Technologies Versus Justice: Challenges of AI Regulation in the Judicial System

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Abstract
The article examines issues of using artificial intelligence in such a sensitive area of human activity as justice. The authors refer to numerous facts on attempts to create a kind of "smart court" in various countries. At the same time, these attempts run up against circumstances that indicate the need to establish legal restrictions on the use of artificial intelligence in the administration of justice. Moreover, according to the authors' reasoned conviction, there are areas in which the robot judge turns out to be powerless to replace human intelligence. Based on the philosophical and legal approach to assessing such a phenomenon as digitalization and the phenomenology of legal judgment, the authors conclude that the adoption of a court decision that meets the requirements of the principle of justice is something beyond the reach of artificial intelligence. Such a decision can only be made by a human judge, but not by a robot. AI systems in the judicial system should support rather than supersede judges.

Keywords
artificial intelligence; robot; judge; judicial decision; "smart court"; phenomenology; justice.

Background

Dramatic social changes caused by the fourth industrial revolution and its principal offspring — artificial intelligence (AI) — are challenging the judicial system, with society and judges faced with problems never seen before. By their sheer impact on the value basis of the judicial system, these challenges need to be promptly addressed by theory and systemic regulation.

In many areas of industrial production and public services the digital technologies including AI are regarded as a factor of development and a modern method (benefit) for reducing production costs, improving labor productivity and management performance, providing for new usability, and ensuring better living standards and individual comfort. Future-focused expressions like “smart home”, “smart plant” or “smart city” reflect the current trend to make AI systems part of the economic and social texture and to create economically viable models [Filipova I.A., 2021: 92–105].

In the wake of this rhetoric, the doctrinal literature and case law increasingly employ the word combination “smart court” that assumes the use of automation, digital data communication/processing systems and AI across the board including legal procedures, case management and administration.

While countries are now only at the early stage of AI introduction, this technology increasingly permeates the judicial system with no resistance on the part of judges, only too eager to test new capabilities for addressing professional tasks.

Meanwhile, AI is fraught with evident threats (named digital risks), something that pushes researchers and practitioners to look for answers to the question of AI feasibility in the judicial field in general and legal decision-making in particular, as well as of the forms and methods to regulate its usage.

While the opportunities of using AI are welcomed rather than questioned by judges themselves, there is no shared view on the meaningful use of this technology to render justice. Also, there is a bitter controversy around the extent and legitimacy of AI use in legal decision-making.
1. “Smart Court”: AI Judicial Uses in Russia and Elsewhere

The question of possible use of machine algorithms in court is not new either for international or domestic science.

The noted American mathematician Norbert Wiener, one of the founders of cybernetics, first posed the question of using cybernetics to deal with legal issues back in 1958 [Wiener N., 1958: 117].

A similar question was discussed by professor S. Levi (France) in his presentation “Cybernetics and Law” at the Second International Congress on Cybernetics (Belgium, 1958). The speaker, in particular, argued that cybernetics should be used both to create and use laws since lawyers “have to deal with increasingly difficult situations resulting from complex organization and fast pace of living of the modern society” [V.A. Ilyin et al., 1961: 368].

The same question was formulated more specifically by L.E. Allen in his report for International Conference on Machine Languages in Cleveland (United States, 1959) on machine discovery and verification of grammatical ambiguities in pleadings.

It was stated already at that time: even the most advanced machine would never become a substitute for human creativity, with cybernetics exploring only quantitative aspects of management processes. Cybernetic devices are just auxiliary technologies for addressing the legal problems of enforcement and management.

In his article “Cybernetics and Law”, D.A. Kerimov, legal section chairman of the Research Council on Cybernetics in the USSR Academy of Sciences, noted in 1962, that “any ideas to fully replace human creative intelligence with machines are to be strongly condemned”. He was outraged that “there are lawyers who are serious about feasibility and rationality of developing a cybernetic device to replace the judge!” [Kerimov D.A., 1962: 102, 103].

While technologies have advanced considerably by now, the main question put in the simplest but essentially valid form — can artificial intelligence replace the judge? — is yet to be addressed.

The answers to these questions are produced by way of experimenting and building up innovative experience of using digital technologies (including AI) in court.

Despite the intrinsic conservatism of procedural form, the judicial power cannot remain outside digital communications emerging at executive
agencies and businesses (as prompted, in particular, by interagency digital communication with many adjacent bodies).

AI tools demonstrate an enormous potential for courts — such as data processing, audiovisual identification, search and analysis of legal documents. AI provides social advantages for exercise of the right to judicial protection as it facilitates access to justice by offering a claim drafting wizard as well as advice on simple and frequently asked questions.

The opportunities for using AI in legal proceedings are extensively explored under different legal systems. Internationally, these technologies are tested to address various tasks including to examine and resolve disputes and to deliver final judgments.

Thus, in China “…major issues brought about by the era of digital technologies and cybernetics, era of artificial intelligence and dissemination of blockchain” are dealt with at the government level.

The Supreme People’s Court of China Resolution “On Regulation and Application of Artificial Intelligence in the Judicial Field” (2022) purports to introduce an improved AI system at courts for comprehensive support of justice and lower burden on judges. It is envisaged by 2030 to put in place an applied and theoretical system for AI use in the judicial field and to develop relevant standard rules consistent with generally accepted standards and principles of justice. The Supreme People’s Court resolution identifies AI in-depth integration with litigation and enforcement, court services and administration, as well as modernization of the judicial system and services across the board as strategic areas of development. ¹

The introduction of AI into China’s judicial system has already provided sizeable economic and financial gains by allowing to reduce the workload of judges by more than one third and save 1.7 billion hours of working time and over 300 billion yuan (45 billion US dollars) in the period from 2019 to 2021.

Chinese digital services cover all stages of case examination and resolution from pre-trial settlement to enforcement of judgments, including case file management and archiving processes. The judicial system makes active use of Big Data technologies, intelligent data processing for speech recognition, case analysis, file error correction, similar case search, case document drafting assistance.

Each judge’s desk is connected to the Smart Court SoS digital system. As reported by the Supreme People’s Court, this system daily analyzes and draws conclusions on approximately 100,000 cases nationwide to monitor the progress of each case and prevent abusive or corrupt practices².

In India, virtual courts examine same-type claims for violation of traffic rules based on AI-aided algorithmic proceedings³.

AI is actively used to provide access to justice.

In Germany, AI systems support the processing of mass claims (in particular, those to road vehicle manufacturers with regard to sales). Essentially of the same type, such claims differ in minor details: motor type, price, mileage, etc. AI is used to process data and draft the final certificate.

In Portugal, the Justice Ministry is in process of developing a virtual assistant based on GPT system to facilitate people’s access to information.

Trial courts in Singapore are testing generative AI to process claims for divorce and some other civil cases⁴.

In Russia, large-scale introduction of AI is hinged on Online Justice super-service to be made operational not later than 1 January 2025, with services to include weak AI technologies to be used in proceedings including for automatic drafting of judgments based on analysis of claims and case files, decoding audio minutes, searching/analyzing legal precedents, and performing administrative routine (record keeping and archiving).

V. Momotov argues that weak AI can be used to examine civil and administrative cases for collection without recourse, primarily in summary proceedings, as “decision-making is largely technical and not related to analysis of legal relations between the parties”⁵.


⁴ Singapore courts to test generative AI. Available at: URL: https://tass.ru/ekonomika/1885151?ysclid=lr9b7s79v584002374 (accessed: 26.01.2024).

⁵ Presentation “Smart courts and the future of judicial power” by V. Momotov, Chairman of the Judicial Council at the XVIII Conference of Supreme Court Chairpersons of SCO Member States in Delhi, 11 March 2023. Available at: URL: http://ssrf.ru/news/lienta-novostiei/50081?ysclid=lr9t2lweb234395325 (accessed: 29.01.2024)
The funded knowledge of AI use in the judicial system shows that its introduction solves three main objectives: reducing the workload of judges and court staff across both procedural and administrative (essentially auxiliary) segments; ensuring faster proceedings; satisfying people’s needs in cheaper, more accessible and convenient forms of access to justice.

Thus, the early experience of introducing AI into countries’ justice systems shows economic, social and administrative gains, with conveniences and advantages offered by this technology to encourage further expansion not only into judiciary communities but also government and society.

2. AI in the Justice System: Challenges of Institutionalization

The current period is prioritizing the search for reliable regulatory system to fence off adverse implications of AI use, and for sources likely to be acceptable for multi-tier social regulation.

Apparently, AI institutionalization challenges related to new “digital risks” for the judicial system, need to be addressed via the law.

Adoption of regulations should be accepted as an ideal regulatory method since the law itself is the supreme regulator [Maltsev G.V., 2016: 770].

However, instant regulation of the problem like in the age of stability and all-over codification, as mentally (and habitually) expected by the legal profession is not feasible and even practically impossible since it is hard to formalize as due the procedure for AI systems tested at courts over short periods, often as test samples, or yet to be developed.

As such, the problem of necessary regulators can be addressed at the first stage of AI introduction via not only legal but also non-legal social regulators, primarily ethical corporate standards would later provide a robust social basis for legal regulators.

Overall, the AI regulatory system appears more sustainable and effective given the diversity of social regulators combining legal and ethical regulation as reinforcement.

The study of doctrinal literature provides similar views with regard to the search for an adequate regulatory system.

V. Sinyukov argues with good reason that such a system, given the intervention of technical regulators, cannot rely on highly abstract provisions
emerging through a long evolutionary process but instead should be “highly empirical and concrete” [Sinyukov V.N., 2021: 26].

Social regulation should be bidirectional, with public interests essentially opposing each other to contain and encourage AI development [Djeffal C., 2019: 255–284]. On the one hand, it should ensure protection of the society and individuals from negative implications of digital technologies and to make them safe while, one the other hand, to encourage innovative AI development for judicial purposes.

The Recommendation on the Ethics of Artificial Intelligence (hereinafter Recommendation)6 passed at the UNESCO Conference of 23 November 2021 attended by 193 member states is believed to the first global source of AI regulation in the international practice. Its starting point is that control arrangements should be based on values and principles not to be violated through the use of technologies.

The Recommendation provides the aims, values and principles of AI use, as well as guidance for all areas where AI is introduced.

The main values underlying all policy measures and regulations relevant for AI are respect and protection of human rights and fundamental freedoms and human dignity. No human being or community should be harmed or subordinated, whether physically, economically, socially, politically, culturally or mentally during any phase of AI system lifecycle.

Throughout the lifecycle of AI systems the quality of life of human beings should be enhanced (clause 14 of the Recommendation). Values to be supported by AI include: environmental and ecosystem flourishing (clauses 17–18), promotion of diversity and inclusiveness (clauses 19–21), and living in peaceful, just and interconnected societies (clauses 22–24).

The principles of AI ethical regulation include: proportionality and do no harm, safety and security, fairness and non-discrimination, sustainability, right to privacy and data protection, human determination, transparency and explainability, responsibility and accountability, awareness and literacy, multi-stakeholder and adaptive governance and collaboration.

China demonstrates a sustainable procedural strategy with regard to AI regulation in the judicial system, with the Supreme People’s Court Resolution “On Regulating and Promoting the Use of AI in the Field of Justice”

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6 Recommendation on the Ethics of Artificial Intelligence. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000381137 (accessed: 29.01.2024)
passed in 2022 containing five principles that identify the parameters of AI technologies used in courts.

The general principles include those of security and legitimacy, integrity, fairness, auxiliary role in decision-making, transparency and credibility, compliance with public order and good customs.

The principle of security and legitimacy essentially prohibits to use AI technology and products to the detriment of national security and legitimate interests of individuals and organizations.

The principle of fairness and integrity requires to follow the fundamental principles of justice and ensure fair trial and equal opportunities to stakeholders.

AI’s auxiliary role in proceedings is a critically important rule (principle) since it prohibits AI to deliver judgments instead of the judge.

Under the principle of transparency and credibility, all AI algorithms are subject to control, assessment and registration by the relevant authorities. Such algorithms should be verifiable to make the procedure and outcomes of AI use predictable and credible.

The meaning of the fifth principle is that the use of judiciary AI systems should not undermine public order and good customs.

We believe that the sustainable procedural approach to AI regulation in the justice system contains the outlines of the applicable legal regime and provides the framework to institutionalize this phenomenon in the judicial field. The next step is to formulate special standards that will establish the legal regime for AI across different types of proceedings to examine different categories of cases from the perspective of common procedural principles and judicial practice.


The legal literature provides the views on obvious advantages of AI compared to human intelligence, with some authors considering the matter of replacing judges with robots — at least, in e-courts — as closed [Furssov D.A., 2021: 46–53].

In our view, the problem of using AI to deliver judgments or intermediate orders depends on the general legal theory and legal philosophy at the same time. The critically important issues are, firstly, those of legitimate
sources of judicial power and, secondly, those of the nature of judgments to be made in rendering justice.

The academic discussion of the problem prompts the following question: “Does the delegation of decision-making authority from a legitimately appointed judge to artificial intelligence (machine) match the nature of judiciary power?”

There is apparently no profound study of how AI systems have impacted judiciary institutions shaped by millennia of human history. The current cursory effects to reduce the workload and accelerate proceedings cannot serve as a criterion for their unlimited use.

The lagged effects of transition from “man-man” to “man-machine-man” or “man-machine” patterns in the communicative model of justice threaten not only to undermine the outcomes of justice but equally to cripple the actor — the judge as the embodiment of judicial power — with a profound debasement.

The doctrine shows an increasing number of authors who adopt the view that using AI to deliver judgments is contrary to the idea of the rule of law [Djeffal C., 2022: 33–44] and fair trial.

The fundamental importance of AI acceptability for judicial decision-making calls for a number of interrelated ideas to set the limits of what is acceptable from the perspective of legal philosophy and theory and other fields of knowledge.

The ongoing processes are hinged on the solution to the dilemma of what comes first: artificial intelligence based on mathematically computable algorithms or human mind capable of perceiving and understanding the facts of life including for rendering justice. That is, the principal question is whether AI (robot) can replace human judge in legal proceedings.

The advocates of using AI in the judicial system believe they can thus significantly simplify, accelerate and facilitate case examination at court. Therefore, they focus on technological aspects of undisputable benefit in the digital age, only to bypass the main question of correlation between computation-based AI and conscious thinking proper of physical activity of human mind endowed with intelligence.

There are at least four viewpoints in this regard: every thinking is computation; in particular, the sense of knowledgeable cognition is in fact the outcome of corresponding computation; cognition is a characteristic mani-
festation of physical activity of human mind [Penrose R., 2005: 35]; though any physical activity can be simulated through a set of computations, numerical simulation cannot be the effective cause of cognition; cognition results from the relevant physical activity of human mind but this physical activity cannot be adequately simulated by computational means; cognition cannot be explained in any physical, mathematical or scientific terms whatsoever [Johnson–Laird P.N., 1983: 252].

The view of the philosopher John Searl in support of the third point is especially interesting in light of this discussion [Searl J.R., 1992].

Positively, justice is not about technologies. It is a process we implement to make a judgment based on our interpretation of legal principles and provisions as well as actual circumstances of the case, and no constructed syllogism or subsumption — mechanically matching the actual circumstances with a legal provision or rule of behavior — will help AI to sort it out.

A legal decision is an act of judgment containing new knowledge that may be true or false. Deciding whether an assertion is true or false requires cognition characteristic only of human mind and unavailable to its electronic simulation.

AI is thus simulated intelligence that, unlike genuine intelligence of the judge, does not require to understand or perceive the legal principles and provisions to be applied.

Interpretation as intellectual and volitional activity has always been and will be the legal profession’s main purpose of activity because of interpretative nature of law that adds up to its other properties. Since regulations and other forms of law create rights and obligations involving often different forms of liability, only interpretation can serve the purpose of their “right” understanding.

Understanding is part and parcel of genuine intellect: in interpreting a regulation, the judge perceives its meaning and legislator’s intention, that is, the will and purpose pursued by the legislator in adopting a certain regulation.

Human consciousness is characterized by such intellectual phenomena as thinking, volition and judgment that are proper of the judicial decision-making. Since, these phenomena are not shared by AI, it is not truly conscious. Consciousness, cognition and understanding are the abilities that no computing system fully has or can ever learn, just like it is incapable of
aesthetic perception and judgment of what is ethical, beautiful or good as these things require cognition.

While AI can simulate these abilities, it will require additional controlling impact on the part of external, sensitive and conscious being — man [Penrose R., 609]. We thus agree with researchers who assert that only man can render justice [Kleandrov M.I., 2018: 15–25].

Law is a highly complex phenomenon that manifests itself at different levels of human existence and each time in a different quality [Kaufman A., 2019: 18–29].

It is explored by philosophy of law, theory of law and sociology of law, each at its own viewing angle. This fact is indicative of the integrative nature of law that allows to regulate relevant part of human behavior and express the interests that make up the foundation of legal provisions and principles [Yershov V.V., 2019: 17]. Without it justice and rule of law relying on a set of abstract principles and rules will not only run up against human existence but pose some sort of a threat to it as an instrument of formalized digital government.

Any public (including state) institution is underpinned by the idea of justice. A robot is incapable of just, that is, fair decision-making. It is human legacy because only man can understand what is fair and what is not [Zorkin V.D., 2017: 2]. Where a public institution is efficient and formal but not fair, its legitimacy cannot be sustained. Such institution should be either reformed or abolished.

According to D. Rawls, truth and fairness accept no compromise [Rawls D., 1995: 19, 20], not even when a departure from fairness is compensated by economic or social benefits. Fairness is a major institutional attribute.

Fairness does not only essentially define justice as a special government activity to examine and resolve cases but also a mechanism supposed to result in a just, that is, fair outcome. In a sense, the judicial system and proceedings are the two aspects (functional and administrative) of legal and formal embodiment of the concept of fairness created by generations of mankind through successive reforms and transformations. Fairness of the judicial system and the concept of the rule of law implemented by court are based on the axiom of judicial power exercised by man — the judge appointed or elected by formal procedure. Any departure from this axiom is a violation of legal succession essentially amounting to revolution in the legal sense.
All revolutions have a cost in terms of public good and seem to be a weapon with devastating social, cultural and politico-legal consequences. A revolutionary method of delegating the decision-making authority to AI falls short of the task to protect rights, only to result in a damage to fundamental values of judicial power well beyond any economic benefit.

A full and uncontrolled delegation of the decision-making authority from a human judge to AI is incompatible with the nature of judicial power.

With technologies opposing the fundamental values of justice as fair trial, there is a need to regulate the extent and forms of control over the use of artificial intelligence as well as formulate relevant prohibitions.

A control mechanism for acceptable use of AI to deliver judgments should have at its core, in our view, the axiom of irreplaceable human judge. Based on this concept, it should include the following components: a) identifying process stages, case categories, types of judgments involving AI; b) prohibiting automated judgments, that is, those made without human control; c) right of the judge to decide whether to involve AI for assistance; d) principle that AI-generated decision is auxiliary; e) principle of personal responsibility of the judge for decisions being made; and f) identifying the risks likely to result from large-scale judicial use of AI across the board.

The incontestable and unconditional premise that the authority to render justice can never be delegated to artificial intelligence should be specifically enshrined in law. AI should support rather than supersede judges.

Adoption of this standard (principle) will allow to end up theoretical and practical (often fruitless) discussions of the problem and to focus on practical implementation of technologies in the judicial system without risking to undermine its fundamental values.

Conclusion

No “smart court” ideology involving large-scale use of digital technologies and AI can be promoted as a path for the judicial system to follow, unless fundamental principles of legal theory and judiciary power are strengthened and developed.

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The nature of judicial power is incompatible with full and uncontrolled delegation of the decision-making authority to artificial intelligence. Using AI to make judgments is contrary to the rule of law and fair trial: AI systems can function only as an auxiliary technology.

AI in the judicial system is at the stage of inception characterized, along with innovations, by moderate conservatism, building up of empiric experience, development of models acceptable for justice and administrative and procedural rules to involve AI without undermining the humanitarian, human nature of fair and legitimate judgment.

As part of the experimental stage, it appears useful to provide for a “pilot court” regime as a way to reduce the risks from implementation of digital innovations at court and to assess the prospects of the relevant organizational forms. This will create a space to develop, validate and introduce digital technologies into procedural, record-keeping and administrative activities of courts.

With technologies opposing the fundamental values of justice as fair trial, it is necessary to institutionalize AI and create a multi-tier regulatory system that will fence off any adverse implications of AI, establish the extent and forms of control over its use and formulate relevant prohibitions.

The best regulatory strategy for AI in the justice system is the procedural guarantee approach that will define the principles of its use AI for the judicial system should support rather than supersede judges. A control mechanism for acceptable use of AI to deliver judgments should be based on the axiom of irreplaceable human judge and include the following: a) identifying process stages, case categories and types of judgments involving AI; b) prohibiting automated judgments, that is, those made without human control; c) right of the judge to decide whether to involve AI for assistance; d) principle that AI-generated decision is auxiliary; e) principle of personal responsibility of the judge for decisions being made; f) identifying the risks likely to result from large-scale judicial use of AI across the board.

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