ARTIFICIAL INTELLIGENCE IN THE LEGAL SYSTEM OF THE REPUBLIC OF SERBIA: PUBLIC ADMINISTRATION AND LEGISLATIVE ASPECTS OF ETHICAL AND LEGAL IMPLEMENTATION

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Abstract: In context of changes and the implementation of the public administration reform, the authors consider the strategic directions of the development of artificial intelligence in the legal system of the Republic of Serbia. This includes the legal framework, necessary infrastructure and interoperability, optimization and digitization of administrative procedures and public services. The impact of the fourth industrial revolution on aspects of public administration is considered and the significant progress of the Republic of Serbia in terms of innovation and social transformations in synergy with the concept of artificial intelligence is described. According to the artificial intelligence readiness index for 2022, out of 181 ranked countries, Serbia is in 59th place. The Republic of Serbia is implementing the Artificial Intelligence Development Strategy for the 2020-2025 period, it is among the 26 countries that launched the National Platform for Artificial Intelligence and is the first country in Southeast Europe to establish an Institute for Artificial Intelligence. Through the contemporary theory of modern administration and the concept and importance of e-Governance in the development of modern administration, the authors particularly discuss the ethical use of artificial intelligence in the legislative framework that promotes and regulates development. The foundation of e-Governance is regulated by a series of special laws, and the Law on Electronic Administration regulates the performance of public administration tasks using information and communication technologies. Therefore, the application of artificial intelligence in public administration belongs to the field of electronic administration, and the Law on General Administrative Procedure is of great importance for the application of e-administration institutes and rules. In addition to significant benefits, artificial intelligence also brings numerous risks in relation to human rights and freedoms, rights to privacy, rights to the protection of personal data, bias and discrimination, lack of transparency and accountability, uncertainty and unreliability, loss of human control and supervision, and so on. In this sense, the authors suggest the establishment of strong inspection, penal and appeal policy mechanisms. Altogether, it is important from the perspective of various preventive mechanisms that will enable accountable development and ways of verifying artificial intelligence in accordance with the highest ethical and security standards, and in terms of finding a fair balance between technological
1. INTRODUCTION

Automatization and data exchange in technology and production processes bring the speed of changes and measures that affect our daily life and the economic development of the entire society. Wherever we go, whatever we do, at home or at work, even if our actions just involve doing laundry, a quiet revolution is taking place. With the help of the Internet, sensors and embedded systems (software), complex processes take place that open up new possibilities for the combination of mental, physical and mechanical work, and most often involve a large number of individuals. This is how Klaus Schwab described the world of the fourth industrial revolution, a system based on artificial intelligence, in which individuals move “between digital domains and offline realities” and use connected technologies to manage their lives (Xu et al., 2018: 90). Such technological developments lead to more advanced and intelligent achievements of artificial intelligence systems that solve different types of problems and are often more efficient than humans in performing repetitive tasks. This leads to a new age that will destroy many businesses from the previous era, bring new markets, innovations and development opportunities, but also changes in power, wealth and knowledge (Xu et al., 2018: 90-92). Smart technology, artificial intelligence, robotics and algorithms (STARA) are predicted to replace a third of the jobs that exist today (Oosthuizen, 2022).

Conditioned by the dramatic transformation of the new age, the world is becoming increasingly digitalized, which as a result leads to social changes that are fundamentally different in “size and scope” and beyond the previous periods of the industrial revolution, with increasingly complex technology that unites the physical, digital and biological worlds (Rotators and others, 2021). Smart technology is applicable to a wide range of fields, including law and legal technology (Lee, 2021). This means solving legal problems based on data and previously collected and systematized knowledge (Prlja et al., 2023). Consequently, it involves the development of legislation that will successfully respond to the challenges posed by artificial intelligence- to maximize the benefits of advanced technology and minimize adverse impacts. Also, it requires a proper understanding of the public-legal institution of the civil service, which has a special importance for ensuring the stable development of the modern state and solving challenges in the context of the fourth industrial revolution (Berezko, 2022). The successful application of these new technologies will contribute to improving the quality of life of all citizens, but also to increasing the productivity of the Republic of Serbia. However, in order to evolve and ensure progress in knowledge and technology and for individuals and society to benefit from it, it is important to be aware of these changes and the speed at which they are occurring. The aim of this paper is to present the review of the authors in the sense of current challenges.

2. DIGITAL CHANGES AND QUALITY STANDARDS

2.1. Responsible response

What is the Government of Serbia doing to prepare for the future? How do government agencies see the demands of learning on modern challenges?

At the end of 2019, the Government of the Republic of Serbia, the first in the region and the 26th in the world, adopted the Strategy for the Development of Artificial Intelligence for the period 2020-2025. (hereinafter: Strategy) (Government of the Republic of Serbia, 2019).
This Strategy sets goals and measures with the intention of responding to the challenges of the modern future, ensuring economic growth, improving knowledge, developing skills, training scientific staff and improving public services. The strategy is aligned with the European initiative on artificial intelligence. A key emphasis of the policy relates to the development and application of artificial intelligence in a safe manner. The government’s overall activities and determination clearly indicate that it is undeniable that Serbia is actively involved in the development of artificial intelligence, that it is recording results and making significant progress on that front.

First of all, Serbia is the first country in Southeast Europe to establish a Research and Development Institute for Artificial Intelligence, which is engaged in research in various fields and with the vision of becoming a “global center of excellence” and creating innovative leaders in scientific research and technology transfer in the field of artificial intelligence and machine learning in the country. Secondly, Serbia is among the 26 countries in the world that launched the National Platform for Artificial Intelligence. It also belongs to the society of global leaders in the development of artificial intelligence, among the 29 members of the Global Partnership for Artificial Intelligence. Thirdly, with the aim of responsible development and methods of verification, the Government adopted the Ethical Guidelines for the safe and reliable use of artificial intelligence (Government of the Republic of Serbia, 2023). This particularly refers to the protection of personal data and protection against discrimination in the application of machine learning, to be in accordance with ethical and security standards and international ethical principles. Fourthly, Serbia shows that it is determined to take advantage of the benefits of artificial intelligence and shows that it wants to work dedicatedly on improving economic growth, knowledge, skills and services, to preserve its won position among global leaders. The government signed an agreement between the European Union and the Republic of Serbia on Serbia’s participation in the European Union program “Digital Europe” for the period until 2027. This enables persons and business entities with residence or headquarters in the Republic of Serbia, on an equal footing with entities from countries that are full members of the European Union, to apply for financing projects from EU funds in the fields of artificial intelligence, high performance computing (HPC), advanced digital skills and the development and application of digital capacities and interoperability (Ministry of Information and Telecommunications, 2023). In addition, the state considers the solutions of the previous performance in the implementation of the measures of the Strategy 2020-2025 and announces new, improved solutions, which refer to the period until 2030. The development of the new strategy is underway and its adoption is expected in the second half of 2024. It is expected that Serbia will invest 100 million euros in the development of artificial intelligence in the next two years. Fifth, according to the Artificial Intelligence Readiness Index prepared by Oxford Insights, the Republic of Serbia is ranked 57th out of 193 ranked countries in 2023 (Oxford Insight, 2023). In relation to the countries of the region, according to the Index, the Republic of Slovenia is best positioned (39th place). Before the Republic of Serbia are also Hungary (45th place) and the Republic of Bulgaria (51st place). Then follow the Republic of Serbia (57th place), Romania (64th place), Croatia (70th place), and below them are Montenegro (78th place), North Macedonia (83rd place), Albania (89th place), and Bosnia and Herzegovina (117th place) (Oxford Insight, 2023).

2.2. Quality standards

In addition to healthcare, medicine, traffic, road infrastructure and mobility in urban areas, public administration is one of the key areas defined in the Artificial Intelligence Development Strategy 2020-2025. The government considers the possibilities and tries to understand the relationship between innovation and public
administration in the current circumstances and defines that public administration significantly contributes to the envisioned goals of social good and development. All this, in the process of cleaning and supplementing data, and in terms of achieving the appropriate quality of data in registers and electronic records of the public administration, and in the processes of analysing the large amount of data that is created by digitization (Government of the Republic of Serbia, 2019: 52). The goal is to improve the efficiency, economy and transparency of public administration. In this regard, as particularly important, the Government emphasizes the ethical and safe application of artificial intelligence, in order to establish responsible development in accordance with the highest ethical and security international standards and prevent the potentially negative effects of machine learning (Government of the Republic of Serbia, 2019: 53 and 54). This is particularly the case with regard to the protection of personal data and protection against discrimination. Therefore, the efficient and effective protection of human rights is the primary obligation of the state, and the protection mechanisms and realization of rights an inviolable imperative (Kostić & Kojićić, 2024; cf. Kojićić, 2024: 46). It is essentially connected with the concepts of the rule of law, respect for democracy and fundamental rights and should be understood as a constitutional principle that has both formal and substantive components (Kostić & Kojićić, 2024; cf. Kojićić, 2024: 47). The realization of fundamental rights and equality before the law is at the core of the basic meaning of the rule of law, which is based on the principles of legality, legal certainty, prohibition of arbitrariness of executive authorities, independent and impartial courts and effective judicial supervision (Kostić & Kojićić, 2024). Therefore, the implementation of substantive and procedural rules of national law is a compatibility condition for the rule of law, a concept that is inherent in all articles of the European Convention on Human Rights (paragraph 63 of the judgment, Stafford v. United Kingdom) (Kostić & Kojićić, 2024).

2.3. THE SCIENCE OF NORMS

At Lund University in Sweden, a norm science perspective has been developed that is a broader concept than the traditional study of norms (Hydén and Svensson, 2008). This perspective studies everything about actors, everything that guides action and directs action and is strongly related to action (Baier, 2008: 41-42). Norms are imperative, socially reproduced and understand individual expectations regarding behavior (Hydén and Svensson, 2008: 143; cf. Kojićić, 2021: 81). Systemic conditions are an important factor for law enforcement, while social structures and political and economic factors can be an obstacle to the application of norms (Hydén, 2008: 156; Kojićić, 2021: 89-90). Different norms (legal, social, economic and other) perform and regulate different functions. Everything together creates the dimension of a certain action in the context of imperatives (definition, origin of the norm), sanctions (expectations), the context in which the norm is socially reproduced, whether it is systemic or value-oriented, what are the intentions and purpose of the norm, as well as its functions. Thus, a connection is established between different norms and individual levels of execution of each norm (Hydén & Svensson, 2008: 138). Finding the essence is crucial when defining the norm, and understanding the problem will indicate differences and help in classification (Hydén & Svensson, 2008: 138 and 143; Kojićić, 2024: 26). In this regard, Professor Hayden divides the norm perspective into three dimensions: (1) analytical, (2) empirical and (3) normative (Hydén, 2022).

2.4. FINDING THE ESSENCE

If we look at the technical norm, the way in which the creators of the Artificial Intelligence Development Strategy 2020-2025 approached the development of the strategic document, then it is enough to understand a priori the strong commitment of the Government of Serbia to succeed in the projected mission. However, the perspective of the science of norms helps us to understand the normative
landscape, interpretation, but also the real world in terms of norms and normative structures in the context of the development of artificial intelligence in Serbia. First of all, the problems are understood, namely: (1) Weak support for the private sector in the development of artificial intelligence (insufficient investments, insufficient presence of global IT companies, insufficient connection of local firms, insufficient number of personnel); (2) Insufficient focus in the education system and scientific research activity on artificial intelligence (digital literacy, insufficient multidisciplinarity in the division of occupations and competences; relatively small number of researchers in the subject area; insufficient cooperation of universities with economy and industry; weak mutual connection of universities); (3) Insufficiently developed public sector for the application of artificial intelligence (insufficient flexibility for the development and testing of innovative solutions, broad and different interpretation of the law on the protection of personal data, insufficiently advanced solutions for analytics and prediction for the purposes of strategic decision-making, lack of a framework for the use of public procurement innovative solutions, a well-developed conversational user interface and virtual assistants (so-called chat bots) on national portals (Government of the Republic of Serbia, 2019: 27; Problem tree – schematic presentation of problems and causes). Second, since the problems are defined and the Government understands them, it is important to make the differences about the problem visible, to classify them in terms of norms and normative structures. This requires the perspective of a presented science of norms that would provide a scientific perspective between the world of life and systems in the light of artificial intelligence and algorithms.

2.5. Empirical study

In this case, the concept of norms and the empirical study of norms help us understand the causalities underlying behavior at the collective level. For example, in the analysis of the effects, the Government envisages, in connection with measure 4.5, to carry out a detailed analysis of the administrative and management capacities during the realization of each of the public sector services in the application of artificial intelligence, and as a key risk it cites the “absence of cooperation of authorities in the implementation” (Government of the Republic of Serbia, 2019: 53). Broadly speaking, this distinction correlates with the distinction between social norms and systemic norms. First, since 2005, the Law on State Administration respects modern models of administration and overcomes traditional understandings related to the mere execution of laws by passing administrative acts and undertaking administrative actions (Lilić, 2011: 18). Second, the Law follows modern models of administration that derive from the concept of the social function of the state, whereby administration gains much greater importance as a service to citizens (Lilić, 2011: 18). Thirdly, the Law assigns a “professional-political function” to the state administration, which is reflected in the participation in shaping the Government’s policy (Article 12) and requires monitoring the situation in areas within its own scope with the obligation to study the consequences of the established situation and to undertake and propose measures for the adoption of appropriate regulations (Article 13). Fourth, the Law regulates the relationship between state administration bodies and other bodies (Articles 61 and 62) and obligates state administration bodies to mutual cooperation and relations in all common issues (Article 64). Businesses within the scope of two or more authorities are managed by the authority in whose scope the majority of the work is (Article 66). Fifth, implementation as a term implies a clear goal, which means that the implemented policy should be “executed, realized, fulfilled, produced, finished (Holzer and Schwester, 2015: 22). Otherwise, the implementation of public policy will depend both on the initial conditions and on the goals pursued (Holzer and Schwester, 2015: 22). Furthermore, Professor Lilić claims that the legitimacy of administrative action is conditioned by the value justification of each
specific action or action, and it is not enough that calling the administration to act is covered only by formal legal and other regulations (Lilić, 2011: 13). Therefore, for professor Lilić, the efficiency of the administration implies a special relationship between “invested and real”, whereby both economy and respect for human rights are taken into account at the same time (Lilić, 2011: 13). In this regard, we are forced to step outside the law and ask ourselves what characterizes the rules of artificial intelligence in Serbia? For that, we need theories of law that take into account the context, dynamics and conditions of law, which is not the same as legal theory. In this, as Professor Hayden claims, there is a difference between knowing the law and legal knowledge, and this cannot be achieved without understanding the broad socio-scientific perspective of law (Hydén, 2022: 129). In other words, we consider the difference in question relevant and see it as extremely important for an in-depth analysis of the causes and consequences of legal rules in the context of the science of norms.

3. EFFICIENCY AND VALUE CRITERIA

3.1 INDEXES VS. PERFORMANCE

First of all, if we look at the readiness index for artificial intelligence, the Republic of Serbia is ranked an enviable 57th place in the world and is among the leaders in the region (Oxford Insight, 2023). Also, the UN data on the e-Government Development Index (EGDI) indicate that Serbia is recording a significant development in terms of digital transformation and confirms its leadership position in the region, but also in the world. This index defines the state of development of e-government in 193 member states of the United Nations and includes three important dimensions: the provision of online services, telecommunications connectivity and human capacities. To assess how countries use information technology to promote access and citizen involvement, the index includes access characteristics such as infrastructure and education levels. Compared to 2010, when it was ranked 81st, Serbia has doubled its progress by 2022 and is now in the enviable 40th place in the world (UN E-Government Knowledgebase, 2024: Serbia). In comparison with the countries of the region, the best positioned is the Republic of Slovenia (22nd place), followed by the Republic of Serbia (40th place), the Republic of Croatia (44th place), and below them are Hungary (51st place), the Republic of Bulgaria (52nd place), Romania (57th place), Albania (63rd place), Montenegro (71st place), North Macedonia (80th place) and Bosnia and Herzegovina (96th place) (UN E-Government Knowledgebase, 2024).

3.2. OBJECTIVE CRITERIA VERSUS PERFORMANCE

On the other hand, the long duration of procedures, “silence of the administration”, incorrect application of the law, non-compliance of procedures, violation of the right to data protection are only some of the typical examples of violation of the principles of state administration (Radojević, 2011: 212). In his latest annual report, the Protector of Citizens continues to state that citizens are not satisfied with the work of the state administration, and that to a large extent citizens’ complaints relate to bad administration (Protector of Citizens, 2024: 3). Considering 4,425 cases in 2023, the Protector of Citizens determined a total of 5,181 violations of rights, of which more than half refer to violations of the principles of good administration and economic property rights of citizens (Protector of Citizens, 2024: 19). The largest number of issued recommendations (216) refer to the departments of state administration (Protector of Citizens, 2024: 20). In the course of 2022, the Protector also determined violations of rights, the largest number of which are violations of the principles of good administration, economic-property rights and social-cultural rights of citizens, and continues to state that the principles of good administration “are violated in all administrative bodies” before with which citizens exercise their rights” (Protector of Citizens, 2022: 22-23).
3.3. Administrative reforms

Administrative reforms are one of the key priorities of the Government of Serbia. According to the new Public Administration Reform Strategy, an important step in improving the existing legal framework is based on harmonizing the process of administrative reform with the process of European integration, i.e. the European Principles of Public Administration, but also the facilitated process of national and EU monitoring of progress in the field of public administration reform (Government of the Republic of Serbia, 2021). This includes service provision policy, human resource management and capacity management, as well as improving coordination in the implementation and evaluation of administrative reform, including further harmonization of all public policy documents. In addition to the European values and integrations that are being pursued, the key orientation of the Government is primarily based on the determination to bring public administration closer to the needs of citizens and the economy, and this implies efficient, responsible and transparent public administration with high-quality and easily accessible services, (Government of the Republic of Serbia, 2021). Emphasis is placed on decentralization, modernization and digitization, the principle of subsidiarity, improvement of human resources and competence, openness, transparency and participation, depoliticized, professional and effective administration, and democratization of all functions in public administration (Government of the Republic of Serbia, 2021). Consequently, it is concluded that the Government’s efforts to strengthen the role of legality and constitutionality in the functioning of public administration are in accordance with the contemporary theory of modern administration and internal organizational changes in realizing the fundamental values of respect for human rights and political decisions within society.

3.4. New public management

Professor Bojan Bugarić from the University of Ljubljana pointed out much earlier that the proliferation of regulations increasingly creates demands for the necessity of changes in attitudes about the democratic legitimacy of the executive power (Bugarić, 2004: 484). In this regard, Bugarich emphasizes that the proliferation of regulations leads to a greater possibility of abuses, while the complexity, speed and interventions of modern processes increase the creation of specific executive regulations that do not always correspond to the defined legal goals. In this way, the functioning of the public administration, without the express authorization of the legislative power therefore in the absence of legitimacy, “too often” enters the zone of violation of the principle of legality (Bugarić, 2004: 484). Professor Mihajlo Rabrenović emphasizes that the demands of social groups increasingly direct the finding of legal organizational mechanisms that seek a better result for the realization of administrative activities, in accordance with external and internal influences (Rabrenović, 2022: 10). In the search for optimization, in a time of growing social needs, he notes that administrative law is at a turning point, in terms of where to draw the line between the public and private sectors and suggests that, among other things, this implies a new public management and an open state that will in the work of subjects state administration to take into account economic, social and technical-technological changes, but also the reasons for improving communication with the parties, including increasing the economy of the procedure (Rabrenović, 2022: 10). Transparency implies the availability of information and other public administration services, while openness means more responsible and efficient management, but also a new way to solve the problem of discretionary power of the executive power and has increasing importance in the theory of administrative law (Bugarić, 2004: 487-489).
3.5. A Single Administrative Point

Problems in the functioning of public administration are reflected in its reduced efficiency, and all together negatively affect the functioning of the state, economy and society as a whole (Vučetić, 2014: 183). In order to improve opportunities, it is necessary to review and improve the administrative procedural rules that will have a proactive approach in the work of the administration and require full implementation in practice, including the compliance of all regulations. It is important to guarantee a higher level of basic rights, eliminate current obstacles, save time and influence the reduction of the number of disputes that arise due to bad management (Vučetić, 2014: 183-184). In this regard, the new Law on General Administrative Procedure brought about significant conceptual innovations in administrative rules, while the academic public continues to have a discussion about the sufficient or real improvement, and even the value content of such rules (see, for example, Cucić, 2023; Cucić, 2018; Jovanović, 2018; Milkov and Radošević, 2018; Lončar, 2017). This topic deserves special attention and deeper analysis, but it is not an essential determinant of our discussion. Therefore, we limit ourselves only to the necessary elements of this thematic discussion. The Institute of e-Government is regulated by a series of special laws, and the Law on Electronic Administration defines and regulates the performance of public administration tasks using information and communication technologies (ICT). The new Law on General Administrative Procedure through the Institute of Single Administrative Place (Article 42 of the Law) introduces a significant innovation in management. The clear intention of the legislator to simplify and speed up communication between the administration and the parties, and to speed up and simplify the administrative procedure, is recognized. A legal possibility has been created for a party to exercise a certain right or interconnected rights in relation to a situation under the jurisdiction of one or more state authorities before one authority and in one place, which results in the corresponding administrative act. In this way, instead of conducting several administrative procedures, as well as the financial expenses that the procedures bring with them, the party has the opportunity to exercise the appropriate right or related rights in one place, while the state authorities are obliged to communicate and mutually resolve, in in that case, two or more party requests (for more, see Dimitrijević, 2023).

4. PERSPECTIVE IN CONTEXT

4.1. Four-stage model of development

Signore et al. considered a four-stage model of e-government development, grouping them according to technical, economic and social perspectives. They see e-government as an evolutionary phenomenon, for the achievement of which they suggest a four-stage model of development as fully functional, namely: (1) cataloguing, (2) transaction, (3) vertical integration, and (4) horizontal integration (Signore et al., 2005). The first phase is characterized by efforts to catalogue state information and present it on the web. The second phase involves the so-called transaction-based e-government, when initiatives focus on connecting internal government systems to online interfaces and placing live database links on the interfaces, enabling citizens to transact with government electronically. This further conditions the critical implementation of e-government, because there will be demands for the integration of basic processes at different levels of management and the establishment of an integrated normative base to achieve any level of government transaction at one point of management. Such a level of development is called by Signore and others the concept of “one-stop shopping concept”, while integrations at the achieved level occur in two ways: vertical integration (local and central administration are connected by various government functions or services) and horizontal integration (as the integration of different functions and services) (Signore et al., 2005).
4.2. Three development forces

E-government or electronic government (e-government) means the strategic and coordinated use of information and communication technologies in public administration and political decision-making (Von Haldenwang, 2004: 418). It includes every role and activity of government, shaped by ICT technologies (Brown, 2005). Moreover, it is based on three development forces (technology, management concept and the government itself) and includes four aspects: economic and social programs of the state; the relationship between administration and citizens and the rule of law (e-democracy); internal business; and the relationship with the international environment (Brown, 2005). As von Haldenwang, senior advisor of the German technical cooperation agency GTZ, notes, the term e-government is synonymous with modern, efficient, transparent, participatory and citizen-oriented government (Von Haldenwang, 2004: 418). In other words, this is all that the Public Administration Reform Strategy in the Republic of Serbia advocates, in terms of electronic administration as an instrument that plays a crucial role in improving the public administration system and achieving “good administration” in practice. Altogether, it requires new thinking and leadership, in terms of the defined potential and real meaning of e-government. Here we primarily mean the complexity, speed and interventions of modern processes in relation to services to citizens, open data as a public resource and models of responsibility and management. It could significantly improve the overall social environment in Serbia and bring many benefits in the fight against corruption, but also democratic action, participation and pluralism. Above all, we are thinking about education and new skills, but also about improving the public’s awareness of artificial intelligence, which implies greater transparency in decision-making processes in the application of AI and a broad dialogue between the public, experts, the private sector and the state.

4.3. Government in context

One thing is certain - the reform of public administration in the Republic of Serbia is a long journey in which the country has undergone profound legal, structural and bureaucratic changes. Some authors view this concept as a living organism that does not depend only on direct administrative changes, but is conditioned by the application and acceptance of such newspapers, as well as the attitude of citizens towards newspapers (Dimitrijević, 2021: 120). In a broader sense, we believe that this assumption is correct in the context of the legal-philosophical narrative about the concept of government in context, the famous professor emeritus of philosophy and public affairs, David John Farmer, at Virginia Commonwealth University, in the United States American States. Professor Farmer claims that government in the context refers to the government as a whole, and this includes everything that governs, even if it is not called government, but also everything that limits the action of the government (Farmer, 2020). He contextualizes this concept and emphasizes three key features: infiltration, exfiltration, and post-truth, which have implications for democracy (Farmer, 2020). In short, it first means infiltrating the government and gaining access that brings benefits (e.g. to large corporations), but also government actions in this regard, in terms of money, lobbying, tax breaks and acceptance of the free market. The second represents reactions to growing inequalities (e.g. income) and occurs among middle- and lower-income people (exfiltration), while post-truth describes people and circumstances when they respond more to feelings and beliefs than to facts (truth) (Farmer, 2020). Additionally, this concept partially supports our views on the importance of the socio-scientific perspective of law, and in terms of understanding the specific and real nature of law, which we claim can significantly improve opportunities, convenience and security issues in the current processes of digitization and transformation of public administration in the application of artificial intelligence in the Republic of Serbia.
4.4. Accountability perspective

In the context of theories of groups, effective management implies group goals and norms that are compatible and support institutional purposes and missions (Frederickson et al., 2012: 105-106). Busuioc and Lodge emphasize that accountability refers to managing expectations and point out that there is no ideal structure of responsibility that harmonizes desirable and undesirable behaviors (Busuioc and Lodge, 2017). They argue that a reputation-based accountability perspective provides a basic logic of “how accountable actors and accountable forums actually manage these expectations,” that is, how organizations meaningfully act and prioritize “among accountability responsibilities” (Busuioc and Lodge, 2017). In this regard, we appreciate that in terms of the meaningfulness and setting of priorities in the implementation of the institute of the Single administrative place, it was important to integrate the administrative procedures fully programmatically through eGovernment (for more see Dimitrijević, 2023). Professor Dimitrijević warns that in the current practice and work of state bodies there is “a lot of misunderstanding and ambiguity” regarding the application of this institute, which hinders its realization in practice (Dimitrijević, 2023: 23). Moreover, the multi-year passage of time between the adoption of this Institute and the government’s Regulation on a single administrative place, requires a special performance analysis, in terms of the requirements of the institute in question, the Government’s goals on the quality and efficient provision of public services and the expectations of local self-governments and public services in this regard (Dimitrijević, 2023: 24). An outcome-focused approach to service improvement suggests evaluating performance in the context of specific political interventions, which conditions performance change and the possibility of improvement (Boyne et al., 2010: 3). Therefore, if the goal is to improve the quality and work of public administration in terms of modernization and digitalization, then the improvement can be assessed by examining quality and performance indicators in the context of the functional approach and implementation of the adopted rules. It is especially important to understand and appreciate the pace of change in the field of artificial intelligence, which for Professor Alan Shark, executive director of the Institute for Public Technologies, requires management structures not only to react to changes - but also to anticipate them (Shark, 2015: 32). In such an intersection of advanced technology, Professor Shark emphasizes that justifications about whether public administration is effective and efficient today include the third “e” - whether it is fair, equitable (Shark, 2015: 32).

4.5. Organizational reputation

Professors Carpenter and Krause, from Harvard University and the University of Pittsburgh, warn that in democratic systems it is not acceptable for public administration to function in an organizational vacuum, while solving these key administrative challenges depends on the reputation of the organization (Carpenter and Krause, 2012: 26). In this regard, they define organizational reputation as “a set of beliefs about an organization related to its capacities, intentions, history and mission, where the beliefs are embedded in a network of multiple audiences” and emphasize three basic challenges of importance to management: (1) how to maintain broad support for the subject and management activities; (2) how to manage in the face of potential enemies and potentially disaffected supporters; and (3) how to envisage a “reasonable mix” of consistency and flexibility (Carpenter and Krause, 2012: 26). Reputational concerns for Busuioc and Lodge affect relations between actors, and concerns can focus attention on visible, controversial or politicized aspects (Busuioc and Lodge, 2017). Disadvantages are visible when what is important to organizations is not compatible with what is important to the public interest (Busuioc and Lodge, 2017). Precisely in this, in the realization of the public interest, which is the prosperity of the entire society and not only individuals, for Vladimir Berezko, from...
the Moscow State Institute of International Relations, is the key to solving social problems conditioned by the fourth industrial revolution (Berezko, 2022: 28). In this sense, the authors of this paper suggest further research and analysis of organizational reputation, in the context of modernization and digitalization in connection with the implementation of the public administration reform in Serbia.

4.6. Dimensions of reputation

In other words, organizational reputation is conditioned by simple answers to simple questions, namely: • Can the management subject do the work and carry out the responsibility in a competent and efficient manner and respond to the challenges? (Performatve reputation); • Does the governing body protect the interests of clients, constituents and members and demonstrate compassion, flexibility and fairness? (Moral reputation); • Does the management entity respect the adopted rules in relation to its good or bad decisions (Procedural reputation); and • Does the management entity have the necessary capacities and skills to work in complex environments, independently and separately from its actual performance? (Technical Reputation). Carpenter and Krause claim that organizational reputation permeates several dimensions that are not in harmony, and the effects of improving one dimension almost always imply the weaknesses of another, and, according to them, complete optimization between dimensions is unattainable in practice (Carpenter and Krause, 2012: 27).

4.7. Dynamics of (new) complementarity

Discussing the impact of technology on creativity and to what extent and under what circumstances technology complements or replaces work, Pidota and Piscitello indicate that artificial intelligence has advanced to the level of mastering the most complex strategic achievements and creating new works of art characteristic of human quality. They claim that in the future a new relationship between machines and workers will emerge as a dynamic of new complementarity that will increase mutual value and gain more and more importance (Pedota and Piscitello, 2022). These changes in technological innovation are happening at a breakneck pace, creating significant consequences for society as a whole and radically disrupting every aspect of our lives from the way we communicate to the way we live, travel, work and learn (Ross and Maynard, 2021: 160-161). The speed of change also dictates economic reasons. The new economy, in order to improve competitive advantage and strengthen market integration, emphasizes the importance of investing in human capital and creating knowledge and innovation (Shkalenko, 2020). Companies are adapting to the required trends, and guided by new technologies, they are systematizing new jobs. For example, algorithmic managers, machine learning-based paralegals, driverless cargo trucks, and more (Hooker and Kim, 2019). Altogether, it opens a wide field of ethical questions about the application of artificial intelligence and the implications it has for industry and society as a whole, as well as the potential (mis)use of its potential by state and private institutions and organizations.

4.8. Intermediate connection

In terms of the ethical and legal aspects of the application of artificial intelligence, this concept basically implies finding a fair balance between technological development and the protection of human rights and democratic principles (Budić, 2022: 2). In order to determine the future of the society in which we want to live, it is first important to define the key characteristics of normative action, then the ethical challenges and what makes artificial intelligence in Serbia safe. According to Krstić and Ćučković, the key idea of the obligation to respect human rights is aimed primarily at institutions that exercise public powers, which is why the review of all decisions from the point of view of human rights is essential (Krstić and Ćučković, 2016). Second, the socio-scientific perspective of law helps us to discover the mediating link between
actors and systems, i.e. between what is (e.g. Ethical guidelines for the safe and reliable use of artificial intelligence) and what should be in practice (compliance with ethical and security standards and international ethical principles). In such interactive processes, the difference in responses will determine the essence and define norms and spontaneous needs in the form of formalized agreements (Hydén, 2022: 133; Hydén & Svensson, 2008: 138 and 143). In this regard, we specifically point to risks related to human rights and freedoms, rights to privacy, rights to protection of personal data, bias and discrimination, lack of transparency and accountability, uncertainty and unreliability, potential loss of human control and supervision, and suggest a social-scientific perspective for finding strong mechanisms of inspection, punishment and appeal policies. All together, it is important from the perspective of various preventive mechanisms that will enable the responsible development and ways of verifying artificial intelligence in accordance with the highest ethical and security standards in terms of moving from values and assessments to formalized rules that will represent operationalized values in practice.

5. CONCLUSION

The significant development of the Republic of Serbia in terms of digital transformation and development is indisputable, and the indicators of this are unquestionable. Also, it is clear that each of the presented examples and results can be compared with such examples and results from the peer group. They are therefore always relative and never absolute and sufficient as objective criteria can be. However, we claim that with an in-depth analysis of current processes, in terms of the socio-scientific perspective of law, the Republic of Serbia, with the same investments and efforts, can significantly improve the overall “objective” effects and efficiency in terms of artificial intelligence and public administration reform, and significantly improve its own performance. Analysing legal rules alone is not enough if we want to realize social benefit and take advantage of the benefits of artificial intelligence. If the general purpose is to achieve changes in everyday life, work and business and use the challenges of artificial intelligence as an opportunity for the progress of the entire society (Government of the Republic of Serbia, 2019: 28), then we cannot ignore the difference between the legal and social scientific perspective of law. Therefore, the context, dynamics and legal conditions must be taken into account and the starting point of action must be found in that. For example, where does the risk of “absence of cooperation of state authorities in implementation” come from if the conditions of law simultaneously negate the same. It could represent the concept of disruptive social action against expected effectiveness, in which rules and norms are structured internally without necessarily looking at real (living) rules, behaviour and other influences coming from the “real” world that surrounds it. The legislature will never be able to anticipate every possible situation and create flawless rules that would completely eliminate executive discretion. Therefore, Professor Bugaric claims that the formal theory of administrative law is unrealistic, because it is impossible to apply in practice (Bugaric, 2004: 484). Qualitative changes and the theory of open public administration, as well as the importance of open administration in terms of executive and administrative regulation, will require greater transparency and participation of citizens in decision-making, which is an important legal principle in European administrative law and the functioning of modern administration. At the same time, it is important to understand the specific and real nature of rights, in which the usual (expected) mechanism of sanctions can represent a huge social risk against the uncertainty and unpredictability of possible abuses in the sphere of artificial intelligence. In this sense, we see the further development of the Republic of Serbia in terms of artificial intelligence and recommend in-depth analyses and further research.
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VEŠTAČKA INTELIGENCIJA U PRAVNOM SISTEMU REPUBLIKE SRBIJE: JAVNA UPRAVA I ZAKONODAVNI ASPEKT ETIČKE I PRAVNE IMPLEMENTACIJE

Sažetak: U kontekstu promena i sprovođenja reforme javne uprave, autori razmatraju strateške pravce razvoja veštačke inteligencije u pravnom sistemu Republike Srbije. To uključuje pravni okvir, neophodnu infrastrukturu i interoperabilnost, optimizaciju i digitalizaciju administrativnih procedura i javnih usluga. Razmatran je uticaj četvrte industrijske revolucije na javnu upravu i opisan značajan napredak Republike Srbije u pogledu inovacija i društvenih transformacija u sinergiji sa konceptom veštačke inteligencije. Prema indeksu spremnosti za veštačku inteligenciju za 2022. godinu, od 181 rangirane zemlje, Srbija je na 59. mestu. Republika Srbija sprovodi Strategiju razvoja veštačke inteligencije za period 2020-2025, među 26 zemalja koje su pokrenule Nacionalnu platformu za veštačku inteligenciju i prva je zemlja u jugoistočnoj Evropi koja je osnovala Institut za veštačku inteligenciju. Kroz savremenu teoriju uprave i koncept i značaj e-uprave u razvoju dobre uprave, autori posebno razmatraju etičku upotrebu veštačke inteligencije u zakonodavnom okviru koji promoviše i reguliše razvoj. Osnove e-Uprave regulisane su nizom posebnih zakona, a Zakonom o elektronskoj upravi regulisano je obavljanje poslova javne uprave korišćenjem informaciono-komunikacionih tehnologija. Dakle, primena veštačke inteligencije u javnoj upravi spada u oblast elektronske uprave, a Zakon o opštem upravnom postupku je od posebnog značaja za primenu instituta i pravila e-uprave. Osim značajnih koristi, veštačka inteligencija donosi i brojne rizike u vezi s ljudskim pravima i slobodama, pravima na privatnost, pravima na zaštitu ličnih podataka, pristrasnošću i diskriminacijom, nedostatkom transparentnosti i odgovornosti, neizvesnosti i nepouzdanosti, gubitkom ljudske kontrole i nadzora, i tako dalje. U tom smislu, autori predlažu uspostavljanje snažnih mehanizama inspekcijske, kaznene i žalbene politike. Sve u svemu, važno je iz perspektive različitih preventivnih mehanizama za pravni i demokratski princip i odgovor razvoju, održivi razvoj i uspostavljanje snažnih mehanizama inspekcijske, kaznene i žalbene politike. Sve u svemu, važno je iz perspektive različitih preventivnih mehanizama koji će omogućiti odgovoran razvoj i načine verifikacije veštačke inteligencije u skladu s najvišim etičkim i bezbednosnim standardima, a u smislu pronalaženja pravne ravnoteže između tehnološkog razvoja i zaštite ljudskih prava i demokratskih principa. Ovaj rad ukazuje na značaj budućih istraživanja u različitim granama prava oblasti veštačke inteligencije.

Ključne reči: veštačka inteligencija, moderna administracija, e-uprava, veštačka inteligencija, ljudska prava, demokratski principi, odgovor razvoj, održivi razvoj

Marija KOSTIĆ, Jovan KOJIĆIĆ ● ARTIFICIAL INTELLIGENCE IN THE LEGAL SYSTEM OF THE REPUBLIC OF SERBIA: PUBLIC ADMINISTRATION AND LEGISLATIVE ASPECTS OF ETHICAL AND LEGAL IMPLEMENTATION