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INFLUENCE OF ARTIFICIAL INTELLIGENCE ON HUMAN RIGHTS

ABSTRACT

Today, artificial intelligence has a direct impact on not only the economy, politics, education, culture and democracy, but human rights as well. Its development and appearance in our everyday life opens up a series of new issues: from the issue of the legal subjectivity and responsibility of robots with artificial intelligence, to the issue of threats to human rights and democracy from artificial intelligence systems. Through the prism of the concepts of human rights and artificial intelligence, the impact of artificial intelligence on human rights is discussed. Given that artificial intelligence systems that are based on biased information can cause algorithmic discrimination in work, legal and non-legal means of protection against algorithmic discrimination are highlighted.

KEYWORDS: ARTIFICIAL INTELLIGENCE, HUMAN RIGHTS, ALGORITHMIC DISCRIMINATION

INTRODUCTION

Artificial intelligence has already had a direct impact on the economy, politics, education, culture, democracy and human rights. We can only guess what impact artificial intelligence will have on our lives in the future. Its development and appearance in our everyday life opens up a series of new issues today: from the issue of the legal subjectivity and responsibility of robots with artificial intelligence, to the issue of threats to human rights and democracy from artificial intelligence systems. The number of human rights that are threatened because of the development and application of artificial intelligence is increasing on daily basis. It is necessary for the law to respond to that challenge and protect basic human rights and freedoms. The adoption of new rules and changes to existing ones should create a legal system that will successfully protect the highest values, guided by justice, morality and ethics. That legal system, both at the national and international level, must be made up of binding and non-binding rules that are mutually agreed upon. Law is required to respond to the development of new technologies and limit the possibility of their abuse and protect human rights and freedoms.

In the past five years, the Council of Europe and the European Union have adopted a series of documents related to certain aspects of the legal regulation of artificial intelligence, including aspects of the protection of human rights as well.

In February 2017, the European Parliament adopted the Resolution on Civil Law Rules on Robotics (European Parliament, "Resolution on Civil Law Rules on Robotics", 2015/2103 (INL) https://www.europarl.europa.eu/doceo/ document/TA-8-2017- 0051_EN.html.), which opened up many issues related to the use of artificial intelligence in products that appear on the market, and especially issues regarding their safety. In March 2018, the European Commission established a High-Level Expert Group on Artificial Intelligence, gathering experts from various fields of expertise. The initial task of the expert group was to gather stakeholders in the "European AI Alliance", support the implementation of the European initiative for artificial intelligence, prepare a draft of guidelines for the ethical development and use of artificial intelligence based on EU law, and to consider issues regarding fairness, security, transparency, the impact on democracy and basic rights of individuals. In June 2018, the EU Commission appointed fifty-two experts to the High-Level Expert Group on Artificial Intelligence. On April 10th, 2018, the members of the European Union signed the *Declaration on Cooperation in the Field of Artificial Intelligence*, in order to solve the most important issues raised by artificial intelligence together: from the issue of ensuring competitiveness in the research and application of artificial intelligence, all the way to the consideration of social, economic, ethical and legal issues in areas such as health care, education, climate changes, cyber security, migrations, etc.

On April 25th, 2018, the European Commission adopted the strategic document *Artificial Intelligence for Europe* (European Commission, "Artificial Intelligence for Europe", COM (2018) 237 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2018%3A237%3AFIN). In this first strategic document, attention is focused on strengthening the technological and industrial capacities of the EU and introduction of artificial intelligence into the entire economy, on the preparation of social and economic changes caused by the development of artificial intelligence, on the creation of an appropriate ethical and legal framework for the use of technologies based on artificial intelligence and on joint action and mutual exchange of experiences of the EU countries in connection with the development and use of artificial intelligence. Based on this adopted strategic document, the *European AI Alliance* was founded in June 2018 as a broad forum that would discuss all aspects of the development of artificial intelligence and its impact on society and the economy. It brought together representatives of companies, consumer organisations, trade unions, and of civil society. Several thousands of participants within the European AI Alliance exchange opinions, documents and information on events related to artificial intelligence. Members of the European AI Alliance can also discuss various issues, draft documents, etc. with the members of the High-Level Expert Group on Artificial Intelligence. The most important questions about the future perspective of building the European Union's approach to artificial intelligence are discussed at the annual meetings of the European AI Alliance.

The first annual meeting of the European AI Assembly was held in June 2019, and the second was held in October 2020. *The Coordinated Plan on Artificial Intelligence* was adopted by the European Commission in December 2018 (European Commission, "Coordinated Plan on Artificial Intelligence", COM (2018) 795 final, https://digital-strategy.ec.europa.eu/en/policies/european- approach-artificial-intelligence). In February 2019, the European Parliament adopted the *Resolution on a Comprehensive European industrial policy on Artificial intelligence and robotics* (European Parliament, "Resolution on a Comprehensive European industrial policy on Artificial intelligence and robotics", 2018/2088 (INI), https://www.europarl.europa.eu/doceo/document/TA-8-2019-0081_EN.html). *Ethic Guidelines for Trustworthy AI* (European Parliament, "Resolution on a Comprehensive European industrial policy on Artificial intelligence and robotics", 2018/2088 (INI), https://www.europarl.europa.eu/doceo/document/TA-8-2019-0081_EN.html) were presented by the High-Level Expert Group of the European Commission in April 2019. In February 2020, the European Commission adopted the *White Paper – A European approach to excellence and trust* (European Commission, "White Paper – A European

approach to excellence and trust", COM (2020) 65 final, https://ec.europa.eu/info/files/white-paper-artificial-intelligence-european-approach-excellence-and-trust-en), which clearly indicated the need to adopt a new legal framework for the regulation of artificial intelligence, with basic directions for the development of that legal framework. *The Impact Assessment of the Proposed Regulation on Artificial Intelligence* (European Commission, "Commission Staff Working Document Impact Assessment Accompanying the Proposal for a Regulation of the European Parliament and the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts", SWD (2021) 84 final, https://digital-strategy.ec.europa.eu/en/library/impact-assessment-regulation-artificial-intelligence), as a working document of the European Commission, was prepared in April 2020 and published together with the *Proposal of a Regulation on Artificial Intelligence* in April 2021. In June 2020, the European Parliament established a *Special Committee on Artificial Intelligence in a Digital Age*, with the task of analysing the future impact of artificial intelligence in the digital age on the EU economy and to determine future EU priorities. A series of resolutions related to artificial intelligence was adopted by the European Parliament in October 2020: *Resolution on a framework of ethical aspects of artificial intelligence, robotics and related technologies* (European Parliament, "Resolution on a framework of ethical aspects of artificial intelligence, robotics and related technologies", 2020/2012 (INL), https://www.europarl.europa.eu/doceo/document/TA-9-2020-0275_EN.html), *Resolution on a civil liability regime for artificial intelligence* (European Parliament, "Resolution on a civil liability regime for artificial intelligence", 2020/2014 (INL), https://www.europarl.europa.eu/doceo/document/TA-9-2020-0276_EN.html), *Resolution on intellectual property rights for the development of artificial intelligence technologies* (European Parliament, "Resolution on intellectual property rights for the development of artificial intelligence technologies", 2020/2015 (INI), https://www.europarl.europa.eu/doceo/document/TA-9-2020-0277_ EN.html). In April 2021, the European Commission brought a package containing:

- Communication on a European approach to artificial intelligence (European Commission, "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Fostering a European approach to Artificial Intelligence", COM (2021) 205 final, https://www.digital-strategy.ec.europa.eu/en/library/communication-fostering-european-approach-artificial-intelligence);

- Coordinated plan from member countries (European Commission, "Coordinated Plan on Artificial Intelligence 2021", COM (2021) 205 final Annex, https://digital-strategy.ec.europa.eu/en/library/coordinated-plan-artificial-intelligence-2021-review);

- Proposal of a Regulation on artificial intelligence (European Commission, "Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial intelligence Act) and Amending Certain Union Legislative Acts", European Commission, Brussels, 21.4.2021. COM (2021) 206 final, https://www.eur-lex.europa.eu/resource.html?uri=cellar:e0649735-a372-11eb-9585-01aa75ed71a1.0001.02/DOC_1&format=PDF).

In April 2021, the European Parliament adopted the *Report on artificial intelligence in education, culture and the audio-visual sector* (European Parliament, "Report on artificial intelligence in education, culture and the audiovisual sector", 2020/2017 (INI), https://www.europarl.europa.eu/doceo/document/A-9-2021-0127_EN.html). In June 2021, the European Parliament adopted the *Report on artificial intelligence in criminal law and its use by the police and judicial authorities in criminal matters* (European Parliament, "Report on artificial intelligence in criminal law and its use by the police and judicial authorities in criminal matters", 2020/2016(INI), https://www.europarl.europa.eu/doceo/document/A-9-2021-0232_EN.html.).

The Council of Europe has also been considering certain issues regarding the regulation of legal aspects of the use of artificial intelligence for several years. It adopted new standards related to artificial intelligence and data protection, bioethics, cybercrime, human rights, democracy and the rule of law. In 2019, it founded the *ad hoc* Committee on Artificial Intelligence (CAHAI), which

investigates the elements of the legal framework for the development, design and application of artificial intelligence, based on European standards in the field of human rights, democracy and the rule of law. The Committee has a unique structure, which brings together member countries and observers, as well as observers from the civilian society, and the academic and private sector, and works in close cooperation with other international institutions, such as UNESCO, OECD and the European Union.

All previous activities of national and international participants indicate that the legal system that will regulate artificial intelligence in the future must be a part of the global legal mechanism that regulates digital technologies in general, and must include a coherent set of binding and non-binding rules, which will regulate the everyday use of artificial intelligence in different areas of people's life and work in a fair, moral and ethical manner.

The mutual relationship between law and artificial intelligence is not a one-way street, that is to say, it's not only the law that affects artificial intelligence, but this relationship is more like a two-way street, because artificial intelligence also affects the law in different ways. In many aspects, artificial intelligence can influence a different and better way of applying law. Some of those ways are automatic translation, decision-making, especially in the judiciary, risk prediction, resource management, form filling and expert systems.

Human rights and freedoms, as universal values, must be protected from possible threats from products and services based on algorithms, i.e., artificial intelligence. The best way for this to actually happen is to develop a set of legal norms, which will guarantee the effective exercise of rights and freedoms for all individuals without any differences.

The concept of human rights

The origin of human rights stems from the theory of natural law. Human rights as natural rights are acquired by every human being by birth. Human rights apply equally to all people, regardless of their race, sex, language, religion, economic status, education, political or other opinion, in any circumstances. Regardless of the diversity among societies and people, human rights form the thread that binds them together. They represent universal values, which are common to all (Grahovac 2020: 11).

The rights that every human being has, by virtue of being a human being, independent of the state and without a state, are human rights (Dimitrijević and Paunović 1997: 26). They belong to all human beings without any distinction and are based on values that modern humanity acknowledges for all human beings (Paunović, Krivokapić and Krstić 2021: 23). It can be said that human rights are a set of inalienable rights and freedoms of individuals (Gajin 2011: 15).

The core of the concept of human rights is the aspiration to protect human dignity. It puts the personality of an individual at the focal point and is based on a shared general value system (Benedek and Nikolova 2003: 18).

The history of the development of human rights is linked to the American and French revolutions in the 18th century, when human rights were promoted and recognised in the acts of the USA and France, namely, in the Declaration of Independence in 1776 and the Declaration on the Rights of Man and Citizen in 1789. In the 20th century, the foundations of today's human rights system were laid in numerous international and national legal acts. These are, first and foremost: UN Declaration of Human Rights from 1948, European Convention on Human Rights from 1950, UN Convention on the Elimination of All Forms of Racial Discrimination from 1965, International Covenant on Civil and Political Rights and International Covenant on Economic, Social and Cultural Rights of the UN from 1966, Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data of the Council of Europe from 1981, UN Convention on the Elimination of All Forms of Discrimination against Women from 1981, Convention on Cybercrime of the Council of Europe from 2001, and EU Charter of Fundamental Rights from 2009.

In many international and national legal acts, some of the rights and freedoms comprehended by human rights are specifically stated, such as the right to life, and freedom of movement, the right to a fair trial, the right to privacy, freedom of expression, freedom of assembly and association, the right to vote, the right to work, the right to health, the right to an education, the right to a healthy en-

vironment, etc. It should be emphasised that the list of human rights given in any international or national legal act is not limited and that it expands over time in accordance with the values accepted by today's societies. The process of including certain new rights and freedoms to the list of human rights that belong to individuals is never-ending.

Human rights and freedoms are most commonly listed by being classified into three generations of rights.

The first generation of rights and freedoms consists of civil and political rights. Civil and political rights usually include: the right to life, equality before the law, freedom of speech, freedom of religion, property rights, the right to a fair trial, and voting rights.

The third generation consists of the right to development, right to peace and right to a healthy environment.

This division into three generations of human rights has no greater significance today for at least two reasons. The first is because no human rights differ in importance, that is to say, they all have equal importance. There are no human rights and freedoms that are more important or significant, i.e., there are no human rights and freedoms that have greater legal force. The second reason is that the division into three generations of human rights and freedoms is certainly not final, since human rights and freedoms are continuously expanding due to the development of social communities and the development of notions about particular social values that should be protected. A good example is the right to data protection, and soon also the right to protection against artificial intelligence

right to equality,	group of rights for participants in judicial proceedings,	property rights,
prohibition of discrimination,	right to privacy,	freedom of thought, belief and religion,
freedom from slavery, torture and inhuman or degrading treatment and punishment,	freedom of movement,	freedom of thought and expression,
right to legal subjectivity,	right to sanctuary,	freedom of assembly and association,
right to judicial protection,	right to citizenship,	right to participate in the management of public affairs, and
right to liberty and security,	right to marry and start a family,	right to participate in free elections.

Table 1. The first generation of rights and freedoms

The second generation consists of economic and cultural rights and freedoms. Economic and cultural rights and freedoms include:

right to work,	right to a suitable compensation for work,	right to an education,
right to the freedom of choice of employment,	right to rest and limited work hours,	rights of mother and child,
right to just and satisfactory work conditions,	right to union organisation and membership in a union,	right to participate in cultural, artistic and scientific life of the community, and
right to protection from unemployment,	right to a life standard which provides health and well-being for individuals and their families,	right to protection of scientific, literary and artistic works.
right to equal pay for equal work,	right to social security,	

Table 2. The second generation consists of economic and cultural rights and freedoms

(Gajin 2011: 131–141), (Paunović, Krivokapić and Krstić 2021: 25–27).

In order to fully comprehend the concept of human rights, it is necessary to consider two more important questions: who are the beneficiaries of human rights and who are the guarantors of the real application of human rights?

In principle, it is claimed that the beneficiaries of human rights and freedoms are all human beings, but not all human beings can enjoy all human rights and freedoms. Some human rights and freedoms are intended exclusively for certain groups of human beings. The reason for this may be their specific characteristics:

- age (children's right, right to marry),
- sex (women's rights),
- occupation (media rights),
- citizenship (right to vote),
- status of refugee or stateless person, etc.

Aside from natural persons, users of human rights and freedoms can also be organisations, such as political parties, trade unions, religious organisations, non-governmental organisations, professional associations, foundations, faculties and universities, companies and other subjects of commercial law. Not all organisations can enjoy all human rights and freedoms either. The application of some human rights is reserved only for some of the organisations, such as the right to submit the so-called "organisational lawsuits" for protection against discrimination, which is reserved for organisations for the protection of human rights and the rights of discriminated categories of persons (Gajin 2011: 182–184).

The question regarding those who guarantee the enjoyment of human rights and freedoms is extremely important for the very concept of human rights and for anyone whose human rights, any of them, are threatened. The guarantors are countries, on one side, and international organisations, on the other. By signing international legal acts and adopting national legal acts, countries have committed themselves to respect human rights and freedoms and to provide mechanisms for unhindered enjoyment of fundamental rights and freedoms. In exceptional cases, countries have the right to limit certain rights and freedoms in given situations. This is the case when there are extraordinary circumstances, hence, for reasons of national security, protection of public order or protection of health and morals, countries can suspend certain human rights and freedoms for a certain period of time while those circumstances last.

International organisations, on the other hand, have mechanisms for monitoring the exercise of human rights by countries.

Individuals initiate the procedure for the protection of human rights with an individual petition (lawsuit, appeal, application) by fulfilling certain conditions (legitimate interest, exhaustion of domestic remedies, etc.). Countries rarely initiate procedures for the protection of human rights for political and economic reasons. So far, not a single country has addressed the UN Human Rights Committee with a request for the protection of human rights, and there were a dozen cases before the European authorities in which countries sued other countries for endangering human rights (Paunović, Krivokapić and Krstić 2021: 113–118).

We can note that, despite a large number of international and national acts, the concept of human rights and freedoms is not precisely defined, because it is actually not identical for all societies due to the numerous specificities of individual social organisations. In some countries, for example, same-sex marriage is acceptable and falls within the scope of human rights, while it is not acceptable in other countries and does not fall within the scope of human rights. Regardless of these individual differences, a large number of human rights and freedoms is similarly protected in different countries.

Numerous international and national legal acts continuously expand the list of protected human rights; therefore, it is practically impossible to create a definitive list of human rights and freedoms. A typical example of the expansion of the list of human rights and freedoms are legal documents of the European Union. They have significantly expanded human rights and freedoms in the areas of consumer protection, intellectual property protection, natural environment protection, data protection, and labour rights protection, and legal acts of the European Union have already been prepared that would expand the list of human rights and freedoms to the areas of protection from artificial intelligence and algorithmic discrimination.

THE CONCEPT OF ARTIFICIAL INTELLIGENCE

As with the definition of rights, there is no universally accepted definition of artificial intelligence. Some authors believe that the definitions of artificial intelligence can be divided into rationalistic ones and those that focus on humans. Supporters

of rationalistic theories believe that artificial intelligence can be defined as a type of agent, created by man, that can make decisions and perform actions based on its perception. Supporters of the definition of artificial intelligence that puts humans at its centre believe that artificial intelligence exists when it can perform a task, the execution of which would otherwise require human intelligence (Turing test). In 2019, the European Union's High-Level Expert Group defined an artificial intelligence system as a software or hardware system created by humans, which, in relation to a set goal, acts with perception in the physical or digital dimension, collecting data, interpreting the collected structured or unstructured data, explicating information and knowledge obtained by processing this data and deciding on the best action or actions to be taken to achieve a given goal. Artificial intelligence systems can use symbolic rules or learn a numerical model, and can adapt their behaviour according to an analysis of how the environment is affected by their previous actions (Ben-Israel et al. 2020: 22).

Artificial intelligence, which is considered a scientific discipline, appeared shortly after the invention of the first computers. Skills characteristic of humans, i.e., intelligent beings, are attributed to artificial intelligence, including proving hypotheses, reasoning and playing games (Bialko 2005).

The first definition of artificial intelligence, presented by John McCarthy, referred to the unity of the "science and engineering of making intelligent machines" (https://www.artificial-solutions.com/blog/homage-to-john-mccarthy–the-father-of-artificial-intelligence), i.e., the creation of particularly intelligent computer programmes (http://35.238.111.86:8080/ jspui/ bitstream/123456789/274/1/McCarthy _ John _What %20is % 20artificial% 20intelligence.pdf).

Definitions that appeared somewhat later can be grouped by taking into account two main criteria. One group of definitions refers to the process of thinking and reasoning, while the other group of definitions takes into account the category of success (Furmankiewicz, Sołtysik-Piorunkiewicz and Ziuziański 2014).

The focus of definitions that include rationally acting systems and those systems that behave like humans (thinking, reasoning), is behaviour. They measure success in the context of matching human performance, while others measure success in comparison to ideal concepts of intelligence that we call rationality. A system is rational if it does the "right thing", considering the things it knows. This means that the system is expected to have full awareness of the goal, i.e., formally speaking, that there is an implicitly or explicitly defined criterion function, which measures, in a given metric system, the success of the action of an intelligent system in its work environment (Milosavljević 2015).

Although this division is characteristic of the period up to the mid-1990s, it is comprehensive in its purpose. Modern definitions generally present artificial intelligence as a simulation of human intelligence processes by a suitable algorithm, code or technique, with the help of machines or computer systems. Artificial intelligence systems are actually systems that enable machines to perform activities that are similar to human intelligence (Mitchell 1997). The subjects of study of artificial intelligence are actually management rules of the so-called intelligent human behaviours and the creation of formal models of these behaviours, with the help of computer programmes that will simulate this behaviour. Some intelligent behaviours are: speech recognition, shape recognition (letters, drawings, photos), proving theorems, playing board games, translating from one natural language to another, creativity (creating musical compositions, drawing), formulating a medical diagnosis, etc. (Sroka and Wolny 2009: 171–173).

Artificial intelligence technologies today are increasingly present in various fields, bringing a large number of benefits. In its beginnings, artificial intelligence was conceived as a replacement for experts in certain fields (medicine, informatics, finance), only to evolve, so that now it can offer great opportunities for improving people's quality of life. In perspective, for certain tasks that automated artificial intelligence systems would perform better than humans, there will be no need to engage the human factor any more, but on the other hand, there will be need for the human factor in new areas that automation would bring (control, management, legal regulations, etc.).

INFLUENCE OF ARTIFICIAL INTELLIGENCE ON HUMAN RIGHTS

The use of products and services based on artificial intelligence leads to the possible endanger-

right to dignity,	right to freedom of expression and free assembly,	right to consumer protection,
right to respect of private life,	right to an efficient legal remedy,	rights of children and disabled,
right to data protection,	right to a fair trial and presumption of innocence,	right to a healthy environment, and
right to non-discrimination,	right to good management,	right to health and safety of people.
right of suffrage,	right to fair and just work conditions,	

ing of the basic rights and freedoms of individuals:

The right to freedom of expression was drastically threatened when Facebook and Cambridge Analytica distributed partially correct or inaccurate information and, thus, threatened the human right to freedom of expression, i.e., the right of citizens to freely participate in the management of public affairs and voting processes. Millions of people were jeopardised who could not protect their right to freedom of expression with an adequate legal remedy (Desierto 2020).

The use of artificial intelligence systems in the judiciary can negatively affect the *right to a fair trial*, if the decision is made with the use of an algorithm, and judicial employees do not have a sufficient level of understanding of artificial intelligence to ensure that decisions made with the help of artificial intelligence are non-discriminatory. A system for biometric face and voice recognition can threaten the *privacy of individuals*. Artificial intelligence systems that collect and analyse large amounts of data about individuals can predict their behaviour, influence changes in their behaviour, threaten their privacy, e.g., by revealing their facial expression, emotional state, heart rate, physical location, etc. Biometric facial recognition systems can prevent citizens from exercising their right *to freedom of expression, association and assembly* and, thus, can have a negative effect on social solidarity and participation in democratic processes. The activities of *chatbots* (computer programmes that simulate people conversing via voice or text messages. This way, people can be misled into believing that they are communicating with other people when they are, in fact, communicating with a computer programme based on artificial intelligence) and the creation of undoubtedly falsified content (*deepfake* - false information created by the digital alteration of photos or videos so that a person appears to be someone else, that is, to have done or said something that they did not actually do or say. This way, false information is spread maliciously) by systems based on algorithms and artificial intelligence can affect an individual's ability to build attitudes based on reliable information. This way, individuals are manipulated and their *right to be informed* is threatened, necessary for them to be able to participate in democratic decision-making processes.

Artificial intelligence systems that control sophisticated weapons, such as robot snipers or drones with the purpose of killing individuals or groups of people, are already in use and threaten the most important of human rights, *the right to life*.

A particularly negative impact of artificial intelligence products and services on human rights and freedoms is achieved through algorithmic discrimination, endangering the *right to data protection*, but also endangering many other human rights and freedoms.

ALGORITHMIC DISCRIMINATION

The quality of our everyday life increasingly depends on the use of artificial intelligence. Artificial intelligence manages traffic and energy supply, recognises speech, filters spam, analyses X-ray images and affects our daily life in many other ways, and the economic development of the entire society as well. In all these processes, artificial intelligence works using algorithm-based software, making decisions that usually involve a large number of individuals. Those decisions should be rational, neutral, impartial and equal for all affected. Practice shows that decisions made in artificial intelligence systems based on algorithms

are often not so, but cause some form of discrimination called algorithmic discrimination. An algorithmic decision-making system can be defined as a computer process, including one derived from machine learning, statistics or other data processing or other artificial intelligence techniques, that makes decisions on its own or supports human decision-making (European Law Institute, "Model Rules on Impact Assessment of Algorithmic Decision Making Systems Used by Public Administration", European Law Institute, Vienna, 2022, 16).

An algorithm can be described as an abstract, formalised description of a computational procedure. An algorithmic decision is the result, finding, or outcome of that procedure. Sometimes the algorithm decides in a completely automatic way. It is necessary to distinguish between decisions made on the basis of an algorithm that are fully automated and those that are only partially automated. This is important because of the determination of responsibility in the case of human rights violations and because of how changes can be made to the automatic decision-making system, so that human rights violations would not occur in the future. In algorithmic decision-making systems with partial human participation, a tendency to minimize one's responsibility by simply following the computer's recommendations has been observed. This phenomenon is called automation bias (Zuiderveen Borgtesius 2018: 11).

The rights possessed by human beings derive from the fact that they are human beings, and for this reason the acceptance of human inequality actually destroys the entire concept of human rights (Dimitrijević and Paunović 1997: 181). The principle of equality is the basic principle of human rights, hence, the principle of non-discrimination derives from it – in other words, *the prohibition of discrimination* between people.

In recent legal documents, discrimination based on gender, sexual orientation, gender identity, age, health status, disability, marital status, migrant or refugee status, or other status is prohibited, which means that this list is not exhaustive either (Gasmi 2016: 149–167).

One of the most frequently reported negative impacts of artificial intelligence on human rights is the impact on the prohibition of discrimination, i.e., on the *right to equal treatment* (Ben-Israel et al. 2020: 28).

Artificial intelligence systems based on biased information can cause algorithmic discrimination, i.e., discriminatory algorithmic decisions or behaviours. If an artificial intelligence system learns on the basis of previous data, founded on discriminatory decisions, then it can also make discriminatory decisions, on the basis of "feedback loops", meaning, it can threaten human rights.

LEGAL MEANS FOR PROTECTION AGAINST ALGORITHAMIC DISCRIMINATION

Binding and non-binding norms are the main obstacles to algorithmic discrimination. First of all, there are binding regulations at the international and national level on non-discrimination and data protection, but also many other regulations, standards and rules of conduct. The UN Universal Declaration of Human Rights from 1948 guarantees freedom and equal rights to all people in its first article, and guarantees non-discrimination in the second article. The European Convention on Human Rights and Fundamental Freedoms, in accordance with the UN Universal Declaration of Human Rights, prohibits discrimination in article fourteen. The EU directive from 2000 on the implementation of the principle of equal treatment among persons regardless of their racial or ethnic origin recognises two forms of discrimination: direct and indirect discrimination. In the case of algorithmic discrimination, indirect discrimination often occurs, so that a seemingly neutral provision leads to a particularly unfavourable position for a certain group of people. Therefore, it is not relevant whether the discriminator had the intention to discriminate, the effect that algorithmic decision-making had in practice is what is important instead. This indirect discrimination happens much more often than the direct one. For example, algorithmic decisions that force people of a particular racial background to pay higher prices for products or services violate the prohibition of indirect discrimination (Zuiderveen Borgtesius 2018: 34).

Artificial intelligence systems base algorithmic decision-making on the large amount of data they collect about individuals. *Data protection regulations* aim to ensure respect for all fundamental

rights and freedoms, to ensure equal rights and, thus, non-discrimination as well, for all those whose data is processed.

The EU General Data Protection Regulation (Regulation 2016/679 of the European Parliament and of the Council of 7 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), *Official Journal of the European Union* L 119/2016) from 2016, which began to be applied in 2018, largely influenced the changes in the data protection system in the EU and worldwide. It requires the raising of the level of transparency in all cases of data processing, especially when it comes to automated decision-making by artificial intelligence systems, as stated in article thirteen, point f. In that point, it is stated that individuals will be given information about the logic by which decisions were made, as well as the significance and the consequences of such data processing and such decision-making for individuals. Transparency is required when personal data is collected, used, disclosed or otherwise processed.

Based on the principle of transparency, in point thirty-nine of the Preamble of the EU General Data Protection Regulation, it is required that any information and communication related to the processing of personal data be easily accessible and understandable, that clear and simple language be used. Point seventy-one of the Preamble, as well as article twenty-two of the EU General Data Protection Regulation, directly covers algorithmic decision-making. It establishes the right of an individual to request that he/she would not affected by a decision made solely on the basis of automated data processing that produces legal consequences for him/her or significantly affects him/her (Regulation 2016/679 of the European Parliament and of the Council of 7 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), *Official Journal of the European Union* L 119/2016). Such automated data processing includes the creation of a profile, that is to say, an assessment of an individual's personal traits, especially those related to work results, economic status, health, personal preferences or interests, reliability or behaviour, location or movement, when it produces legal consequences related to the individual or that affect him/her. However, decision-making based on such processing, including profiling, may be permitted if allowed by EU law or the law of a member country to which the data processor is subject, among other things, for the purposes of monitoring and preventing fraud and tax evasion, in accordance with regulations, standards and recommendations of EU institutions or national authorities (Regulation 2016/679 of the European Parliament and of the Council of 7 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), *Official Journal of the European Union* L 119/2016). The prohibition of such automated discriminatory algorithm-based decisions does not apply in cases where the individual has given consent, when it is stipulated in the contract between the data handler and the individual and when it is stipulated by law.

In these cases, as stipulated in article twenty-two of the EU General Data Protection Regulation, it is necessary for the data handler to implement appropriate measures to protect the rights and freedoms and legitimate interests of individuals, especially the right of people to participate in decision-making, the right to express personal opinion and the right to challenge a decision. Based on article twenty-four of the EU General Data Protection Regulation, data handlers are required to *take into account risks* of different levels of probability and severity that may threaten the rights and freedoms of individuals. This certainly includes the risk of discrimination against individuals during data processing. Data handlers are obliged to take appropriate technical and organisational measures in order to eliminate these risks. This is especially necessary when it comes to the application of new technologies, such as artificial intelligence and algorithmic decision-making, if the handler has not carried out an *impact assessment* on data protection, as stated in point eighty-nine of the Preamble of the EU General Data Protection Regulation. Article thirty-five of the EU General Data Protection Regulation established the handler's obligation to carry out an impact assessment regarding data protection, in cases of high risk to the rights and freedoms of individuals.

Examples of automated algorithm-based decisions with legal consequences are court decisions or decisions of state authorities on social benefits provided by law, such as pensions and various other social benefits. Automated decisions with similar consequences are also those made by banks when approving loans or decisions made by private companies on the prices of products or services that put individuals and groups of individuals in an unequal and disparate position in relation to others.

Point seventy-five of the Preamble of the EU General Data Protection Regulation also refers to algorithmic discrimination. In that point, it is emphasised that the processing of personal data may cause physical, material or non-material damage (Regulation 2016/679 of the European Parliament and of the Council of 7 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), *Official Journal of the European Union* L 119/2016).

The EU General Data Protection Regulation has great importance in the prevention of discrimination in terms of the processing of personal data, but even so, a part of algorithmic decision-making that does not relate to the processing of personal data remains outside the scope of this legal regulation (Zuiderveen Borgtesius 2018: 44–45).

The Proposal for an EU Directive *on improving working conditions in platform work* from 2021 contains a separate chapter on algorithmic management, divided into five articles (Proposal for a Directive of the European Parliament and of the Council on improving working conditions in platform work, COM(2021) 762 final, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021PC0762&from=EN):

- Transparency on and use of automated monitoring and decision-making systems,
- Human monitoring of automated systems,
- Human review of significant decisions,
- Information and consultation,
- Persons performing platform work who do not have an employment relationship.

In addition to regulations on the prohibition of discrimination, regulations on data protection, and regulations on improving the working conditions of platform workers, there is a large number of other regulations in legal systems that can be helpful when it comes to fighting algorithmic discrimination. These are regulations on consumer protection, competition, free access to information of public importance, freedom of information, etc.

There is an increasing number of non-binding rules on ethical principles regarding the use of artificial intelligence, which are formulated by international organisations and professional associations, and which can serve as a good basis for formulating binding legal regulations.

NON-LEGAL MEANS OF PROTECTION AGAINST ALGORITHMIC DISCRIMINATION

In addition to strictly legal means to fight against algorithmic discrimination, there are a number of other measures that can help in this fight. These measures are education, risk assessment and mitigation, public sector transparency, strengthening of equality bodies, strengthening of human rights monitoring organisations, etc. (Zuiderveen Borgtesius 2018: 51–60).

A large number of people, such as computer scientists, lawyers and economists, are not aware of the risks brought on by the use of artificial intelligence, hence, it is necessary to direct attention at all levels of education to the acquisition of new knowledge, which can help fight against algorithmic discrimination.

CONCLUSIONS

Risk assessment and mitigation is essential for all projects involving the use of artificial intelligence. Any institution that intends to create a product or service based on artificial intelligence, i.e., algorithms, should form a team made up of IT specialists, lawyers and economists, who will assess the possible risks and impact on the rights and freedoms of individuals. This is not only necessary in the creation phase of the artificial intelligence system, but also needs to be done later, during the testing and implementation phase of the artificial intelligence system. Special responsibility when using artificial intelligence systems exists when such systems are used by public services and state

bodies. Their decisions often affect a large number of individuals, endangering human rights, so it is necessary to exclude all possible forms of discrimination in such algorithmic decision-making. In order to achieve fairness and equality in the use of artificial intelligence and algorithmic decision-making in the public sector, it is necessary to constantly monitor and control the functioning of these artificial intelligence systems.

Institutions that deal with equality and those that deal with the protection of human rights should handle issues of algorithmic discrimination, but in order to successfully deal with those issues, they should acquire new knowledge and use special expert analyses. Additionally, the task of these institutions is to work on raising public awareness regarding the risks brought on by algorithmic decision-making. Cooperation between institutions that deal with equality and institutions that deal with human rights, on one hand, with institutions that deal with data protection and consumer protection, on the other, can also contribute to a more successful fight against endangering human rights due to the consequences of algorithmic discrimination.

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REZIME

UTICAJ VEŠTAČKE INTELIGENCIJE NA LJUDSKA PRAVA

KLJUČNE REČI: VEŠTAČKA INTELIGENCIJA, LJUDSKA PRAVA, ALGORITAMSKA DISKRIMINACIJA.

Veštačka inteligencija danas ima direktan uticaj kako na ekonomiju, politiku, obrazovanje, kulturu, demokratiju tako i na ljudska prava. Njen razvoj i ulazak u naš svakodnevni život danas otvara niz novih pitanja: od pitanja pravnog subjektiviteta i odgovornosti robota sa veštačkom inteligencijom, do pitanja ugrožavanja ljudskih prava i demokratije od strane sistema veštačke inteligencije. Kroz prizmu pojmova o ljudskim pravima i veštačkoj inteligenciji obrađen je uticaj veštačke inteligencije na ljudska prava. S obzirom da sistemi veštačke inteligencije koji su zasnovani na pristrasnim informacijama mogu prouzrokovati algoritamsku diskriminaciju, u radu su istaknuta pravna i nepravna sredstva zaštite od algoritamske diskriminacije. Tema rada je aktuelna i prikazuje kako međusobni odnos veštačke inteligencije i ljudskih prava ima ne samo praktičan uticaj na naš svakodnevni život, već će utiče i na kvalitet pravne regulative u ovoj oblasti. Sa jedne strane utiče se na ubrzavanje ili usporavanje primene najnovijih tehnoloških dostignuća iz oblasti veštačke inteligencije, a sa druge strane opredeljuje stepen dostojanstva i stvarne slobode pojedinca u sajber prostoru.

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