

LAW IN THE CONTEXT OF NEW SOCIAL AND TECHNOLOGICAL REALITIES

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ABSTRACT: *In an age of profound and accelerating change, justice and law are undergoing an unprecedented process of transformation. Social dynamics, economic pressures, and technological innovation – from digital platforms and artificial intelligence to the restructuring of labor and communication – are reshaping the legal landscape and redefining the very concept of justice.*

This paper explores how law responds to these emerging realities, focusing on the tension between adaptation and the preservation of fundamental legal and moral principles. The study argues that while legal systems must evolve to maintain relevance and effectiveness, this evolution should not compromise the ethical and humanistic core of justice.

Through a reflective analysis of current legal transformations, the paper seeks to identify whether contemporary law remains an instrument of stability and fairness, or whether it risks becoming a reactive mechanism subject to external forces of change. Justice, in this context, appears not as a fixed ideal, but as a process in continuous transition — one that mirrors the broader transformations of modern society.

KEYWORDS: *justice; legal transformation; technological innovation; adaptation; ethical principles.*

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1. NEW SOCIAL AND TECHNOLOGICAL REALITIES

In recent decades, communication has undergone a profound transformation, acquiring increasingly diverse and accelerated forms, as a result of the development of modern digital tools, such as electronic correspondence and instant messaging applications (WhatsApp, Signal, Telegram). At the same time, the storage, processing and transmission of information is increasingly carried out through *cloud computing* technologies, which allow fast and flexible access to significant volumes of data. Information sharing is taking

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place at an unprecedented rate through social media platforms, facilitating constant and extensive global interactions.

This technological development has penetrated rapidly and deeply into everyday life, influencing all the essential areas of society – economic, financial, medical, cultural, political and judicial – so that technology has become an indispensable component of individual and collective existence. Currently, its use is often done in an automatic or default way, without users being fully aware of the scale, frequency and actual impact of digital interactions on daily activities.

Technology plays a crucial role in enhancing access to justice by facilitating access to legal information, support, and judicial mechanisms, thereby enabling individuals to better understand and exercise their rights, especially in developing contexts (Okeke, 2026).

2. LAW IN TRANSITION

In this context of new social and technological realities, different branches of law are forced to analyze and provide answers to the complex problems generated by the accelerated process of digitization, each according to its specificity (Moldovan, 2023). Science and technology thus acquires the valence of genuine sources of law, directly influencing both the content of legal norms and the mechanisms for their application and interpretation (Kajcsa, 2018).

Public law as a whole is constrained to reconfigure fundamental concepts such as the general interest and sovereignty of the state by assimilating new principles and institutions such as net neutrality, regulation of digitalization processes, digital sovereignty and digital diplomacy (Manu, 2023).

At the same time, international law is facing the emergence of new forms of conflict, such as cyber warfare, which raise issues of global responsibility, jurisdiction and security, while criminal law and criminal procedural law are also deeply influenced by new technological realities.

Thus, the criminal law had to criminalize facts whose commission was previously unthinkable, giving rise to the category of cybercrime. Beyond this, the expansion of the use of technology has also facilitated the commission of traditional crimes in the virtual environment, such as the trafficking of drugs through online orders, the collection of victims of human trafficking through digital platforms, the blackmail carried out through messages sent on social networks or other forms of electronic communication.

At the same time, criminal procedural law is the witness of a progressive dematerialization of evidence, which is becoming increasingly digital, which raises key issues regarding the administration, authenticity, integrity and evidentiary value of computer data, requiring the adaptation of the regulatory framework and judicial practice to the requirements of the new technological reality.

3. TECHNOLOGIZATION OF JUSTICE

So far, all processes, be they criminal, civil, administrative, have evolved under the influence of technologies, with the introduction of information tools for case management. For example, the ECRIS portal, the portal.just.ro page and the electronic file are technological tools that currently offer the judiciary a wide range of potential benefits.

At the same time, the possibility of detainees attending court sessions by videoconference, remote witness hearing, quick access to information related to files and relevant case law, real-time remote communication, archiving, processing and transmission of information instantly are real benefits of the technology of justice. File management systems create the possibility for judges and court staff to manage information on ongoing processes more efficiently and quickly. The availability of judgments through electronic publication or distribution leads to the proper functioning of the rule of law, through citizens' access to them (Manu, 2020).

Technology also considerably facilitates the discovery of facts of a contravention or criminal nature, as well as the identification of perpetrators. For example, surveillance cameras can help identify perpetrators; GPS locations can determine their route, intercepts of verbal or written communications, or environmental ones can provide important information about the subject matter of the case (Bodea, 2020).

Applications based on artificial intelligence can improve the working methods of judicial authorities in combating certain types of crime more effectively, such as financial crime, money laundering and terrorist financing, child pornography, online sexual abuse and child exploitation, as well as cybercrime. At the same time, the doctrine showed that the judge might be useful to use artificial intelligence to resolve requests for conditional release, or to foresee the possibility that the suspect will commit new crimes or evade prosecution if called to rule on a preventive measure (Cesari, 2019).

The benefits of artificial intelligence in justice are considerable:

1. Increased efficiency - thanks to artificial intelligence systems, complex analysis can be carried out in a much shorter time than a person could realize.
2. The acceleration of procedures - an efficient processing of information allows the acceleration of procedures, which would reduce the time needed to solve a case;
3. Deeper analysis - given the sheer amount of information, a person would be unable to analyze every aspect in detail, but artificial intelligence is able to analyze and identify patterns in the data provided with remarkable precision and depth.
4. Anticipating human behavior and deep data analysis can lead to the establishment of predictions, thus anticipating human behavior.

The use of new technologies in justice can thus be an extremely useful tool; however, with their implementation, questions of ethics, security, equity have been raised.

Thus, a major challenge is managing sensitive data, ensuring their security, protecting personal information and privacy.

At the same time, the use of artificial intelligence is based on algorithms, which allow the mechanical identification of a result, using data and a predetermined way of processing them. Algorithms, however, can be influenced by the basic information introduced, which can create discrimination. Since the algorithm works on the objective basis of a mathematical formula that processes a huge amount of data entered into the program and which refers to several factors considered relevant for the purpose of calculating the risk of escape or relapse of people (age, work, family status), it can create algorithms in which people of a certain race or gender, age or occupation, or they would be presented with a higher degree of danger, due to the data and information that were provided to the program. Nor can the functioning of the algorithms be fully understood and accessible to the parties, which raises issues of transparency and equality before justice.

The lack of transparency in decision-making, the different types of discrimination and the errors inherent in the basic algorithm, represent major risks for the equality before the law, the protection of privacy and personal data, the freedom of expression and information, the presumption of innocence, the right to defense.

The lack of pertinent information on the functioning of algorithms and consequently the difficulty of challenging their results in court, in particular by persons under criminal investigation, makes their use prejudicial to the rights of the defence and the equality of arms in the administration of evidence, essential principles of the criminal trial.

Therefore, there are also many risks related to the restriction of fundamental rights of litigants, and it is necessary to find a way to use these technological resources in accordance with the fundamental principles of law.

Regulation 2024/1689 (AI Act) recognises certain that AI systems are considered too risky and thus prohibited by law, for example, the use of an AI system for making risk assessments of individuals in order to assess or predict the risk of committing a criminal offence, based solely on the profiling of this person or on assessing their personality traits and characteristics (Katerina Entcheva / Ioana Mazilescu, 2024).

4. THE NEED FOR REGULATION OF DIGITALIZATION

Regulating digitalization is a sovereign tool of states, which allows for rapid and effective intervention, without the aim of destabilizing the existing legal system, but on the contrary, ensuring its evolution, rebalancing its mechanisms and preventing the harmful effects generated by the uncontrolled use of technology (Manu, 2023).

In a broad sense, digitization means the process of transforming analog information, rendered on – physical media such as documents, images, photos, sound or – objects in a digital format, in which information is organized in bits and can be stored, processed and accessed through computer devices.

From this perspective, it can be said that at this moment justice has taken certain steps towards the digitization of processes, but they can only represent a beginning on the way to the modernization of the judicial system. It needs an integrated system of rules, which governs all phases of the process, taking into account their interdependence, participation in the trial by judicial bodies and parties and other procedural subjects, and which affects as little as possible the substance of the specific principles of law and of the rights and obligations laid down by law (Stanciu, 2021).

Thus, the admission of new surveillance techniques in the category of evidence has imposed the observance of constitutional provisions on privacy and secrecy of correspondence, while it is necessary to establish the limits within which the exercise of these rights may be restricted, in accordance with the provisions of the European Convention on human rights and the case-law of the European Court of Human Rights (Valea, 2014).

Looking to the future, the analysis of the problem of predictive justice becomes inevitable. However, an independent and impartial judiciary is one of the essential pillars of the rule of law and a fundamental element in guaranteeing human rights, with judges called on to exercise their functions independently and impartially (Blaj, 2023), without external influences likely to affect the rights of the parties involved in a judicial process (Truța, 2023, p. 183). In this context, future regulations will have to identify ways in which

the use of predictive justice remains an instrument of support for the act of justice and not a substitute for human decision. This is because the judicial decision involves not only the mechanical application of the norm, but also the ability to understand, reasonable appreciation of the peculiarities of each concrete case, as well as the existence of a component of emotional intelligence and sense of responsibility, traits that can be assumed exclusively by a human being.

A pertinent response to these uncertainties generated by automated decisions can be identified in the field of aviation by the concept of „human-in-control”. Starting from the premise that excessive automation can diminish the authority of the human operator, NASA has developed principles of a „man”-centric automation, in which, despite the high level of technology, the pilot and air traffic controllers remain responsible and retain effective control over decisions (Maier, 2025).

Similarly, biometric identification is a technology that is likely to be used more and more frequently in the future. Although the general rule is to ban the use of biometric identification systems by law enforcement bodies, the new Regulation on artificial intelligence adopted at EU level expressly provides for certain exceptions, which are allowed under strict safeguards. Thus, real-time biometric identification schemes can only be used on limited terms, such as the restriction of use over time and space and prior approval by a competent judicial or administrative authority (Truța, 2024, p. 33).

Within this framework of the profound transformations generated by the new social and technological realities, justice is in an inevitable transition process, in which the right is called to adapt dynamically, without losing its fundamental milestones, so that the integration of technology strengthens the efficiency and accessibility of justice, while maintaining the supremacy of the principles of the rule of law procedural guarantees and the essential role of human decision in achieving fair justice.

5. CONCLUSIONS

In conclusion, recent technological developments have led to profound changes in society, directly influencing the legal system. Digitization and intensive use of new technologies have generated both significant opportunities and complex challenges for all legal branches, especially criminal and procedural law. The integration of technology into the justice act helps to increase efficiency, speed and accessibility, facilitating evidence management and case management. At the same time, the use of artificial intelligence and information systems raises sensitive issues regarding data protection, transparency and respect for fundamental rights. Risks associated with excessive automation and opaque algorithms call for a prudent and balanced approach. In this context, proper regulation of digitalisation is becoming essential to upholding the rule of law. It is necessary to provide a coherent regulatory framework that allows the benefits of technology to be exploited without affecting process guarantees. The role of the human factor must remain central in the act of justice, with technology having only an auxiliary character. Therefore, the future of justice depends on the ability to integrate innovation responsibly, in line with the fundamental principles of law.

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