian citizenship may be appointed as a judge. The State Council for Justice independently decides on the appointment, transfer, promotion, dismissal and disciplinary responsibility of judges and court presidents, with the exception of the President of the Supreme Court of the Republic of Croatia. Vacancies for judges are advertised by the State Judicial Council (hereinafter: DSV) in the Official Gazette and, if necessary, by other means. The advertisement shall contain an invitation to candidates to submit, within a period of not less than 15 and not more than 30 days, an application in which they shall prove that they meet the requirements necessary for appointment as a judge and in which they shall provide information on their activities. Article 51 of the Law on the State Judicial Council specifies the requirements for appointment as a judge.[27] The Official Gazette published a set of regu-

23 *Official Gazette*, no. (84/09, 75/09), 14/19, 30/23.

24 *Official Gazette,* no. 92/05, 140/05, 142/06, 77/07, 107/07, 27/08, 34/11, 49/11, 150/11, 34/12, 49/12, 37/13, 38/13, 01/15, 138/15, 61/17, 70/19 i 98/19.

25 See Dejan, Bodul, *et al.*, "Uloga sudskih savjetnika u radnim sporovima: zalog za budućnost kvalitetnog sudstva ili jeftina radna snaga", *Radno pravo (RP)* 2/2022.

26 With previous passing of the Law School.

27 *Official Gazette*, no. 116/10, 57/11, 130/11, 13/13, 28/13, 82/15, 67/18, 126/19, 80/22, 16/23.

lations prescribing the method and content of the examinations to determine qualification to hold the office of judge. Thus, the regulations were published on the content and methods of conducting psychological tests related to the candidates for the office of a judge at the municipal, commercial or administrative court.[28] The psychological test consists of a written part and an interview with the applicant. The Rules for the Evaluation of Applicants in the Procedure for Appointment of Judges of the First Instance, Regional Courts and Higher Courts shall regulate the manner of conducting and evaluating the interview and/or the written part of the procedure for applicants who have applied for a vacancy for a judicial position.[29] The Rules for Conducting and Evaluating the Written Applications of Candidates for the Office of Judge at the Supreme Court of the Republic of Croatia who are not judicial officers and for Conducting and Evaluating the Interviews of Candidates for the Office of Judge at the Supreme Court of the Republic of Croatia regulate the evaluation of candidates who have applied for the office of judge at the Supreme Court of the Republic of Croatia. Indeed, we see how the Croatian as well as all other modern legislations realize the legal security of the exercise of the judicial function through a more detailed legal regulation of the entire service and, above all, through the establishment of strict legal requirements that a natural person must fulfil as a prerequisite for entrustment and access to the judicial profession. So, can this complex appointment system be replaced by an AI system, i.e., can the AI be endowed with the prerogative of independence and impartiality?[30] In the legal literature of the Republic of Croatia, the criteria applied in the appointment of judges, as well as the authority of the body that determines the procedure for the election of the holders of judicial functions, are still problematic

28 *Official Gazette*, no. 132/22.

29 *Official Gazette*, no. 132/22.

30 Independence refers to freedom of decision-making from external pressures and implies the presence of safeguards against undue influence on the court in the performance of its duties, while impartiality implies the absence of bias or prejudice on the part of the court. This criterion is as important as the criterion of independence, and in cases of doubt, courts usually examine independence and impartiality together. In more detail: "Nezavisnost i nepristranost pravosuđa", *Pregled relevantne prakse Evropskog suda za ljudska prava*, The Aire Centre: Civil Rights Defenders 2021.

today.[31] Therefore, the criteria for the appointment of judges, which should ensure the influx of the best jurists into the judicial system, are questioned both intellectually and professionally, as well as ethically. Moreover, these criteria are problematic, although they are in line with international documents that define the issue of judicial independence, provide certain guidelines as a guide to ensure the best selection criteria and as a guarantee of professionalism in the exercise of judicial activity, and basically prescribe a set of principles, which ensure that the selection is not based on discriminatory criteria, but favors the choice of the most ethically and professionally trained persons, capable of independently examining the legal aspects of the issues raised and resolving them using techniques of legal presumption.

3.3. The liability of the state for damages caused by the illegal and improper activity of a judge, i.e., which liability rules should apply to AI

Pursuant to Article 105 of the Courts Act, the Republic of Croatia shall be liable for damage caused by a judge to a party to proceedings as a result of his unlawful or improper activity in the exercise of his judicial office. The prerequisites for the state's liability for damages are the unlawful and improper activity of the court, the existence of damage caused thereby, but also the causal link between the unlawful and improper activity of the court and the damage caused. These conditions must be met cumulatively. In addition, the Republic of Croatia will only require the judge to repay the compensation paid if the judge caused the damage intentionally or through gross negligence. Similarly, the Republic of Croatia will require the judge to return the compensation paid due to the violation of the right to trial within a reasonable period of time if the violation was caused by the judge's intent or gross negligence. The president of the court where the right to a fair trial has been violated within a reasonable period of time shall be obliged to provide the competent public prosecutor's office with the information necessary for initiating the proceedings to recover the compensation

31 Dejan Bodul, Ivan Tironi, "Vrednovanje rada sudaca u Republici Hrvatskoj: dihotomija norme i prakse", *Zbornik radova II. Međunarodnog savjetovanja "Aktualnosti građanskog procesnog prava – nacionalna i usporedna pravnoteorijska i praktična dostignuća*, Pravni fakultet u Splitu, Split 2020, 241–261.

paid for the violation of the right to a fair trial within a reasonable period of time, if the violation was caused by intent or gross negligence of the judge.[32] So, can the artificial intelligence work in a way that would constitute illegal and irregular work, or is it a case of liability for a defective product, i.e., could the state exculpate itself by claiming that it is a material defect for which the manufacturer is responsible and which it could not have known and should not have known. Current regulations governing a manufacturer's liability for a defective product state that a manufacturer who places a product on the market is liable, without fault, for damages caused by a defect in that product. This responsibility of the manufacturer may not be excluded or limited by a contract. The term "product" includes all movable property as well as electricity and other forms of energy, while real estate is excluded but independent parts incorporated into a movable or immovable property are included. It also specifies when a product is considered defective, who is considered the manufacturer, what the manufacturer is responsible for, what the manufacturer is not responsible for, and when the manufacturer can be relieved of responsibility, what the injured party must prove, and the terms of liability. However, there is no obstacle to establishing special rules for liability, perhaps the rules from Article 9 of the Land Register Act can serve as guidelines determining how the Republic of Croatia is objectively liable for damages caused by errors in keeping the land registers. The liability of the Republic of Croatia for damages is excluded if the damage is caused by an irreparable event, but it exists if it is caused by an error or absence of a computer program or computer termination.[33]

3.4. Data protection issues in the context of Big Data

AI and its automated decision making require the collection and processing of large amounts of data. Regarding the processing/publication of personal data by courts, the introductory statement (Preamble 20) of the General Data Protection Regulation states that this Regulation applies, inter alia, to the activities of courts and other judicial authorities. It also states that the competence of the supervisory

32 Maja Bukovac Puvača, Armando Demark, "Nezakonitost i nepravilnost rada kao pretpostavka odgovornosti države za štetu prouzročenu radom sudaca", *Zbornik Pravnog fakulteta Sveučilišta u Rijeci (ZPFRI)* 42 (2)/2021, 343–360.

33 *Official Gazette*, no. 63/19, 128/22.

authorities should not include the processing of personal data when the courts act in a judicial capacity, in order to protect the independence of the judiciary in the exercise of its judicial functions, including in decision-making. However, Big Data, as it is referred to in authoritative sources, also poses certain challenges, usually related to the volume, velocity, and variety of data processed. Indeed, it is about the amount of data processed, the number and variety of data, that is, the speed of data processing.[34][35] This may, according to doctrine, create challenges for ensuring adequate protection of personal data, for example, when human intervention is not possible or when algorithms are too complex, and the amount of data is too large to communicate to individuals the reasons for certain decisions and/or to inform them in advance in order to obtain their consent.[36]

3.4.1. The right to a reasoned court decision

As a rule, the written word is the most common channel of communication between the courts and the public. A well-written, well-reasoned, and persuasive judicial decision is important for the quality of the performance of judicial duties. At the same time, it is an im-

34 The term "Big Data" can have different meanings depending on the context. Generally, it encompasses the ever-growing technological capability to collect, process, and extract new and predictive insights from a large volume, velocity, and variety of data. See, Vijeće Europe, Savjetodavni odbor Konvencije br. 108, Smjernice o zaštiti pojedinaca u pogledu obrade osobnih podataka u svijetu velikih podataka, 23. siječnja 2017, 2; Europska komisija, Komunikacija Komisije Europskom parlamentu, Vijeću, Europskom gospodarskom i socijalnom odboru i Odboru regija, "Prema rastućem gospodarstvu temeljenom na podacima", COM(2014) 442 final, Bruxelles, 2. srpnja 2014, 4.; Međunarodna telekomunikacijska unija (2015.), Preporuka Veliki podaci: zahtjevi i mogućnosti utemeljeni na računalstvu u oblaku. See: Priručnik o europskom zakonodavstvu o zaštiti podataka, Luksembourg: Ured za publikacije Europske unije 2020, 356. *et seq*.

35 *Exempli gratia,* EDPS, Svladavanje izazova velikih podataka, Mišljenje 7/2015, 19. studenoga 2015; EDPS, Dosljedno jačanje temeljnih prava u doba velikih podataka, Mišljenje 8/2016, 23. rujna 2016; Europski parlament (2016), Rezolucija o utjecaju velikih podataka na temeljna prava: privatnost, zaštita podataka, nediskriminacija, sigurnost i kazneni progon (P8_TA(2017)0076), Strasbourg, 14. ožujka 2017; Vijeće Europe, Savjetodavni odbor Konvencije br. 108, Smjernice o zaštiti pojedinaca u pogledu obrade osobnih podataka u svijetu velikih podataka, T-PD(2017)01, Strasbourg, 23. siječnja 2017.

36 Priručnik o europskom zakonodavstvu o zaštiti podataka, *op.cit*., 353.

portant source of benchmarks for judicial authority, both within the judiciary through the practical application of rules and in the broader social community.[37] The doctrine points out that a well-reasoned judgment is important because the parties must be able to conclude from the court's decision what exactly that decision entails and on the basis of what arguments the court made such a decision. In this second aspect, i.e., what the court bases its decision on, i.e. the reasoning of the decision, the doctrine distinguishes between three elements. First, the factual basis of the decision must be clear: What facts did the court consider as the basis for its decision. Second, it must be clear on what legal basis the decision was rendered, i.e., what legal norms the court applied and how those norms were applied to the facts of the case. Third, it must be clear from the decision how the court weighed the arguments put forward by the parties or evaluated the evidence and what this means for the final decision. This includes both (relevant) arguments regarding facts and arguments regarding legal grounds. The parties must be able to see from the judgment that the court has taken their explanations and arguments into account, and how the court has evaluated these explanations and arguments. These are the requirements from Art. 6 of the Convention.[38] So how likely is it that AI will make a well thought out decision?

3.5. Working time issues: advantages of AI

If there is one issue about which there is always something to discuss and which even suggests itself as a source of legal (and political) dilemmas, it is certainly the (over)burden of the judge. A less complex issue is the area of working time and work scheduling, which involves organizing the duration and schedule of work on a daily, weekly, monthly or annual basis in order to protect the health and safety of workers from the negative effects of excessively long working hours, unreasonable breaks, unreasonable daily, weekly and annual leave. Analyzing these two complementary issues, one can naturally

37 Kristina Saganić, *Način pisanja prvostupanjskih presuda u parničnom postupku*, available with the author.

38 *Priručnik za izradu sudske odluke u parničnimpredmetima,* Visoko sudsko i tužilačko vijeće Bosne i Hercegovine, available with the author; Ustavni sud BiH, *Pravo na obrazloženu sudsku odluku – obvezni standardi su sudskim postupcima,* Sarajevo 2018.

ask whether a judge is able to "balance" the expected duration, quality, fairness of treatment, and availability of legal protection in the given working time while performing administrative and technical tasks.

The doctrine states that the analysis of the European experience shows that the most effective way to increase the efficiency of the judiciary is to relieve judges of tasks outside the court, especially administrative, taking into account that the working time of a judge is (or should be) the most expensive and that it should be targeted. Although it is unrealistic today to expect AI to replace judges, it can replace their assistants who perform administrative and technical tasks. While the courts appear to have a sufficient number of clerks, they are poorly paid and work in very poor buildings with inadequate office equipment. Small courts present a particular problem, with structural weaknesses in their functioning, as the lack of one or two court advisors or technical staff can paralyze the functioning of the entire court and further burden the process.

4. INSTEAD OF A CONCLUSION

Imagine it's Tuesday, May 29, 2046, and the day of your court hearing has finally arrived. You are sitting on a sofa in your living room. You flip open your laptop and log onto the court's website, and a virtual courtroom appears. You see the faces of lawyers, opponents, and the public through their webcams. You also see a very strange judge – a judge who looks like a human, but he/she is not an ordinary judge, he/she is a computer. We leave it to your imagination.

Technology is inevitably changing the way we work and function, so there are predictions that many aspects of human activity will be replaced or supported by newer technologies, and even litigation will not be immune. Although the development of the "AI judge" is still in its infancy, there are signs that it will grow in importance, and there are already developments to introduce an AI judge in some categories of litigation.

From the series of previously mentioned and legally insufficiently solved, i.e., unresolved issues, the extent of sub standardization, legal doubts, but also ambiguity in the analyzed segment of AI management becomes visible.

Namely, EU law does not specify the legal nature of AI but leaves this question to the legislator of each country, which is why this issue is regulated differently in EU countries. Therefore, the question of whether AI can replace the court is not easy to answer. Based on the general criteria for the recognition of the status of a court or tribunal, it will certainly be examined in the future whether AI has and can have such a status. The criteria were proclaimed in the decisions of the CEU in the *Dorsch Consult* and *Josef Kollensperger* cases, according to which it must be a body that 1) was created by law, 2) has a permanent character, 3) whose decisions are binding, 4) before which there is a procedure *inter partes*, 5) whose decisions are taken on the basis of legal norms, and 6) which is independent.[39] Considering the above arguments, it is very important to determine more precisely the status of AI. Authoritative sources state that AI refers to the intelligence of machines that act as "intelligent subjects." As intelligent beings, certain devices can use software to perceive their environment and take actions based on algorithms. The term AI is used when a machine mimics "cognitive" functions, such as learning and problem solving, that are normally associated with humans. To mimic decision making, modern technologies and software use algorithms that allow devices to make "automatic decisions." An algorithm is best described as a step-by-step process of computation, data processing, estimation, and automated reasoning and decision-making.[40] All this shows that the answer to the question of what AI is, is not simple, because defining abstract concepts such as intelligence has never been easy. Moreover, different classifications may differ in their logical or scientific applicability, in the sense that different features of AI are chosen as the basis for classification and thus differ greatly in their utility as organizing principles for our knowledge. At present, AI is expected to evolve in the near future, but no one can yet say with certainty where this technology will ultimately lead and what impact it will have on the understanding of humans and the functioning of society, including in the context of the development of justice. AI, machine learning, and data technologies

39 CEU, no. C-54/96, Dorsch Consult Ingenieurgesellschaft mbH vs. Bundesbaugesellschaft Berlin mbH, ECR (1997) I-4961, 17 September 1997, para. 23 judgments; CEU, no. C-103/97, Josef Kollensperger GmbH & CO. Kg, Atzwanger AG vs. Gemeindeverband Bezirkskrankenhaus Schwaz, ECR (1999), I-00551, 4 February 1999, para. 29.

40 Priručnik o europskom zakonodavstvu o zaštiti podataka, *op.cit*., 353. *et seq*.

may still be in their infancy, but there is no doubt that they will "creep" into justice on a large scale in the coming years and decades.[41]

Dr Dejan Bodul
Izvanredni profesor Pravnog fakulteta Univerziteta u Rijeci

MOŽE LI UMJETNA INTELIGENCIJA (AI) ZAMJENITI SUCA?

Rezime

Iako je u pogledu radnih uvjeta trenutna financijska situacija u pravosudnim institucijama takva da manji broj sudova ima relativno zadovoljavajuće uvjete rada, dok se većina redovno suočava s kadrovskom nepopunjenošću pozicija sudaca, administrativnog osoblja, nedostatkom osnovnih materijalno-tehničkih sredstava za nesmetan rad i nedostatkom ili neadekvatnošću prostora za smještaj osoblja i rad, autor će postaviti doktrinarno dosta aktualno pitanje: može li umjetna inteligencija zamijeniti suca? Pravo EU-a ne precizira pojam suda, već je to pitanje prepušteno zakonodavcu svake države, zbog čega je ova problematika različito uređena u državama EU-a, a samim time i veći izazov za budućnost. Uz navedeno, i dinamična normativna aktivnost u ovom području na europskoj razini uvjetuje potrebu daljnjeg izučavanja i prilagodbe regulative. Osnovni je cilj ovog teksta prezentirati neke od potencijalnih problema, pa se skicaizazova i mogućih odgovora koju ćeponuditi ovaj tekst može smatrati skromnim doprinosom raspravi o involviranju AI u parnični postupak.

Ključne reči: *Sud. – Umjetna inteligencija. – Promjena paradigme.*

LITERATURA

Aletras N., Tsarapatsanis D., Preoțiuc-Pietro D., Lampos V., „Predicting judicial decisions of the European Court of Human Rights: a Natural Language Processing perspective," *PeerJ Computer Science (PCS)* 2016.

41 Dejan, Bodul, Jakob, Nakić, „Umjetna inteligencija (AI) u parnici: početne rasprave?", *IUS INFO* 2023, 1–10.

Arlović M., „Ustavnosudski aktivizam i europski pravni standardi," *Zbornik radova Pravnog fakulteta u Splitu (ZPFST)* 51 (1)/2014.

Bodul D., „Refleksije o nekim hrvatskim modelima dejudicijalizacije", *Harmonius – Journal of Legal and Social studies in South East Europe*, Beograd 2017.

Bodul D., *et al.*, „O pravu sudova da ulaze u meritum predmeta u kojem donose odluku slučaj predstečajnih nagodbi", *Zbornik radova, Dvanaesto međunarodno savjetovanje, Aktualnosti građanskog i trgovačkog zakonodavstva i pravne prakse,* Pravni fakultet Sveučilišta u Mostaru, Mostar 2014.

Bodul D., Grbić S., „O međusobnoj komplementarnosti pojmova „sud"i „javni bilježnik" u praksi Europskog suda za ljudska prava," *Javni bilježnik (JB)* 18 (40)/2014.

Bodul D., Grbić S., „Uloga sudskih savjetnika u radnim sporovima: zalog za budućnost kvalitetnog sudstva ili jeftina radna snaga," *Radno pravo (RP)* 2/2022.

Bodul D., Nakić J., „Umjetna inteligencija (AI) u parnici: početne rasprave?", *IUS INFO* 2023.

Bodul D., Tironi I., „Vrednovanje rada sudaca u Republici Hrvatskoj: dihotomija norme i prakse," *Zbornik radova II. Međunarodnog savjetovanja „Aktualnosti građanskog procesnog prava – nacionalna i usporedna pravnoteorijska i praktična dostignuća,* Pravni fakultet u Splitu, Split 2020.

Bukovac Puvača M., Demark A., „Nezakonitost i nepravilnost rada kao pretpostavka odgovornosti države za štetu prouzročenu radom sudaca," *Zbornik Pravnog fakulteta Sveučilišta u Rijeci,* 42 (2)/2021.

Dymitruk M., „The Right to a Fair Trial in Automated Civil Proceedings" 13 (1) /2019.

Edwards L., Veale M., „'Slave to the algorithm? Why a 'right to an explanation' is probably not the remedy you are looking for'", *Duke Law & Technology Review (DLTR)* 2018.

Lenz M., Hübner A., Kunze M., *Textual CBR,* in: *Case – Based Reasoning Technology, (*Mario Lenz, Brigitte Bartsch-Spörl, Hans-Dieter Burkhard, Stefan Wess (eds.), Berlin, Springer Verlag 1998.

Lynskey O., *The Foundations of EU Data Protection Law,* Oxford 2015.

Martinović A., „Postavljanje prethodnog pitanja Sudu Europske unije," *Građansko pravo– sporna pitanja i aktualna sudska praksa – 2018., Zbornik radova, Tuheljske Toplice, Vrhovni sud Republike Hrvatske i Pravosudna akademija Republike Hrvatske* 22 – 23. studenoga 2018.

Nowotko P. M., „AI in judicial application of law and the right to a Court", *Procedia Computer Science (PCS)* 192/ 2021.

Omejec J., *Konvencija za zaštitu ljudskih prava i temeljnih sloboda u praksi Europskog suda za ljudska prava,* Strasbourški acquis, Zagreb 2013.

Reed C., Lawlore, „What computer scan do: Analysis and prediction of judicial decisions", *American Bar Assosiation Journal (ABAJ)* 49 (4)/1963.

Russel, J. S., Norvig P., *Artificial Intelligence: A Modern Approach (3rd ed.),* New Jersey: Prentice Hall 2009.

Russel, J. S.; Norvig P., *Artificial Intelligence: A Modern Approach (2nd ed.),* New Jersey: Prentice Hall 2003.

Saganić K., *Način pisanja prvostupanjskih presuda u parničnom postupku,* available with the author.

Šago D., „Postupak prethodnog odlučivanja pred europskim sudom – problemi i moguća rješenja," *Zbornik Pravnog fakulteta Sveučilišta u Rijeci* 36 (1)/2015.

Tomlinson J., „The Policy and Politics of Building Tribunals for a Digital Age: How 'Design Thinking' Is Shaping the Future of the Public Law System'," *U.K. Const. L. Blog* 2017.

Uzelac A., *(Ne)premostive prepreke za pametno digitalno pravosuđe, https://legaltech.bug.hr/*.

Zarsky T., „The trouble with algorithmic decisions: An analytic road map to examine efficiency and fairness in automated and opaque decision making, Science", *Technology and Human Values (THV)* 41 (1)/2016.

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