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THINKING OUT OF THE BOX: THE HUMAN BEING IN THE AI ERA

Abstract: We are witnessing increasingly widespread and already indispensable technology inhabit our homes, businesses, schools, public offices, streets, but also bodies and minds. Applications range from natural language processing, through logical AI inferencing, artificial neural networks, to machine perception and motion manipulation widely used in many industries, but also to the prospective birth of the synergic mind based on human-computer interactions. With time and growing excellence and complication of algorithms, more difficult questions arise: not only technical, but also legal, ethical, social, political and economic. Key legal issues relating to the use, acquisition, and development of AI cover a wide array of fields: commercial contracts and tort law, consumer protection and products liability, privacy, data security and other fundamental rights, intellectual property, labour law or antitrust. These questions are interrelated with ethical problems, including whether the strong – as opposed to currently employed narrow artificial specialized intelligence or ASI, with defined goals and no self-awareness – the artificial general intelligence (AGI) may at some point pose an existential threat pursuing goals that – in the extreme – are not even aligned with preservation of mankind. Not less important are closely linked social, economic and political issues, rooted in fear of unequal distribution of profits from this unprecedented exponential tech revolution. The authors make a humble attempt at addressing these problems in a comparative and interdisciplinary perspective.

Keywords: Artificial Intelligence, AI & the law, EU AI White Paper, US approach to AI, privacy and data protection, opportunities & threats for humanity, AI in courts, AI in public administration, AI & judicial dialogue

INTRODUCTION – CREATING AND HARNESSING THE WORLD OF ROBOTS

The Future Life Institute – authoring one of the circulating sets of principles on AI development, supported by practitioners and academics alike[1] – is one of the think tanks which considerably contributed to placing artificial intelligence problems at the centre of interdisciplinary research. An avid supporter of AI expansion, Max Tegmark, offers a classification of life as divided into three phases: Life 1.0 – biological phase, Life 2.0 – cultural phase and, finally, Life 3.0 – technological stadium, with AI at its centre[2]. As Steven Pinker pointed out in a podcast available on FLI website: „It's one of the great achievements of neuroscience, on the one hand, to show that a brain is capable of supporting problem solving, perception and decision making, and of the computational sciences, on the other, for showing that intelligence can be understood in terms of information and computation, and that goals (like the Aristotelian final cause) can be understood in terms of control and cybernetics and feedback"[3].

In the world of robots, it is utterly important that they are able to handle complex tasks while efficiently interacting and collaborating with multiple agents: humans and other robots[4]. Computers clad in a more or less human-like outer shell are expected to mock humans: sense, learn, reason, and take action. It is, therefore, necessary that accurate models are developed capable of producing predictable output based on received data[5]. Humans „routinely make such inferences in their social interactions using the theory of mind: reasoning about others as agents with their own mental states – such as perspectives, beliefs, and intentions – to explain and predict their behavior. Alternatively, one can think of the theory of mind as the human ability to imagine the world from another person's point of view"[6]. Humans came to realize the importance of

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1 Among others: Ray Kurzweil, Nick Bostrom, Andrew Ng, Erik Brynjolfsson, Max Tegmark, Elon Musk and Larry Page.

2 M. Tegmark, Życie 3.0. Człowiek w erze sztucznej inteligencji (Life 3.0. Human Being in the Age of Artificial Intelligence), Prószyński i ska, Warszawa 2019, p. 46.

3 S. Pinker, https://futureoflife.org/2020/06/15/steven-pinker-and-stuart-russell-on-the-foundations-benefits-and-possible-existential-risk-of-ai/ Accessed on 5 Dec. 2020.

4 In the near future human interactions with intelligent machines will become daily routine, ranging from customer service to medical care. There are hardly any limits in the attention and kindness that accordingly programmed bots can expend on another person, channeling unlimited resources into building relationships.

5 A. Hayashi, D. Ruiken, T. Hasegawa, Ch. Goerick, Reasoning about uncertain parameters and agent behaviors through encoded experiences and belief planning [in:] Artificial Intelligence, Volume 280/2020, https://doi.org/10.1016/j.artint.2019.103228. Accessed on 5 Jan. 2021.

6 N. Bard, J. N. Foerster, S. Chandar, N. Burch, M. Lanctot, H. F. Song, E. Parisotto, V. Dumoulin, S. Moitra, E. Hughes, I. Dunning, S. Mourad, H. Larochelle, M. G. Bellemare, M. Bowling, The Hanabi challenge: A new frontier for AI research [in:] Artificial Intelligence, Volume 280/2020, https://doi.org/10.1016/j.artint.2019.103216. Accessed on 5 Jan. 2021.

addressing this question as soon as the 60s, when primary attempts at creating artificial intelligence proved likely to be successful. Ever since, „there have been advances in search algorithms, machine learning algorithms, and integrating statistical analysis into understanding the world at large"[7]. We are now witnessing increasingly widespread and already indispensable technology inhabit our homes, businesses, schools, public offices, streets, but also bodies and minds. Applications range from natural language processing, through logical AI inferencing, artificial neural networks, to machine perception and motion manipulation widely used in many industries, but also to the prospective birth of the synergic mind based on human-computer interactions (HCI)[8]. Fostering digital economy correlates with the vast number of cloud computing resources and consumer demand for on-line services. With time and growing excellence and complication of algorithms, more difficult questions arise: not only technical, but also legal, ethical, social, political and economic[9]. Key legal issues relating to the use, acquisition, and development of AI cover a wide array of fields: commercial contracts and tort law, consumer protection and products liability, privacy, data security and other fundamental rights, intellectual property, labour law or antitrust. These questions are interrelated with ethical problems including whether the strong – as opposed to currently employed narrow artificial specialized intelligence or ASI, with defined goals and no self-awareness – the artificial general intelligence (AGI) may at some point pose an existential threat pursuing goals that – in the extreme – are not even aligned with preservation of mankind[10]. Not less important are closely linked social, economic and political issues, rooted in fear of unequal distribution of profits from this unprecedented exponential tech revolution[11], possibly resulting in massive unemployment not just in the developing countries but threatening virtually any profession other than the ICT sector. This, in turn, may give rise to even more violent outbreak of resentment on the part of those who suffer from social exclusion than we have so far witnessed, and, thus, render the ever-growing neglected class even more sensitive to populist propaganda – spread through still under-regulated social media transpired by murky algo-

[7] Ch. Smith et al., The History of Artificial Intelligence, History of Computing CSEP 590A, University of Washington, December 2006.

[8] Cf. D. F. Noble, Religia techniki. Boskość człowieka i duch wynalazczości (The Religion of Technology. The Dignity of Men and the Spirit of Invention), tł. K. Kornas, Copernicus Center Press, Kraków 2017, p. 277.

[9] M. Stankovic et al, Exploring Legal, Ethical and Policy Implications of Artificial Intelligence; Law, Justice and Development, September 2017 https://www.researchgate.net/publication/320826467 accessed on 6 Jan. 2021.

[10] Assessing the risks of Artificial Intelligence, WEF, at http://reports.weforum.org/global-risks-2017/part-3-emerging- technologies/3-2-assessing-the-risk-of-artificial-intelligence/#view/fn-6 6, accessed on 10 December 2020.

[11] D. Rotman, Who will own the robots, MIT Technology Review (June 2015), at https://www.technologyreview.com/s/538401/who-will-own-the-robots, accessed on 10 December 2020.

rithms. The address of Ursula von der Leyen at the 2020 WEF summit in Davos, if not much belated, is worthy of praise and extensive quotation:

> *„A year ago at Davos, we talked also intensively about digitalization. The pandemic has massively accelerated the process. The European Union will dedicate 20% of NextGenerationEU to digital projects. To nurture innovative ecosystems, for example where universities, companies, innovators can access data and cooperate. (…) So that the 2020s can finally be Europe's Digital Decade. But for this to be a success, we must also address the darker sides of the digital world. Like for so many of us, the storming of the Capitol came as a shock to me. We are always quick to say: Democracy and values, they are part of our DNA. And that is true. But we must nurture our democracy every day, and defend our institutions against the corrosive power of hate speech, of disinformation, fake news and incitement to violence. (…) The business model of online platforms has an impact – and not only on free and fair competition, but also on our democracies, our security and on the quality of our information. That is why we need to contain this immense power of the big digital companies. Because we want the values we cherish in the offline world also to be respected online. At its most basic, this means that what is illegal offline should be illegal online too. And we want the platforms to be transparent about how their algorithms work. Because we cannot accept that decisions, that have a far-reaching impact on our democracy, are taken by computer programs alone. We want it clearly laid down that internet companies take responsibility for the manner in which they disseminate, promote and remove content. (…) There needs to be a framework of laws for such far-reaching decisions. This is why the Commission launched the Digital Services Act and the Digital Markets Act in December. This is our new rulebook for our digital market"*[12].

More recently, the focus of both research and development is on the following applications: large-scale machine learning, artificial neural networks (ANNs), Natural Language Processing (NLP) analysing human speech based on deep learning, collaborative systems, algorithmic game theory and computational social choice drawing attention to the economic and social computing dimensions of AI, reinforcement learning based on experience-driven sequential decision-making. All the above may aid, though not always serving transparent incentives, many fields of industry and everyday life: medical diagnosis, farming, wild-life preservation, entertainment, individual and public safety and security, the Internet of Things (IoT), writing sports reports, trading stocks, multi-purpose smart phone applications, autonomous vehicles, to name but a few. Bank of America

[12] Special Address by President von der Leyen at the Davos Agenda Week, 26 Jan. 2021, https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_21_221, accessed on 25 Jan. 2021.

Merrill Lynch estimates probably rightly point at ca. 2 trillion U.S. dollars in AI-generated global cost-efficiency – a figure that is not to be underestimated and that creates market incentives calling for regulators to exercise ultimate caution, monitoring and surveillance based on clear guidelines[13].

APPLICATIONS TO LEGAL SERVICES: AI AIDING THE PUBLIC ADMINISTRATION

Automated decision-making systems (ADS) include algorithms assisting human decision-making, ie. any computer technology that either assists or replaces human decision making. ADS does not cover AI sensu stricto, but those more conventional systems also pose risks. According to EU Commission initiatives further developed by think-tanks such as the European Law Institute[14] there is a need for "evaluation by internal and external auditors, and the availability of such evaluation reports can contribute to the trustworthiness of the technology"[15]. Such an independent assessment „will increase trust and ensure objectivity"[16], its subject being the evaluation of the impact assessment report done by Expert Boards who are required to possess knowledge of AI systems, knowledge of the public authority's tasks and responsibilities, be impartial and represent diverse social, gender, racial and national groups with different professional backgrounds. The outcomes of their work – reports and recommendations –

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13 M. Stankovic, supra, p. 9.

14 Cf. ELI „Project on Artificial Intelligence (AI) and Public Administration – Developing Impact Assessments and Public Participation for Digital Democracy", which follows on from a preceding feasibility study on the matter, announced on 1 May 2020. Not less important in the dawn of unprecedented growth of big data use is another European Law Institute project: „Principles for a Data Economy", executed in collaboration with the American Law Institute. For more up-to-date information consult: www.europeanlawinstitute.eu.

15 The independent High Level Expert Group on AI, set up by the European Commission to address key AI issues within the framework of the EU, drafted four deliverables, including: Ethics Guidelines for Trustworthy AI which „puts forward a human-centric approach on AI and list 7 key requirements that AI systems should meet in order to be trustworthy"; „ Policy and Investment Recommendations for Trustworthy AI" – a list of „33 recommendations to guide trustworthy AI towards sustainability, growth, competitiveness, and inclusion"; „The final Assessment List for Trustworthy AI (ALTAI)", translating „the Ethics Guidelines into an accessible and dynamic self-assessment checklist for developers and deployers of AI" and, finally, „Sectoral Considerations on the Policy and Investment Recommendations" referring to three spheres: the Public Sector, Healthcare and Manufacturing the Internet of Things. https://digital-strategy.ec.europa.eu/en/policies/expert-group-ai Accessed on 20 October 2021, See also: Ethics Guidelines for Trustworthy AI. See also: Towards a Code of Ethics in Artificial Intelligence with Paula Boddington, Davey, Future of Life Instituute, at https://futureoflife.org/2017/07/31/towards-a-code-of-ethics-in-artificial-intelligence/ Accessed on 20 October 2021.

16 European Commission White Paper on Artificial Intelligence – A European approach to excellence and trust, Brussels, 19.2.2020 COM(2020) 65 final.

should guarantee audit integrity and procedural justice[17]. Therefore, some algorithms would be subject to assessment, some not (ie. spell-checkers), while still other will be screened for potential risks. In this context, Art. 35 GDPR provides a good model with a data controller and data protection authority at the core of safeguarding protected interests. However, as regards AI, the legal framework needs to be clearer than mere ethical guidelines.

Lawyers tend to be conservative, but those who work in the public administration as well as – increasingly, especially in the pandemic era – those who form law enforcement and the judiciary, try to make their work more efficient with the use of AI. Technically speaking, most of the systems used in this setting are not AI, but rather they use technology to enhance the work of public authorities. Nevertheless, lawmakers adhere to the old approach, trying to safeguard original humanitarian legal values at the outset. Relevant documents drafted so far globally, not many of them binding as yet, deal with human rights and ethical approach, because legislators are historically accustomed to analysing these issue. It is doubtful whether we can translate old traditional problems into the digital language; in other words, at the outset a question must be answered: is there an inherent breach between information technologies and human rights? With respect to data protection, competition and consumer protection, competent authorities oversee and supervise their functioning permanently; also in the field of AI impact assessments are welcome. While it is desirable to speed decision making, it is also crucial to protect people against wrong automated decisions. The „red button" dilemma concentrates on the question: whether and how we can take out a single unjustly decided case from the automated system.

Given the above, nationally adapted and iterative evaluations may be needed, but at the same time risk for regulatory overload will potentially drown any AI project and hinder the Internal Market. At the moment, there are several different platforms of sharing information, ie. Internal Market, competition networks, tax authorities, public procurement, but even more elaborate platforms will ensue, therefore it is ever more important to ensure transparency, yet at the same time to meet often conflicting data protection requirements. Another issue raising doubts are the standards of assessment with the central question: how to secure the principles of good administration (duty of care, right to be heard, reasoned decisions) and transparency in the decision-making process[18]. Not less important is addressing the problem: "who will guard the guardians" by defining the principles regulating the supervision of input, but also, perhaps even more importantly, the clandestine processes taking place in the AI „black box"[19]. There might

[17] Eg. predictive policing can pose risks of discrimination as the police relying on AI tend to discriminate the inhabitants of certain areas, which will lead to ethnic profiling.

[18] Cf. M. Ananny, K. Crawford, „Seeing without Knowing: Limitations of the Transparency Ideal and Its Application to Algorithmic Accountability"20(3) 2018 New Media Society, p. 973.

[19] One infamous example is COMPAS, the Northpoint Inc. algorithm used by US courts to predict reoffending criminals. The algorithm weighed 100 factors such as: prior arrests, family

appear the need in the case of self-learning AI to envisage iterative assessments and perhaps introduce ex-post evaluation, which weakens the efficiency and the sense of employing algorithms in the first place. One possible solution is on-going monitoring, another would be scheduled re-evaluation or a system for revocable permits. Furthermore, any requirements elaborated at the European level may need to be adapted to national rules. Yet another problem to be solved is: how to secure the EU Internal Market and uphold national administrative requirements or balance the regulatory overload with respect for national administrative law traditions, while nationally adapted and repetitive evaluations cannot be avoided. It is important to have a system that rises above national traditions, which could be attained with a set of simple, general, not excessively detailed regulation, that would set standards for all Member States.

There is virtually no way to avoid bureaucracy, especially with respect to a system that works in several jurisdictions. Supervisory bodies do not have to be EU or public bodies, however; there is plenty of room for self-regulation which is both proportionate and in line with the principle of subsidiarity, but on the other hand leads to doubts on how valuable a system is and how much it would need to rely on the vigilance of the individual concerned, who would then have to complain using the traditional system for redress[20]. Whatever the final solution, traditional law cannot control AI, but AI should neither be relied upon to supervise AI[21], and any human-designed standards should be based on good administration.

Reference should be made to ethics documents, such as one of earliest attempts drafted in Canada[22], which promises clear-cut answers based on an interactive form to be filled out on-line by a human supervisor – AI developer or user, but creating a danger that a person downplays the risk of the system. In addition, the survey is also designed in a very formalistic manner, by which it may not take

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life, drug use, age and sex, and predicted the likelihood that a defendant would commit another crime. Despite the lack of intentional inherent racist bias, the algorithm incorrectly labeled black defendants as "high risks" almost twice as often as the white defendants. M. Miron, S. Tolan, E. Gómez, C. Castillo, Evaluating causes of algorithmic bias in juvenile criminal recidivism, Artificial Intelligence and Law 29/2021, p. 125. Cf. Northpoint, Inc. (2012) Compas risk and need assessment system. Northpoint, Inc, Tech. rep.

20 M. E. Kaminski, G. Malgieri, Algorithmic impact assessments under the GDPR: producing multi-layered explanations, International Data Privacy Law, 2021, Vol. 11, No. 2, p. 128. See also: K. Crawford, J. Schultz, 'Big Data and Due Process: Toward a Framework to Redress Predictive Privacy Harms' 55(1) 2014 Boston College Law Review, p. 93.

21 Research is needed concerning mechanisms that provide in addition to privacy by design also "accountability by design". See: J. – P. Schneider, Response to the public consultation on the White Paper: On Artificial Intelligence – A European approach to excellence and trust, COM (2020) 65 final, European Law Institute, p. 4-5.

22 S. Hodgett, T. Liu, A. Perey, AI, Machine Learning Big Data Laws 2021. Canada, https://www.globallegalinsights.com/practice-areas/ai-machine-learning-and-big-data-laws-and-regulations/canada Accessed 15 August 2021.

into account individual cases and subtleties. Impact assessment systems for AI are developed by analogy to environment impact assessments – they take a holistic approach and integrate useful and helpful criteria. Any solutions should be communicated to the public in an easy and effective, accessible language, access to information, being a civic right under the the ECHR and CFR[23], and subject to public consultation, as it is crucial to build the trust and make it easier for people to understand how AI and its supervision on the UE level actually works.

APPLICATIONS TO LEGAL SERVICES: AI IN COURTS

Programming language, or "code", which is more elaborate than any human language, allows the machine to be instructed at every stage of its reasoning with precision as to what task must be performed, since it cannot invoke common sense in the absence of an explicit directive of behavior[24]. The code must be devoid of any error in order to allow for smooth, unflawed functioning of the algorithm which decides on issues ranging from financial institutions' investment and lending decisions through enhancing court efficiency and expedient proceedings to assessing the risk of recidivism in criminal cases and adjusting the sentence accordingly[25].

Efficiency is the measure applied to evaluate services rendered both within the scope of market economy and the society, in the public and private sphere. Judicial justice and ADR should be assessed yet from another perspective – that of fairness. Justice delayed is justice denied[26], therefore expediency serves both purposes and application of algorithms may significantly improve dealing with workload by appropriate case assignment and, consequently, reducing the length of proceedings, which is particularly important for doing business. On the other hand, parties may want to accept a more extended and thorough examination of evidence with view to elevating the quality of the decision – one must not forget that people are looking for being heard and understood, which belongs to the wider principle of the right to court as enshrined in Article 6 ECHR and 47 CFR[27]. Independence and impartiality, ascertained by the constitutional principle of separation of powers, but also through education, training and selection process as well as judicial immunity and scope of disciplinary responsibility, are indisputable elements in court as well as – to an extent – in the out-of-court dispute resolution systems. Justice can only be evaluated in a weighted manner,

[23] Under Article 10 ECHR, Article 11 and – with respect to EU documents – Article 42 CFR.
[24] A. van den Branden, Les robots à l'assaut de la justice, L'intelligence artificielle au service des justiciables, Bruylant, Bruxelles 2019, p. 6.
[25] Ibidem, pp. 6 et seq.
[26] W. E. Gladstone.
[27] A. van den Branden, op. cit., p. 20.

using a coefficient measuring importance attributed to selected criteria, such as quality, cost and expediency of proceedings[28], presented to a group of evaluators who award a given number of points from a given pull, equal for all of them and summing up to the same number, eg. 100[29]. The creation of an appropriate matrix and selection of criteria to be assessed is of crucial importance, the Council of Europe „Measuring the quality of justice" being critiqued for operating with questions of very little importance while neglecting the actual content and merits of court decisions[30]. Any analytical debate using arguments for and against robotization of justice must focus on opportunities offered by but also threats inherent in the increased use of machines enhancing or even – with time – substituting human performance[31].

AI, DEMOCRACY, NORMATIVE DISCOURSE AND JUDICIAL DIALOGUE[32]

Information technologies are being perfected and are getting cheaper; as a result, there are no economic barriers to developing judges' dialogue. Therefore, not only the gap in national law or the need to get acquainted with the interpretation of foreign law by the local courts in cross-border disputes, but also the imperative of efficiency implies using the experience of partners from other countries. This phenomenon is known as judicial comity, which is based on respect for the law and its interpretation by courts in another jurisdiction. The long-term effect of the judicial dialogue intensifying and spreading globally is the strengthening of ties between legal systems that interact and even the

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28 This methodology. requires the factors representing weight given to each criterion to sum up to the same number – eg. 100 – for all evaluators.

29 A. van den Branden, op. cit., p. 21.

30 cf. European Commission for the Efficiency of Justice, „Measuring the quality of justice", as adopted on 7 December 2016, at the 28th plenary meeting of the CEPEJ. The document refers to 2 yardsticks: conformity with requirements (assuming pre-defined quality parameters and fixed standards of quality) and conformity with expectations. Authors do concede that „ it would not make sense, given the different legal systems and the many specific features of each judicial system, to formulate a trans-national methodology. Moreover, the concept is so large that it cannot be reduced to a unique technique or methodology." At the same time, a checklist is created, containing seven identified essential elements of the intrinsic quality of the jurisdiction.

31 For example, a model of evaluation of justice proposed by van den Branden – both a practicing lawyer and IT specialist – offers three possible results for each criterion of assessment: either the algorithm prevails substantially over human reasoning, or the other way around, or man and machine are performing equally well. Cf. A. van den Branden, op. cit., p. 21 et seq.

32 Ideas here presented are further developed alongside relevant case law in a forthcoming book by M. Konopacka on global judicial dialogue inferring from and impacting modern legal cultures.

mutual penetration of elements of legal cultures. Short-term cross-border discourse creates a virtual training ground, allowing you to test different solutions, transplant them into your own land. Certainly, conversation through citations, even if it is not symmetrical, enables decisions based on wider knowledge and more data, more complete information than in the case of silence and isolation. Another aspect, which becomes more important after making a decision about seeking helpful judgments and deciding about the choice of specific judgments of specific courts, is the frequency with which these judgments have been used by the courts so far. We like the songs that we already know and are happy to follow proven patterns. Judges are also people, so they make a similar selection, based on the suggestions of other judges or knowing about the popularity of a particular judgment, sometimes due to the popularity of the author – a judge with a distinct personality. Supported by information technologies (search engines, databases on the websites of individual courts, legal information systems) that further increase randomness and make the result dependent on the exact sequence of words entered, the judges actually have innumerable sources of inspiration. However, this does not apply to time, human resources or even language skills. The constructive and proper use of jurisprudence outside its own jurisdiction (even when it comes to ECJ or ECtHR judgments) depends on all of the above factors.

It often happens that state communities desire and seek non-national justification for the solutions adopted to tackle novel problems. This is particularly true in transient situations: at the time of political, economic, social and, of course, legal transformation, of countries once enslaved by a foreign regime or internal dictatorship (e.g. Central and Eastern European countries, Latin America, South Africa), but also in the dusk of unprecedented technological leap which the present generations will unavoidably witness in their lifetimes. The policy of internationalism and nationalism is another element that is variable in the world of judicial dialogue. Some states go as far in their constitutions as to require judges to indicate external sources of justification for their decisions, while countries with established democracy often discourage this. Finally, judges themselves are more or less friendly and open to foreign inspiration when passing judgments. Judges, as has already been pointed out by Foucault, must also convince themselves or, as Posner – himself a federal judge frankly concedes[33] – they must convince their colleagues from the bench, but potentially also lower or higher court judges. Equally, they should have their auditorium in mind, that is, first and foremost, the parties to the dispute, but it is difficult to imagine a court decision that is not persuasive towards a wider audience – the local community, the entire

[33] R. Posner, Nine Theories of Judicial Behaviour [in:] How Judges Think, Harvard University Press 2008, pp. 19-56. Cf. M. Konopacka, "Wielopoziomowa niesprawiedliwość" a "Sędzia" albo "Złota Legenda o Świętym Jerzym" opowiedziana we współczesnej Europie", Centrum Europejskie Natolin 2010, pp.40-43.

nation, and even citizens of larger communities: the Commonwealth, the European Union or even the whole world (as applicable).

Judges also speak to the other authorities, especially to the executive. The analysis of legal discourse proposed by Michel Foucault is not easy to read, but literally perfect and philosophically captivating. Rejecting the accusations of deeply Marxist or nihilist Nietzschean inspirations – by borrowing only the concentration of philosophical discourse on economy and power, respectively – Foucault proposed his own concept of the relationship between law and power, becoming a pioneer of the commonly proclaimed juridisation of everyday life or the colonization of society by law[34]. Based on historical, economic and social analysis, but also on language studies, Foucault approached the interdisciplinary concept of legal discourse[35]. He studied the mutual relations of law, morality and knowledge as well as the use of forms, language and institutions to exercise power at every social level. His works undermine the modernist visions of the individual's central position, legal formalism, progress and the idea that emancipation is always possible through the growth and application of scientific knowledge. [Foucault] studies contribute to the establishment of critical knowledge that opposes domination, especially in its rational, legally administered forms, where appropriation of power is justified by the possession of knowledge. (...) His research shows how the correlations between legal discourses, various forms of knowledge, political economy, governmental techniques and institutions of social control create the logic of power that can be grasped most fully by analyzing its detailed applications (especially at times of transformation and technological change).

Foucault's perceptiveness and skepticism, perhaps even visionaryism, should be appreciated regardless of the assessment of his biography, which significantly influenced the increased criticism, and even reluctance to the oppressive function of degenerating norms (in a mixed sense, also descriptive), replacing the rule of law (in a normative sense only)[36] and to the constant judging of the environment based on the rule of "universal normativity" by virtually every person feeling such a vocation: a teacher, a doctor, a social worker. Foucault conceptualized the law in its operation as a multi-threaded and decentralized product of knowledge and social structures. For him, the law was part of the expansion of power, or rather – "authorities" clustered in many centers. In modern societies, law connects with power at many levels in various ways that expand patterns of social control, knowledge, and documenting information about an individual for institutionally

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34 J. Habermas, Theorie des komunikativen Handelns, Frankfurt 1981, p. 222.

35 G. Turkel, Michel Foucault: Law, Power and Knowledge [in:] Journal of Law and Society, Vol. 17, No. 2 (Summer, 1990), pp. 170-193. R.D. Rieke, Judicial Dialogue [in:] Argumentation 5/1991, Kluwer Academic Publishers. The Netherlands 1991, pp. 39-55.

36 F. Ost, Quelle jurisprudence pour quelle société? [in:] Dire le droit, faire justice, Bruylant, Bruxelles 2012, p. 16.

useful purposes. Ultimately, the requirement of legality and associated knowledge and control techniques cover every aspect of life, every fiber in the fabric of society. The source of "evil", or rather a perversion of noble intentions and ideas, was the evolution of Enlightenment ideas, "excluding forms of thinking, language, association, actions and experiences that are considered abnormal" Rules on coherence, i.e. deciding what is good and what is bad, true and false define the standard of normality. Normalizing discourses take place behind the façade of institutions dominating in social life in a given period, combining elements of rationality and science, juridical categories and state power, creating a network of knowledge and control patterns. The above statement shows the unprecedented power of the judges in the 21st century, which, along with the rapid expansion and sublimation of new technologies, offered unlimited possibilities for expanding knowledge to those chosen by humanity – the half-gods (compared, among others, to Hercules and Apollo, but also to Saint George). For this reason, this intellectual elite equipped with the weapons of independence and ultimate control of human behavior, including lawmaking by the legislature and its application by the executive, in terms of justice and efficiency, has become the target of unprecedented attacks (on the pretext of healing the justice system) by authoritarian regimes hatched on social discontent. The rebellion against social inequalities arises – which in a sense Foucault anticipated – out of powerlessness against exploitation by corporations strongly associated with power centers, the arrogance of the rulers and their distance from "ordinary people", which populists use skilfully. Instability in countries with seemingly ripe democracies is also associated with the effects of global warming and "peripheral" wars fueled by global powers: mass migrations of peoples towards a prosperous and more economically and climate stable north. Anti-immigrant policy is an extremely effect-ive scarecrow for some of even the most liberal societies and is part of the racist, anti-feminist and anti-ecological agenda of contemporary "conservatives" This is currently the biggest challenge for the courts, especially in post-communist countries, hence the attack on their independence by the other populist authorities is carried out with great determination. Strengthened by adequate algorithms, the „elite" now increasingly meaning strong non-national players with vast financial resources, may forward goals that are detrimental to rule of law and democracy. It is for the courts to defend these values also from abuse via information and communication technologies, conversely, using new AI-linked ICT for the benefit of global coherence and peace.

EUROPEAN PERSPECTIVE – THE EU AI WHITE PAPER

A recent document that sets the landscape for future legislative action is the EU Commission White Paper of 19 February 2020 on artificial intelligence: „A European approach to excellence and trust". The pre-legislative document

lists as AI benefits: improving health care (more precise diagnosis, better disease prevention), increasing the efficiency of agriculture, or transport; pro-ecological role in effectuating the „European Green Deal"; improving the efficiency of production systems and reduce the cost of holy services; increasing security (e.g. crime prediction) and improving the efficiency of public administration.

Among potential threats, the Commission enumerates: non-transparent decision making, discrimination based on sex or other protected features (Article 19 TFEU), interference with private life, possible use of AI for malicious and criminal purposes[37]. Hence the objectives of the EU White Paper entail a coordinated European approach to the social and ethical implications of artificial intelligence, better use of big data for innovation, regulatory and investment approach, promoting artificial intelligence, but also addressing threats (rule of law, basic laws), guaranteeing sustainable development (economic, ecological and social) identifying policy options on how to achieve these objectives, extensive public consultation (completed) and exclude military use from its scope[38].

The creation of the "Artificial Intelligence Ecosystem" for citizens comprises safe and environmentally friendly transport and health services. With respect to enterprises, the crucial problems are cybersecurity and green circular economy; while for services of general economic interest – reducing the costs of providing services (transport, education, energy and waste management). The problem of security of citizens in connection with rights and freedoms point at the benefits arising from the use of intelligent algorithms in tracking online terrorist propaganda or hate speech; detection of suspicious transactions of sale of dangerous products, money laundering; identifying dangerous hidden objects or illegal substances or products, assistance to citizens in emergency situations and assistance to emergency services. But disinformation, fake news, invasion of privacy and abuse of data, human dignity or the safety of minors are not to be neglected and call for comprehensive regulation[39]. An "ecosystem of excellence" along the entire value chain, from research and innovation to implementation is also stressed alongside the need for incentives for SMEs. An "ecosystem of trust" needs to be created, with the protection of fundamental rights at its core, including personal data (as stipulated in Art. 8 ECHR and CFR) and consumer protection (with respect to high-risk AI), which is utterly important for citizens.

With data wave increase from 33 zettabytes in 2018 to a forecast 175 zettabytes in 2025 (10 21 bytes)[40], 80% accounting for cloud computing, 20% for the

37 AI White Paper, p. 9.

38 Ibidem, p. 1.

39 M. Konopacka, Protection of Minors and Human Dignity in he Information Society: EU and US Perspectives [in:] Lawyers in the media society : the legal challenges of the media society / Saarenpää Ahti, Sztobryn Karolina (eds.), Rovaniemi 2019, University of Lapland Printing Centre, p. 127 et seq.

40 If every terabyte in the zettabyte was a kilometer, that would be the equivalent of 1,300 trips back to the Moon.

internet of things, including smart cars or home appliances, the basic requirements set out by the Commission cover data storage and record keeping; required types of information; reliability and accuracy; human supervision and specific requirements for certain artificial intelligence applications, e.g. for remote biometric identification. All the above safeguards serve the purpose of counteracting possible flaws within algorithms, including: early-stage machine learning mistakes, but also bias stemming from internalisation of prejudices of human creators, cybersecurity problems related to the Internet of Things[41], internet of bodies in the medical field[42], privacy and consumer protection concerns[43], military applications of autonomous robots[44], attempts at robots' rights regulations[45], intellectual property issues with respect to robots themselves, as well as the creations of artificial mind[46], civil and criminal liability for robots' actions and omissions[47], or – most reprehensibly – the singularity phenomenon potentially requiring efficient pre-emptive procedures designed to „press the red button" or „pull the plug"[48]. On the other hand, excessive or inadequate regulation may hinder headway, stifle innovation and sabotage potential AI benefits to humanity[49]. We are of the opinion that balance must be struck on all levels of governance, based upon relevant black-letter law regulations, as much as possible harmonized on

41 S. Kumar, P. Tiwari, M. Zymbler, Internet of Things is a revolutionary approach for future technology enhancement: a review, Journal of Big Data, volume 6, no.111/2019, SpringerOpen, p. 1-2.

42 H. Dalal Abdulmohsin et al., Body-to-Body Cooperation in Internet of Medical Things: Toward Energy Efficiency Improvement, Future Internet 2019, 11, 239; doi:10.3390/fi11110239, pp. 1-13.

43 S. Wang et al., Consumer Privacy Protection With the Growth of AI-Empowered Online Shopping Based on the Evolutionary Game Model, Frontiers in public health, 7 July 2021, Vol.9, pp. 1-9.

44 R. C. Arkin, Governing Lethal Behavior in Autonomous Robots, Chapman Hall/CRC 2009.

45 J. C. Gellers, Rights for Robots: Artificial Intelligence, Animal and Environmental Law, London : Routledge. 2021.

46 C. Castets-Renard, The Intersection Between AI and IP: Conflict or Complementarity?, IIC – International Review of Intellectual Property and Competition Law, 2020-01-21, Vol.51 (2), pp.141-143.

47 With respect, in particular, to manufacture and design defects and failure to warn. More on the subject: J. Villasenor, Products liability law as a way to address AI harms, 31 October 2019, https://www.brookings.edu/research/products-liability-law-as-a-way-to-address-ai-harms/ Accessed 15 August 2021. On postulated responsibility for plotting terror attacks see: M. Lavi, Do Platforms Kill?, Harvard Journal of Public Law Policy vol. 48, pp. 549-563.

48 In this respect, a question arises: will the future AI generate utopia or dystopia? „Although it is very unlikely that either scenario will ever occur, the potential impact can be so great that it deserves a certain measure of reflection. That applies both to the utopian vision (we never have to work again) and the dystopian vision (we will become slaves to technology)." R. van Belkom, AI no longer has a plug: About ethics in the design process. Part III in the series 'The future of artificial intelligence (AI)' Making choices in and for the future, The Netherlands Study Centre for Technology Trends (STT), The Hague 2020, p. 13.

49 J. von Braun et al., Robotics, AI, and Humanity: Science, Ethics, and Policy, Springer 2021.

a regional and – ideally – global scale, in order to avoid incoherent, chaotic and potentially dangerous developments and to prevent AI from working to the benefit of selected groups of society, serving their utilitarian purposes, or even from posing a threat to all human beings.

COMPARATIVE PERSPECTIVE – SOLUTIONS ADOPTED IN THE UNITED STATES

American solutions aimed at machine learning systems and AI refer to consumer protection and unfairness as defined in the Federal Trade Commission (FTC) act s. 5 (a)[50]. It covers substantial injury to consumers not reasonably avoidable by them and not outweighed by countervailing benefits. This expands to non-economic injuries and makes necessary due consideration for the established public policies and may be used against unfair uses of machine learning/AI. It is put forward by American authors addressing the subject, that ML/AI require a new paradigm based on social protection rather than on individual control[51]. However, some states' attempts at regulating AI (notably state privacy laws of Virginia and Colorado, while the draft Washington law was never passed) are referred to as „binary governance" covering two primary modes of regulation, the first one being the „individual rights approach" focused on dignity and autonomy, covering the right to meaningful information on used algorithms, he right to explanation, the right to human intervention and to express one's point of view as well as to contest supplemented by rights to notification, access, correction and deletion of personal data. The latter was also adopted in the EU in Art. 22 GDPR and advocated eg. by OECD in its 2019 Recommendations on AI, but also in the proposed amendments to Quebec law which includes the right to contest, or the Brazilian law with the right to review the decision taken with respect to unfair AI. The second possibility is the governance/compliance approach, which is more instrumental and offers systemic, ex ante control and ex-officio administrative supervision based on risk management. There is, however, growing tendency to combine the benefits of both approaches and to „co-regulate" the issue[52]. It is noteworthy that the US FTC is seeking to apply its own „unfairness authority" to use of biased algorithms, in accordance with the draft Algorithmic Fairness Act (p. 5052), focusing on algorithmic eligibility determinations with respect to key

[50] Section 5(a) of the FTC Act, 15 U.S.C. Sec. 45(a), prohibits, inter alia, "unfair methods of competition." Unfair methods of competition include any conduct that would violate the Sherman Antitrust Act or the Clayton Act.

[51] D.D. Hirsch, From individual control to Social Protection: New Paradigm for Privacy Law and the Era of Predictive Analytics, 79 Maryland Law Review 2020, p. 439.

[52] M. E. Kaminski, Binary Governance, 92 S. Cal L. Review 2019, p. 1529; M. E. Kaminski, Understanding Transparency in Algorithms Accountability, Cambridge Handbook of the Law of Algorithms, ed. Woodrow Barfield, Cambridge University Press 2020, pp.1-28.

life opportunities, such as employment or credit. A proposed Algorithmic Accountability Act refers to impact assessments as studies „evaluating an automated decision system and the automated decision system's development process, including the design and training data of the automated decision system, for impacts on accuracy, fairness, bias, discrimination, privacy, and security".

INTELLIGENT REGULATION: HUMAN MASTERS & ROBOT SLAVES OR VICE VERSA?

The „Ethics Guidelines for Trustworthy AI" „postulate that in order to achieve 'trustworthy AI', three components are necessary: (1) it should comply with the law, (2) it should fulfill ethical principles and (3) it should be robust". It should also operate and be used for ends consistent with core EU values of „respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities" as enshrined in Article 2 TEU, common EU Member States' values as enshrined in the ECHR and the EU Charter of Fundamental Rights, but also in observance of the EU „regulatory framework that will set the global standard for human – centric AI", including the GDPR[53], the recently adopted Cybersecurity Act[54] and the proposed ePrivacy Regulation[55]. The seven key requirements enumerated in the Guidelines are: human agency and oversight , technical robustness and safety, privacy and data governance, transparency, diversity, non-discrimination and fairness, societal and environmental well-being and, finally, accountability. Intended as a horizontal policy of general application, these seven safeguards must take a „concrete and proportionate implementation, taking an impact-based approach"[56]. Design, drafting and passing adequate laws is rarely swift, therefore the judiciary may have to address novel legal issues. Practicing lawyers and academics alike are now tasked with strategic litigation and advancing test cases

[53] 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), OJ L 119, 4.5.2016, pp. 1–88.

[54] Regulation (EU) 2019/881 of the European Parliament and of the Council of 17 April 2019 on ENISA (the European Union Agency for Cybersecurity) and on information and communications technology cybersecurity certification and repealing Regulation (EU) No 526/2013, OJ L 151, 7.6.2019, pp. 15–69

[55] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the respect for private life and the protection of personal data in electronic communications and repealing Directive 2002/58/EC (Regulation on Privacy and Electronic Communications), COM/2017/010 final – 2017/03 (COD).

[56] An example offered by the HLEG is that of AI application suggesting a consumer an unsuitable book to read compared to the much more perilous misdiagnosing patient's cancer or other health and safety applications, which call for far more stringent supervision.

preferably to last instance courts, that will in turn make sure to engage in European and perhaps even – much desired – global dialogue, while ascertaining more uniform and unavoidably creative interpretation of the emerging problems involved in AI activities.

AI can provide a system to make decision making more efficient: where humans make mistakes, AI may help to get the balance right. But should the administration of justice rely on the same mechanism as sports games where a video assistant referee decides if a player was off-side or not? This football analogy points to the phenomenon referred to as automation bias, where a logically flawless decision has no human element and therefore does not serve human justice, even with AI only aiding humans, as data judges receive through operation of AI is pre-filtered and inevitebly creates an information bubble. Any person, judge in particular, taking informed and unbiased decisions, must be capable of using the possessed contextual knowledge to analyse information; he or she must have adequate options and be free from coercion and manipulation of others. Another important question is that of collegiality – judges taking decisions in panels use the opportunity to exchange view and sometimes even, as pointed out by Posner[57], negotiate the outcome, where there are no guardians to guard pre-coded algorithms in their decision-making process. This refers us back to the black-box or explainability paradox on how base values were programmed, as a result of which a perfectly logical decision may also be perfectly unacceptable from the point of view of humanitarianism, and renders useful a remark coined by Donald Rumsfeld that we can never know the unknown unknowns. Human intelligence in this respect should face the challenge of treating artificial intelligence with due care and diligence, in order to oversee its development and make sure it remains an opportunity, not a threat.

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