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RULE OF LAW IN THE DIGITAL AGE

Abstract: The rule of law is a concept of Anglo-Saxon constitutional doctrine, which assumes responsibility and limitation of power in the interest of individual and society freedom. Its counterpart in the European continental legal climate is the theory of the rule of law, which originated from the German legal doctrine of the 19th century. The rule of law can be understood as the rule of natural law, then as the rule of positive law with special properties and as the rule of positive law, regardless of the properties it has. The Serbian constitution-maker defines the Republic of Serbia as a state of the rule of law and thus adopts, terminologically, this concept from Anglo-Saxon legal doctrine. Both in Serbia and in all legal meridians in the third decade of the 21st century, the issues of the rule of law in the digital age are topical, which are conditioned by the emergence of new technologies, primarily artificial intelligence. The paper examines the relationship between law and artificial intelligence from the perspective of the protection and respect for human rights, the possibility of introducing electronic voting, or the modification of institutions of direct democracy, such as, for example, a referendum. In the paper, the authors express potential concern about the misuse of artificial intelligence to the detriment of human rights and institutions of democracy, primarily direct ones.

Keywords: *rule of law, digital age, human rights, institutions of direct democracy, artificial intelligence.*

INTRODUCTION

In constitutional law, the substance of the rule of law is reflected in the concept of constitutionality. Constitutionality entails the requirement that the state and its institutions be subject to objective law. The same principle applies to individuals. State authorities must act in accordance with the rules prescribed in advance, rather than according to the will of those temporarily in power where such will has no basis in objective law. Given that the constitution is both a legal and a political act, which, in the legal sphere, regulates the organization and functioning of state institutions and defines the limits of state authority in relation to the freedoms and rights of individuals and citizens, such a limitation of state power is referred to as constitutionality. The idea of the rule of law, rather than the rule of men, is almost, as old as the very concepts of the state and human freedom. During the era of the Greek city-states and the Roman Empire, there were thinkers who examined, in theoretical terms, the issue of limiting the over powerful state authority. However, the concept of the rule of law was systematically developed within the Anglo-Saxon constitutional doctrine, most notably through the work of the English constitutional scholar Albert Venn Dicey. This scholar identified three fundamental principles of the rule of law: (1) the absence of arbitrary (discretionary) power; (2) the subjection of all citizens to the law; and (3) it is the court which creates the law.

In England, the idea of the rule of law manifested itself through two significant requirements: (1) that state power should be limited by law; and (2) that the supremacy of law needs to be secured over the rule of individuals. In the United States of America, the rule of law is expressed through three principles: “(1) all government authority is subject to the law; (2) the state, in the exercise of its functions, acts solely on the basis of the law; and (3) government and the state are limited in relation to the freedoms and rights of individuals and citizens” (Lukić, 1994, p. 64). The German counterpart to the English concept of the rule of law is the idea of the *Rechtsstaat* (state governed by the rule of law). The *Rechtsstaat* “serves to achieve justice through adherence to principles and procedures that safeguard individual freedom and ensure participation in political life. Consequently, the *Rechtsstaat* and democracy form an inseparable whole, while standing in contrast to the police state” (Bataveljić, 2022, p. 199). In a *Rechtsstaat*, both the law and legislation are binding upon those who exercise state authority. Such a state limits the activities of public authorities in favour of citizens' freedoms, and state institutions may act only where they exercise their powers through the appropriate legal procedures. They

cannot place themselves above the law; on the contrary, the constitution and the law must apply equally to everyone, including individuals, collective entities and public bodies, that is, state institutions. “The *Rechtsstaat* appeared as the antithesis of the police state. It was developed through the abolition of absolutism and the introduction of bourgeois democracy. This was the period of revolutionary movements, the creation of the liberal state, the introduction of human and civil rights and freedoms, and the supremacy of law and the legal order... In the *Rechtsstaat*, the individual is no longer a subject but a citizen. Citizens possess both rights and duties towards the state. Although citizens are obliged to comply with certain legal requirements, they also have the right to seek legal remedies against state authorities and their decisions. In addition to private subjective rights, citizens also enjoy public rights - the rights in relation to state authority, particularly to administrative bodies” (Simić, Đorđević & Matić, 2009, p. 164).

The rule of law may be understood in three different ways. The first concept of the rule of law underlines the rule of natural law, whereby only those laws that are consistent with natural law ought to be observed by both state authorities and individuals. The second concept understands the rule of law as the rule of positive law possessing certain essential characteristics, while the third concept reduces the rule of law to the rule of positive law regardless of its content. The authors of this paper are in favour of the second concept. Namely, legislation must be subject to corrective principles of justice and equity. For a system of positive law to be regarded as one governed by the rule of law, certain conditions must be fulfilled, namely the implementation of fundamental principles and the existence of corresponding institutions. These include: (1) the separation of powers; (2) the legitimacy of government; (3) constitutionality and legality (the principle of legality); (4) the independence of the judiciary; (5) constitutional guarantees of human and civil rights and freedoms; and (6) economic freedom and the freedom to conduct business. Some of these principles, and perhaps all of them, are currently being re-examined or interpreted from new perspectives in the digital age. In Serbia, which is constitutionally defined as a state founded upon the rule of law, as well as in legal systems across the world, the question of the rule of law in the digital age has become increasingly significant.

Digital age

The digital age is also commonly referred to as the information age. It is a historical period characterized by the transition from a traditional industrial economy to the one based on information technology. This era is distinguished by rapid access to information, global connectivity and the widespread everyday use of computers and the internet. Global connectivity means that the internet and mobile technologies enable instantaneous communication regardless of geographical distance. The easy availability of information has contributed to the democratization of knowledge, as data are accessible online and, now, through artificial intelligence. The digital age is inherently associated with the automation and digitalization of business processes. This entails significant changes in working practices, including the introduction of electronic commerce, e-government services, and various forms of remote working. However, the benefits of the digital age represent only one side of the coin. Namely, it also presents a range of challenges that may be regarded as its flaws. Constant exposure to digital stimulation has contributed to shorter attention spans and reduced capacity for sustained concentration on complex tasks, such as those involved in scientific research. Furthermore, the digital age requires digital literacy. This entails a continuous process of acquiring new knowledge and adapting to new technologies in order to avoid misinformation and to bridge the technological gap.

Artificial intelligence and the rule of law

The first definition of artificial intelligence (AI) was provided by John McCarthy who described it as the combination of “the science and engineering of making intelligent machines”, that is, the creation of intelligent computer programs (Prlja, Gasmi & Korać, 2022, p. 26). In 2019, the European Union's High-Level Expert Group on Artificial Intelligence defined an AI system as a software- or hardware-based system developed by humans which, in pursuit of a given objective, operates in either the physical or digital environment by perceiving its surroundings, collecting data, interpreting structured or unstructured information, reasoning on the basis of the knowledge derived from such data, and deciding upon the most appropriate action or actions required to achieve the specified objective. AI systems may operate using symbolic rules or by learning numerical models, and they may adapt their behavior on the basis of an analysis of how their previous actions have affected their environment (Isaac et al., 2020, p. 22).

The appearance of artificial intelligence has brought about a profound transformation of legal systems and the administration of justice. AI undoubtedly contributes to greater efficiency in legal research and analyses. At the same time, however, it poses significant challenges to the rule of law by raising concerns regarding algorithmic bias, placing the protection of human rights under scrutiny, and creating a need for the establishment of clear legal frameworks governing its use. The literature addressing the relationship between artificial intelligence and the rule of law underlines several key challenges. These include the issues of bias and discrimination, as well as the protection of the right to a fair trial. If AI systems are based on biased data, there is a clear risk that automated decision-making within the justice system (for example, risk assessments concerning the likelihood of criminal reoffending) may reinforce existing social inequalities. Also, another challenge to the rule of law concerns the potential infringement of the right to a fair trial.

The primary responsibility for ensuring a fair trial is on the judge or, where applicable, the judicial panel. Nevertheless, it has been rightly observed that: “Human beings are not devoid of passion. A Judge is not Hercules. Artificial intelligence is not impartial. Artificial intelligence is not the solution to the problem of judicial (im)partiality” (Avramović & Jovanov, 2023, p. 169). In conducting judicial proceedings and, ultimately, in delivering judgment, a judge is required to be impartial. No such assumption can be made with regard to artificial intelligence. In the field of criminal law, the use of AI presents genuine risks. Comparative experience in the United States provides a particularly significant illustration of these concerns. In certain criminal cases, courts in the United States have relied upon the so-called COMPAS system. This AI-based system is “designed to profile offenders in order to impose appropriate sanctions. It is intended to predict whether an offender is likely to reoffend, thereby assisting judges in deciding the appropriate sentence in individual cases. Research has shown that the system discriminates on racial grounds to the detriment of black defendants and in favour of white defendants” (Prlja, Gasmi & Korać, 2022, p. 88).

In this context, a particularly illustrative example comes from the American case of *State v. Loomis* (often referred to as *Loomis v. Wisconsin*). This case serves as an important example for analyzing the application of artificial intelligence, its potential influence on judicial decision-making, and its possible adverse consequences for human rights. Following his conviction for fleeing from the police while driving a stolen vehicle, Eric Loomis was sentenced to six years' imprisonment. In determining the

sentence, the court relied, among other factors, on the risk assessment generated by the COMPAS system concerning the likelihood that the defendant would reoffend. The defense challenged the judgment on the grounds that it was based upon unreliable assessments generated by an AI system. However, these arguments were unsuccessful and the Supreme Court of Wisconsin upheld the sentence imposed by the lower court, while the Supreme Court of the United States declined to review the case. As It has rightly been observed: “Insufficient understanding of the complexity how artificial intelligence works and its non-transparent capabilities creates difficulties both in legislative regulation and, even more so, in judicial decision-making. Judges tend to be conservative and prefer to adjudicate on the basis of clearly established facts in order to interpret and apply legal rules appropriately which creates safe ground on which they operate with confidence. Artificial intelligence, however, presents an entirely different challenge, requiring a new level of expertise that cannot reasonably be expected of judges solely on the basis of general digital literacy, regardless how broad is the scope of their knowledge” (Đorđević & Matić, 2025, p. 165).

Human rights in the digital age

The foregoing discussion leads to the question of the status of human rights in the new technological era, namely the digital age. The rule of law and the state governed by the rule of law require the promotion, respect, advancement and protection of human rights. In this context, an important question arises concerning the impact of new technologies on those rights. It may even appear unnecessary to ask whether human rights can be abused or violated in the digital age. Nevertheless, the question must be addressed. Unfortunately, the answer is affirmative. One particular thematic section of this paper is dedicated to the freedom of expression as one of the fundamental values of a modern democratic society. In the states with democratic deficits and an excess of authoritarianism, or, simply put, in non-democratic states, communication networks have traditionally been subject to strict governmental control, freedom of expression has been suppressed and censorship has been widespread. For this reason, the appearance of the internet gave hope to citizens who had long been prevented from expressing their opinions and ideas freely. The internet enabled individuals who had previously been denied freedom of expression to state their views openly, even when those views were contrary to prevailing political ideologies. This means that the internet provided a new medium for free expression which, particularly in the countries where censorship is an everyday occurrence,

frequently breaches severe restrictions imposed by their rules. Consequently, the internet came to be regarded as a window into the democratic world and as a new form of freedom. These are, undoubtedly, the positive aspects of the internet as a means of protecting freedom of expression. However, where there is freedom and where new forms of freedom emerge, particularly in authoritarian state, there are always corresponding efforts to suppress it. At the same time, it is necessary to establish an appropriate legal framework to prevent abuses of freedom of expression on the internet, particularly in situations where the exercise of free speech threatens the rights and reputation of others or endangers public health or public morality.

The internet, however, also has negative implications for the right to freedom of expression, as it has provided governments around the world with new opportunities to engage in surveillance and censorship of online communication. Even in developed Western democracies, various forms of internet censorship and digital surveillance have appeared justified by the need to ensure national security and combat terrorism. A particularly striking example of internet censorship is provided by the regulatory framework of the People's Republic of China. China has developed one of the world's most sophisticated and extensive systems for controlling and filtering online information, commonly referred to as the *Great Firewall*. The purpose of this system is to block access to websites containing keywords such as *human rights* and *democracy*. In addition, the Chinese authorities employ a network of individuals who are paid by the state to pose as ordinary internet users on websites and online platforms in order to identify those who criticize the government. At the request of the Chinese Government, major internet platforms have also designed comprehensive self-censorship mechanisms together with a real-name registration system, under which internet service and content providers are required to collect users' real names, identification numbers, and other personal information when providing online services.

A number of other human rights have also been recognised as particularly relevant in the context of the internet. In addition to freedom of expression, these include the right to privacy, freedom of association, the right to education, multilingualism, consumer rights and the strengthening of capacities relating to the right to development. The right to development, recognized as a third-generation human right by the United Nations General Assembly, is closely linked to the access to internet. The internet plays a vital role in the realization of this right by enabling individuals and communities in developing countries to gain access to economic, educational and social resources. Mobile technologies and internet access

have been identified to have contributed to economic empowerment in developing states. For example, internet access enables individuals to make use of financial services, including savings accounts and online financial transactions, which were previously unavailable to a substantial proportion of the population.

Furthermore, the right to freedom of peaceful assembly has acquired a new dimension in the digital age. Traditionally, this right referred to physical public gatherings, such as demonstrations in streets and public squares. Today, however, “the internet and social media have become essential tools for organizing protests, expressing solidarity and inciting collective actions. The ability to sign online petitions or organise events through social networking platforms has increased the visibility of civic initiatives, while also creating new risks, including arrests resulting from digital activism” (Novaković, 2025, p. 14).

The concept of electronic voting and the referendum

Various terms have been used to describe the application of digital technologies to democratic processes, including *cyber democracy*, *push-button democracy*, *teledemocracy*, *electronic democracy*, *algocracy*, and similar concepts (Prlja, 2012, p. 107). Within this new model of democracy, electronic voting has emerged as a realistic possibility. Electronic voting is a legal and technological concept where information and communication technologies are used to facilitate, support or directly conduct voting procedures, that is, the expression of citizens' preferences as a form of citizens' participation. Electronic voting is not merely a technical innovation; it is also a democratic instrument, as it enables citizens to participate in public decision-making more directly and more conveniently by reducing physical, geographical and administrative barriers associated with classical voting methods. In theory, electronic voting has been defined as “a voting procedure in which computer systems and network technologies are used to facilitate the expression of the electoral will, whereby technology does not replace, but rather supports, the essence of democratic decision-making” (Petrović, 2025, p. 210). Electronic voting may take several technical forms, including electronic voting machines, internet (online) voting and optical scanning of ballot slips. Electronic voting by machine involves voters casting their vote on a special electronic voting device at a polling station, where the vote is recorded and stored electronically. Internet voting enables electors to vote through an online platform from any location, typically using a digital certificate or two-factor

authentication. Optical ballot scanning involves the automatic reading of standard paper ballot papers and the transfer of the recorded votes into an electronic database for counting.

Despite its undeniable advantages, which the states founded on the rule of law should seek to implement in the digital age, electronic voting also presents significant challenges and risks. One of the principal concerns is cyber security. Electronic voting systems may be exposed to cyberattacks, malicious software, and, consequently, manipulation of electoral data. Furthermore, it is technically more difficult to guarantee a complete ballot secrecy in internet voting than in conventional voting procedures. Electronic voting may also be viewed with scepticism by the public. The absence of a tangible paper ballot may lead some citizens to question the integrity and transparency of the electoral process.

“Elections are the principal instrument of representative democracy through which citizens decide only who will exercise public authority on their behalf. On the contrary, the referendum is an instrument of direct democracy, enabling citizens to decide directly upon a particular issue. Since the conditions of the modern state do not permit citizens to take over the parliament’s legislative authority completely, the referendum serves as a corrective mechanism within the dominant system of representative democracy. It thus constitutes a form of semi-direct democracy, in which the competent constitutional authorities determine the issue on which citizens will decide directly... The principal characteristic of the referendum lies in the strong democratic legitimacy that it confers upon political decisions. This source of legitimacy is invariably stronger than that enjoyed by parliament as the elected representative body of the citizens and the holder of legislative authority. In order to achieve this objective, a referendum requires careful preparation, including the provision of adequate public information and the development of citizens' awareness of the political significance of the decision and its potential consequences” (Pejić, 2024, p. 263). Within the context of referendums, electronic voting assumes particular importance as an effective mechanism capable of facilitating faster and more accessible public participation in decisions concerning matters of public interest, including constitutional and legislative amendments, national and local political processes and a variety of social and economic initiatives.

Estonia represents one of the most successful examples of the implementation of electronic voting. This Baltic state has become a global leader in the use of electronic voting in elections and referendums. Estonian citizens are able to vote electronically using national electronic identity

cards linked to the state population register. This technology has been designed to ensure secure, efficient and transparent voting while also enabling the verification and auditing of election results. Estonia has successfully applied electronic voting in various electoral contexts, including parliamentary elections and referendums, with the system contributing both to higher voter turnout and to reduced electoral administration costs. The country has also implemented a range of mechanisms to verify voter's identity while safeguarding ballot anonymity. In Serbia, which is constitutionally defined as a state founded upon the rule of law, electronic voting has not yet been introduced for any type of election or referendum. It may reasonably be expected that certain political actors represented in the Serbian Parliament will, in the future, initiate the introduction of this method of voting. Nevertheless, the potential for abuse of electronic voting is considerably greater in fragile democracies and authoritarian regimes than in stable democratic systems.

Concluding remarks

As a concept originating in Anglo-Saxon legal doctrine, the rule of law had first to be examined in this paper from its classical perspective - by explaining the concept of constitutionality, through which the rule of law is expressed in constitutional law. Even in the digital age, the rule of law must continue to be manifested through two fundamental requirements: the limitation of state power by law and the supremacy of law over the rule of individuals. The digital age, also referred to as the information age, has brought about numerous benefits in almost every sphere of social life. It is characterised by rapid access to information, global connectivity and the widespread use of computers and the internet, and since the third decade of the twenty-first century, the increasing application of artificial intelligence. We are witnessing a breaking point in the development of the modern state, the one that will shape contemporary civilization in ways that remain only partially understood, through the integration of artificial intelligence into every area of social life. The appearance of artificial intelligence, as a new stage in the digital age, has fundamentally transformed legal systems and judiciary. AI can be a valuable tool for improving the efficiency of legal research and analysis, but it also may undermine the rule of law through algorithmic bias and raise significant concerns regarding the protection of human rights. The effective and responsible use of artificial intelligence, therefore, requires clear legal frameworks, together with their continuous adaptation to the rapid evolution of AI technologies. Just as artificial

intelligence has brought about a profound transformation in scientific research during our time, the appearance of the internet several decades earlier also represented a turning point and raised the question of the status of human rights in the digital age. As demonstrated in this paper, the internet has been regarded as a window to the democratic world and as a new form of freedom. At the same time, however, wherever individuals and communities strive to exercise their freedoms, there is often a corresponding tendency on the part of those in power to restrict them. In this respect, the internet has also had adverse implications for the freedom of expression by providing governments across the world with new opportunities to monitor and censor online communication. Similar concerns arise in relation to other rights and freedoms.

Electronic democracy has appeared as a new model of democratic governance in the digital age, creating new opportunities for the rule of citizens and new methods of expressing the will of the voters. Electronic voting enables citizens to participate more directly and more conveniently in public actions and in the election for legislative bodies and their representatives in these bodies, as well as in referendum decision-making, while reducing physical, geographical and administrative barriers associated with traditional voting procedures. Nevertheless, these advantages have a dark side, including concerns relating to cyber security, the difficulty of guaranteeing complete ballot secrecy in internet voting and public confidence in the integrity and transparency of the voting process. Ultimately, the relationship between the rule of law and the new technologies of the digital age should be developed in a manner that creates, what some scholars have described, as a bridge between scientific progress and social well-being. Such a bridge can be built only if the challenges are recognised and addressed in a timely manner, thereby preventing the creation of a substantial divide between the proper application of technological innovation and the needs of individuals and society.

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