

ETHICAL PRINCIPLES AND AI IN INTELLECTUAL PROPERTY LAW

Ileana Ioana BÎLBĂ*

Abstract

Many researchers are concerned with how new technologies, especially those using AI, will change society as we know it. There are evident benefits that will facilitate our current activities. Still, there are also elements whose impact we do not know, or have a character that can limit or restrict our rights and freedoms. Probably, it will not be the technologies that will determine certain limits, but those who own them and those who will establish the rules by which these new technologies will be guided.

I consider that any concern related to the use of new technologies, based on the use of AI, must be approached with great care, and must be reported to respect the values provided by art. 2 and 3 TEU and the Convention for the Protection of Human Rights and Fundamental Freedoms. There are significant concerns related to the ethical implications of the use of AI at the EU level, which will be analysed in this article.

At the European level, it is the role of the European Commission to deal with the „ethical interests” regarding the observance of the five principles that will be a challenge for cyberjustice: respect for fundamental rights, non-discrimination between individuals and groups of individuals, quality and security, transparency, neutrality and intellectual integrity and user control.

Keywords: AI Ethics, AI, AI Principles, Intellectual Property Law, AI Ethics and Principles.

1. Introduction

„William Blake's favorite work, *The Ancient of Days*, 1794, depicts the god Urizen as he creates the second Enlightenment. Blake believed that Urizen was an evil god because he invented science to force mankind to think in one way.”¹

When we analyse the evolution of society in the last two centuries, we cannot, but notice that there is more and more discussion about the four industrial revolutions that fundamentally changed the way people live, the way they understand the world and the way they look to the future: the first industrial revolution took place from the mid-18th century to the mid-19th century, when the steam engine was widely used, which mechanised some production processes, and the result was that some products became made cheaper and faster, some workers were better paid, and the standard of living began to rise.² The second industrial revolution took place at the beginning of the 20th century, when electricity began to be used in production processes, assembly lines became more efficient (the most relevant example is Henry Ford's)³, and the work was concentrated on the realisation of a single segment of the manufacturing chain, which led to a rapid increase in productivity and generated a mass distribution of the manufactured products. The third industrial revolution began to take place in the last decades of the 20th century, with the invention of the Internet, which made it possible for products and services to be distributed and consumed globally, and digital technology made its way across the planet. The fourth industrial revolution is happening nowadays, since the early 2000s, when digital technologies connect people and other technologies: AI begins to make its presence felt in our lives through computer programs that perform routine tasks made in the past of people, automatic translations, speech recognition, making automatic decisions, or other concepts of digitised technologies: *Internet of things (IoT)*, *Cloud computing*, etc.⁴

The present study aims to analyse the ethical principles on which the EU legislation is based regarding the regulation of technologies that use AI. This analysis is very important especially because it refers to a legislative framework that will be regulated in the coming years, or some studies and works do not make any reference to the ethical approach to AI or the ethical principles that govern AI, in time that in French legal literature, the first chapters begin with the presentation of ethical principles and their analysis. That is precisely why we considered it relevant to have in Romanian legal studies a first approach related to the presentation and analysis of the

* PhD Candidate, Faculty of Law, „Nicolae Titulescu” University of Bucharest, Master's student in Business Administration (MBA) at the UNESCO Department, University of Bucharest, SEMP scholarship (2nd semester, 2024), University of Geneva, Switzerland (e-mail: ileanaioanapop@gmail.com).

¹ E.O. Wilson, *The origins of creativity*, Publisher London, UK: Allen Lane, 2017, p. 122.

² J.R. Reagan, Madhusudan Singh, *Management 4.0. Cases and Methods for the 4th Industrial Revolution*, Springer Nature, Singapore, 2020, p. 8 et seq.

³ *Idem*, p. 8.

⁴ *Ibidem*.

ethical principles that will be the basis of the regulation of AI, starting with the AI Act of the EU or the legislative resolution of the European Parliament of March 13, 2024 on the proposal for a regulation of the European Parliament and of the Council establishing harmonised rules on artificial intelligence (AI Law) and amending certain legislative acts of the European Union [COM(2021)0206 - C9-0146/2021 - 2021/0106(COD)]⁵

2. The evolution of technologies

Some researchers and analysts anticipate the fifth industrial revolution, in which robots and other forms of AI will co-exist and work in harmony with humans („cobots”)⁶, technology will be a part of our bodies and in which probably - for example, we will no longer use smartphones, but we will hear directions whispered in our ears, and factories will be able to communicate directly with customers to offer them customised products according to their needs and desires.

The terms AI were first used by John McCarthy in 1956 as a definition of „*the science and engineering of making intelligent machines*”⁷ and follows the architecture of the human brain in artificial neural networks.⁸ We cannot fail to note that the challenges launched by new technologies have drawn the attention of the European Commission and the European Parliament so that they respect the basic principles regarding the recognition of man as the only one who can enjoy intellectual property rights according to the European Parliament's Proposal for a Resolution on to intellectual property rights for the development of technologies in the AI field [2020/2015(INI)], art. 17 whereby: „*considers that works produced autonomously by artificial agents and robots may not be eligible to benefit from copyright protection, in order to respect the principle of originality, which is linked to a natural person, and whereas the concept of 'intellectual creation' refers to the personality of the author.*”⁹

There are many researchers who are concerned about how new technologies, especially those using AI, will change society as we know it. There are obvious benefits that will make our day-to-day activities easier, but there are also elements whose impact we do not know, or are of a nature that may limit or restrict our rights and freedoms. It is probably not the technologies themselves that will determine certain limits, but those who own them and those who will set the rules by which these new technologies will be guided: „*Those who master these technologies will master us more and more. They will have power, which means they will have a constant and vast ability to get us to do meaningful things that we would not otherwise do. They will increasingly establish the limits of our freedom, deciding what is allowed and what is forbidden. They will determine the future of democracy, its progress or decay. In addition, based on algorithms, they will make decisions on vital issues of social justice, distributing social benefits and dividing us into hierarchies, depending on our status and what others think of us.*”¹⁰

It is true that in the last two centuries, many technologies have proposed and proposed to find solutions to bring peace to the world and deter war, but they have not succeeded: Jules Verne imagined that the invention of the submarine would determine peace because fleets of ships would be useless, Guglielmo Marconi thought that the invention of the radio would stop any war because he could communicate easily and whatever he found out if the enemies had troop movements, Alfred Nobel imagined that dynamite would deter war more than „*a thousand international conventions*”,¹¹ and Orville Wright assumed that the airplane „*will make the war powerless.*”¹² These are just a few examples, which show us that what we want to achieve, does not mean that it cannot be used in a destructive way.

⁵ *** Amendments adopted by the European Parliament on 14.06.2023 on the proposal for a regulation of the European Parliament and of the Council on laying down harmonised rules on artificial intelligence (AI Act) and amending certain Union legislative acts [COM(2021)0206 - C9-0146/2021 - 2021/0106(COD)], https://www.europarl.europa.eu/doceo/document/TA-9-2023-0236_EN.html, accessed on 15.04.2024.

⁶ *Idem*, p. 114.

⁷ G. Surblytė-Namavičienė, *Competition and Regulation in the Data Economy. Does Artificial Intelligence Demand a New Balance ?*, Elgar Studies in Law and Regulation, Edward Elgar Publishing Limited, Glos, UK, 2020, p. 8.

⁸ *Ibidem*. «AI follows the architecture of human brains in artificial neural networks (ANNs). On the basis of „machine-learning” or „deep learning” algorithms, intelligent systems are supposed to learn, and the learning material for such machines is data. The latter is processed in a number of layers of ANNs.»

⁹ European Parliament, *REPORT on intellectual property rights for the development of artificial intelligence technologies* https://www.europarl.europa.eu/doceo/document/A-9-2020-0176_EN.html, accessed on 15.05.2024.

¹⁰ J. Susskind, *Politica viitorului. Tehnologia digitală și societatea*, translation from English by Adina Ihora, Corint Books Publishing House, Bucharest, 2019, p. 15.

¹¹ *Idem*, p. 34.

¹² *Ibidem*.

3. The concerns of the EU Institutions and in the world for the regulation of AI

In a study requested by the Legal Affairs Committee (JURI) of the European Parliament, entitled: „Artificial Intelligence and Civil Liability”, from July 2020,¹³ several hypotheses regarding the definition and definition of what the concept of „AI” means are evaluated. Because the regulatory proposal also involves the need to define what is to be regulated, the author of the study notes that there is no consensus regarding the definition of the term „AI” in the first place, including in the United States of America, there are controversies related to technical and literal meanings. Andrea Bertolini proposes in this study the introduction of the notion of the „electronic person”, a fiction that, like the terminology of a commercial company, allows coordination between different parties (in commercial contracts, prima facie identification – a single person responsible for cases with victims), the separation of assets and limiting liability (rather than using a maximum compensation ceiling, through specific legislation), imposing registration and regulating liability to facilitate stakeholder access to AI services (e.g., AI-based stock exchange software).¹⁴ The same author claims that the ontological distinction must be made in defining the notion of an „electronic person”: it is not a subject, but an object.

From the point of view of intellectual property law, there are concerns regarding the protection of productions generated by AI, at the level of the European Union. Thus, in the European Commission's communication to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions dated 25.04.2018, entitled „Artificial Intelligence for Europe”, the interest in clarifying ambiguities is mentioned: „Reflection will be needed on interactions between AI and intellectual property rights, from the perspective of both intellectual property offices and users, with a view to fostering innovation and legal certainty in a balanced way.”¹⁵ France aims to become a world leader in the use of AI and even establish a network of institutes on AI as it appears in the Villani Report,¹⁶ while Germany wants to be known as the one that creates „AI made in Germany”, in this sense the Ministry of Education and Research in this country created the „Lernende Systeme” platform to bring together the most advanced research and applications in this field.¹⁷ Great Britain wants to achieve the most innovative economy through digitization, in this sense the British government has developed several documents in this regard: in November 2017 a document was published defining AI as the foundation of economic and industrial growth,¹⁸ and the most ambitious project from January 2022 is to create global standards for AI,¹⁹ establishing an Office for AI²⁰ and creating a Guide for the acquisition of AI by state institutions.²¹ In China, the Minister of Industry and Information Technology presented the national plan and strategy for AI, the objective being that by 2030, China will become a global leader in the research, development and application of AI, surpassing the United States of America.²²

3.1. Ethical principles of AI in Japan

The Japanese government established an „Artificial Intelligence Technology Strategic Council” in June 2018 to officially make AI a component of the „integrated innovative strategy”.²³ The document issued by the Japanese

¹³ A. Bertolini, PhD, LLM (Yale), *Artificial Intelligence and Civil Liability*, [https://www.europarl.europa.eu/RegData/etudes/STUD/2020/621926/IPOL_STU\(2020\)621926_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2020/621926/IPOL_STU(2020)621926_EN.pdf), accessed on 10.04.2023.

¹⁴ *Idem*, p 33.

¹⁵ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Artificial Intelligence for Europe COM/2018/237 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0237> in note 52 it is mentioned: „Using AI to create works can have implications on intellectual property, with questions arising for instance on patentability, copyright and right ownership.” (accessed on 09.02.2023).

¹⁶ C. Villani, *Donner un sens à L'Intelligence Artificielle*, 2017, https://www.aiforhumanity.fr/pdfs/9782111457089_Rapport_Villani_accessible.pdf, accessed on 12.02.2023.

¹⁷ Progress Report of Platform „Lernende Systeme” Designing Artificial Intelligence for the benefit of society Potentials and challenges for the research and application of AI, https://www.plattform-lernende-systeme.de/files/Downloads/Publikationen_EN/PLS_Fortschrittsbericht_2020_englisch.pdf, accessed on 12.02.2023.

¹⁸ UK Government, Policy paper Build Back Better: our plan for growth, 03.03.2021, <https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth/build-back-better-our-plan-for-growth-html>, accessed on 12.02.2023.

¹⁹ UK Government, New UK initiative to shape global standards for Artificial Intelligence, <https://www.gov.uk/government/news/new-uk-initiative-to-shape-global-standards-for-artificial-intelligence>, accessed on 12.02.2023.

²⁰ UK Government, Office for Artificial Intelligence, <https://www.gov.uk/government/organisations/office-for-artificial-intelligence>, accessed on 12.02.2023.

²¹ UK Government, Guidelines for AI procurement, 08.06.2020, <https://www.gov.uk/government/publications/guidelines-for-ai-procurement/guidelines-for-ai-procurement>, accessed on 13.02.2023.

²² The State Council, The People's Republic of China, Plan focuses on digital economy development during 14th Five-Year Plan period, http://english.www.gov.cn/policies/latestreleases/202201/12/content_WS61de9a35c6d09c94e48a385f.html, accessed on 15.02.2023.

²³ G. Garcia, Artificial Intelligence in Japan. Industrial Cooperation and Business Opportunities for European Companies, https://www.eu-japan.eu/sites/default/files/publications/docs/artificial_intelligence_in_japan_-_guillermo_garcia_-_0705.pdf, accessed on

government on July 28, 2017 „Draft AI R&D GUIDELINES for International Discussions“ recognized the enormous benefits that AI will bring to people, society, and the economy, making important contributions to solving various difficulties that people, the different communities, countries and the world in general, face each other.²⁴

In this document²⁵ the nine principles by which the developers of AI must be guided are mentioned:

- 1) the principle of collaboration (IT engineers will have to pay attention to the interconnectivity and interoperability of AI systems).
- 2) the principle of transparency (developers will have to pay attention to the verifiability of AI systems and the explanation of their judgment and decisions).
- 3) the principle of controllability (developers will have to pay attention to the controllability of AI systems).
- 4) the principle of safety (developers will have to take into account that AI systems will not harm the lives, bodies or property of users or other parties through other actions or devices).
- 5) the principle of security (developers will have to pay attention to the security of AI systems).
- 6) the principle of privacy (developers will have to consider that AI systems will not violate the privacy of users or other parties).
- 7) the principle of ethics (developers will have to respect human dignity and individual autonomy in the research and development of AI systems).
- 8) the principle of user assistance (developers will have to consider that AI systems will support users and make it possible to offer them opportunities to make choices in appropriate ways).
- 9) the principle of responsibility (developers will have to make efforts to fulfil their responsibilities towards interested parties, including AI users).

3.2. EU Expert Group (AI HLEG) - Ethical Principles for AI

At the level of the European Union, there is the High-Level Expert Group on AI (AI HLEG), a group of independent experts, which was appointed by the European Commission in June 2018 as part of the AI strategy. A relevant document prepared by this group (AI HLEG) in April 2019 and entitled „Ethical Guidelines for Trusted Artificial Intelligence (AI)“²⁶ refers to the respect of the fundamental rights provided by the EU Treaties and the EU Charter regarding the development and use of systems based on AI:

1) Respect for human dignity, and by this it is understood that every human being has an „intrinsic value“ that should not be suppressed, compromised, or diminished „*In the context of AI, respect for human dignity implies that all people are treated with the respect they deserve as of moral subjects and not just objects to be selected, sorted, graded, herded, conditioned or manipulated. So, AI systems should be developed in a way that respects, serves, and protects people's physical and mental integrity, their personal and cultural sense of identity, and the satisfaction of their essential needs*“²⁷ Therefore, any attempt to harm human dignity is rejected, and the manipulation of information to influence people's decision-making capacity is excluded.

2) Freedom of the individual, in the context of AI: „*Freedom of the individual for instance requires mitigation of (in)direct illegitimate coercion, threats to mental autonomy and mental health, unjustified surveillance, deception and unfair manipulation. In fact, freedom of the individual means a commitment to enabling individuals to wield even higher control over their lives, including (among other rights) protection of the freedom to conduct a business, the freedom of the arts and science, freedom of expression, the right to private life and privacy, and freedom of assembly and association.*“²⁸ Of course, there will be interventions and limitations imposed by governments and even by non-governmental organisations to ensure access to people exposed to risks of exclusion to have equal access to the benefits and opportunities of AI.

3) Respect for democracy, justice, and the rule of law. Any government institution and power must be limited by law, but also authorised from the point of view of legislation: „*AI systems must not undermine democratic processes, human deliberation or democratic voting systems. AI systems must also embed a commitment to ensure that they do not operate in ways that undermine the foundational commitments upon which the rule of law is founded, mandatory laws and regulation, and to ensure due process and equality before the law.*“²⁹

16.02.2023.

²⁴ *Idem*, p. 29.

²⁵ *Idem*, p. 30.

²⁶ The Independent High-Level Expert Group on Artificial Intelligence established by the European Commission in June 2018, *Ethical Guidelines for Trusted Artificial Intelligence (AI)*, April 2019, <https://ec.europa.eu/futurium/en/ai-alliance-consultation/guidelines.html>, p. 13 et seq., accessed on 15.02.2023.

²⁷ *Idem*, p. 12.

²⁸ *Ibidem*.

²⁹ *Ibidem*.

4) Equality³⁰, non-discrimination and solidarity, including the rights of people at risk of exclusion. The operations carried out by AI must not be biased, favouring some persons and groups and disfavouring others, all the more. *In an AI context, equality entails that the system's operations cannot generate unfairly biased outputs (e.g., the data used to train AI systems should be as inclusive as possible, representing different population groups). This also requires adequate respect for potentially vulnerable persons and groups, such as workers, women, persons with disabilities, ethnic minorities, children, consumers or others at risk of exclusion.*³¹

5) The rights of citizens. The wide range of rights enjoyed by citizens must not be limited, influenced, and manipulated through the use of technologies based on AI, including the right to vote, the right to be elected, the right to access public documents, and the right to address the petition to the administrations.

At the level of the European Union, there is another body responsible for creating ethical frameworks for the use of AI, namely the „European Group for Ethics in the Field of Science and New Technologies” (EGE), whose mission is *„to identify, define and analyse the ethical issues raised by developments in science and technology; (b) provide essential guidance for the development, implementation and monitoring of Union policies or legislation, in the form of analyses and recommendations, presented in opinions and statements, aimed at promoting ethical conduct in Union policy-making, in accordance with the Charter fundamental rights of the European Union”*³² and which in February 2021 received a new 5-year mandate from the European Commission.

3.3. The set of four ethical principles proposed by the High-Level Expert Group on AI

There are also a set of **four ethical principles** enunciated by the High-Level Expert Group on AI, which are specified as ethical imperatives for AI practitioners and developers that they should wish to adhere to:

1) The principle of respecting people's autonomy: *„AI systems should not unjustifiably subordinate, coerce, deceive, manipulate, condition or herd humans. Instead, they should be designed to augment, complement and empower human cognitive, social and cultural skills. The allocation of functions between humans and AI systems should follow human-centric design principles and leave meaningful opportunity for human choice. This means securing human oversight²⁸ over work processes in AI systems. AI systems may also fundamentally change the work sphere. It should support humans in the working environment, and aim for the creation of meaningful work”*³³. Any experiment in the use of AI that violates this principle must be prohibited, as one that is in flagrant contradiction with fundamental human rights.

2) The principle of damage prevention refers to the protection of human dignity and physical and mental integrity: *„AI systems and the environments in which they operate must be safe and secure. They must be technically robust and it should be ensured that they are not open to malicious use. Vulnerable persons should receive greater attention and be included in the development, deployment and use of AI systems. Particular attention must also be paid to situations where AI systems can cause or exacerbate adverse impacts due to asymmetries of power or information, such as between employers and employees, businesses and consumers or governments and citizens.”*³⁴

3) The principle of equity. Although this principle may have nuances of interpretation, the group of experts wanted to clarify these aspects: *„While we acknowledge that there are many different interpretations of fairness, we believe that fairness has both a substantive and a procedural dimension. The substantive dimension implies a commitment to: ensuring equal and just distribution of both benefits and costs, and ensuring that individuals and groups are free from unfair bias, discrimination and stigmatisation. If unfair biases can be avoided, AI systems could even increase societal fairness”*³⁵. This principle is also in full agreement with the White Paper „Artificial Intelligence – A European approach focused on excellence and trust” elaborated by the European Commission on 19.02.2020 which presents the need to create a regulated framework for AI, on the one hand to ensure full compliance with the values and principles of the European Union, and on the other hand, to be prepared for the fruition of all the opportunities offered by new technologies, to become a leader in the world and to find reliable solutions including for the challenges generated by climate change and environmental degradation.³⁶

³⁰ A. Fuerea, *Manualul Uniunii Europene*, 3rd ed., revised and supplemented, Universul Juridic Publishing House, Bucharest, 2006, p. 163.

³¹ *Idem*, p. 12.

³² Commission Decision (EU) 2021/156 of 09.02.2021 renewing the mandate of the European Group on Ethics in Science and New Technologies, <https://beta.op.europa.eu/en/publication-detail/-/publication/e185d59b-6b42-11eb-aeb5-01aa75ed71a1/language-ro/format-PDFA2A>, accessed on 15.02.2023.

³³ The Independent High-Level Expert Group on Artificial Intelligence established by the European Commission in June 2018, Ethical Guidelines for Trusted Artificial Intelligence (AI), April 2019, <https://ec.europa.eu/futurium/en/ai-alliance-consultation/guidelines.html>, p. 13 *et seq.*, accessed on 15.02.2023.

³⁴ *Idem*, p. 14.

³⁵ *Ibidem*.

³⁶ *Idem*, p. 6.

4) The principle of explainability is essential „*is crucial for building and maintaining users' trust in AI systems. This means that processes need to be transparent, the capabilities and purpose of AI systems openly communicated, and decisions – to the extent possible – explainable to those directly and indirectly affected. Without such information, a decision cannot be duly contested. An explanation as to why a model has generated a particular output or decision (and what combination of input factors contributed to that) is not always possible. These cases are referred to as 'black box' algorithms and require special attention. In those circumstances, other explicability measures (e.g., traceability, audibility, and transparent communication on system capabilities) may be required, provided that the system, as a whole, respects fundamental rights*”³⁷.

3.4. EP Resolution [2020/2012(INL)]

In the European Parliament Resolution of 20.10.2020 containing recommendations to the Commission on the framework of ethical issues associated with artificial intelligence, robotics, and related technologies [2020/2012(INL)]³⁸ the ethical principles that must be taken into account for future regulatory acts at the European level are explicitly mentioned, depending on the strategic and interest areas of the European Union:

- Human-centered and human-created AI. Any legal regulatory framework will refer to the ethical principle of serving people and not replacing them, and „*deployment and use of high-risk artificial intelligence, robotics and related technologies, including but not exclusively by human beings, should always be ethically guided, and designed to respect and allow for human agency and democratic oversight, as well as allow the retrieval of human control when needed by implementing appropriate control measures.*” (art. 11);
- Risk assessment. The decision-makers have the possibility and the ability to assess the risks regarding the use and impact of AI so that it does not cause damage to people and: „*Considers, in that regard, that artificial intelligence, robotics and related technologies should be considered high-risk when their development, deployment and use entail a significant risk of causing injury or harm to individuals or society, in breach of fundamental rights and safety rules as laid down in Union law*” (art. 14);
- Aspects related to safety, transparency and accountability. It is an important principle related to knowing the technologies used by AI so that they do not affect privacy and intellectual property rights: „*is essential that the algorithms and data sets used or produced by artificial intelligence, robotics, and related technologies are explainable and, where strictly necessary and in full respect of Union legislation on data protection, privacy and intellectual property rights and trade secrets, accessible by public authorities such as national supervisory authorities and market surveillance authorities*” (art. 19);
- Impartiality and non-discrimination. Forms of automatic discrimination are prohibited, including those that affect people in an indirect way (art. 27), disinformation produced through AI and the possibility for natural and legal persons to have the possibility of an appeal against a decision made by a technology with AI or robotic (art. 37);
- Social responsibility and gender balance. Freedom of thought and expression are guaranteed, and AI technologies must not allow speeches that incite hatred or violence, these being illegal. If AI technologies lead to job losses, Member States will take social security measures, such as reducing working hours (art. 46);
- Environment and sustainability. AI technologies can be used to achieve the sustainable development objectives assumed by the United Nations, for the energy transition and global decarbonization (art. 55);
- Privacy protection and biometric recognition. Public authorities can use AI technologies, but only if they are proportionate to their purpose, avoiding abuses and excessive surveillance, taking into account the psychological and social impact on civil society regarding the surveillance and use of AI data (art. 65);
- Good governance. The use of AI „*should not compromise the protection of public values and fundamental rights in any way; believes that the terms and conditions of public procurement should reflect the ethical standards imposed on public authorities, as appropriate.*” (art. 77);
- Consumers and the internal market;
- Security and defense. In the context of hybrid warfare, the volume of information can be overwhelming for human analysts, and AI can process this information more efficiently, AI is a disruptive, transversal technology: „*quantum computing could represent the most revolutionary change in conflict since the advent of atomic weaponry and thus urges that the further development of quantum computing technologies be a priority*

³⁷ The Independent High-Level Expert Group on Artificial Intelligence established by the European Commission in June 2018, Ethical Guidelines for Trusted Artificial Intelligence (AI), April 2019, <https://ec.europa.eu/futurium/en/ai-alliance-consultation/guidelines.html>, p. 14 et seq., accessed on 17.02.2023.

³⁸ *** European Parliament resolution of 20.10.2020 with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies [2020/2012(INL)]. (2021/C 404/04), <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020IP0275>, accessed on 10.03.2024.

for the Union and Member States" (art. 97), and „Recalls that most of the current military powers worldwide have already engaged in significant R&D efforts related to the military dimension of artificial intelligence; considers that the Union must ensure that it does not lag behind in this regard" (art. 99), to mention is that „the entire responsibility and accountability for the decision to design, develop, deploy and use AI-systems must rest on human operators, as there must be meaningful human monitoring and control over any weapon system and human intent in the decision to use force in the execution of any decision of AI-enabled weapons systems that might have lethal consequences" (art. 102);

- Transport. It is noted that AI systems could contribute to significantly reducing the number of fatal road accidents (art. 108);
- Employment, workers' rights, digital skills and the workplace. In addition to the fact that AI can contribute to increasing the degree of inclusion and the labor market, it must be taken into account that AI technologies used in the workplace must be accessible to everyone, according to the principle of universal design (art. 116);
- Education and culture. Educational institutions will use AI technologies that have „European certificate of ethical compliance" (art. 119);
- National supervisory authorities;
- Coordination at the level of the Union;
- European certification of compliance with ethical norms. It emphasises the need to establish some: „common criteria and an application process relating to the granting of a European certificate of ethical compliance be developed in the context of coordination at Union level" (art. 135);
- International cooperation. It is requested „Calls for synergies and networks to be established between the various European research centres on AI as well as other multilateral fora, such as the Council of Europe, the United Nations Educational Scientific and Cultural Organisation (UNESCO), the Organisation for Economic Co-operation and Development's (OECD), the World Trade Organisation (WTO) and the International Telecommunications Union (ITU), in order to align their efforts and to better coordinate the development of artificial intelligence, robotics and related technologies (art. 141)."

3.5. Concerns about codes of ethics in EU countries and the world about codes of ethics for AI regulation

If we look at the countries that are part of the European Union, Denmark is the country that created a coherent strategy in January 2018 regarding the use of AI (Strategy for Denmark's Digital Growth)³⁹ and which aims to create a code of ethics for companies and users of AI products. Finland developed a first study⁴⁰ in December 2017 in which he expresses his concerns about the ethical aspects of the use of AI, the desire to become a global leader in terms of AI, including through the creation of a Finnish Center for AI⁴¹ (a partnership between two Aalto and Helsinki universities) to accelerate research in the field of AI. Italy, for its part, through the Italian Digitization Agency, on March 21, 2018, a document entitled „Artificial Intelligence at the service of the citizen"⁴² through which he wants to integrate the services of AI in government activities, but taking into account the concerns related to ethics, the availability of employees' skills, the role of big data and the legal implications.⁴³

The Nordic and Baltic countries (Denmark, Estonia, Finland, the Faroe Islands, Iceland, Latvia, Lithuania, Norway, Sweden and the Åland Islands) created, through the ministers responsible for digitization, a document on August 31, 2020 entitled „Nordic cooperation on data to boost the development of solutions with artificial intelligence"⁴⁴ through which, aware of the benefits brought by the management of public data through AI, better services will be offered to society.

In Poland, a round table was held regarding the need to create a national strategy regarding AI⁴⁵ but it is

³⁹ The Danish government, Strategy for Denmark's Digital Growth, p. 46, https://eng.em.dk/media/10566/digital-growth-strategy-report_uk_web-2.pdf, accessed on 17.02.2023.

⁴⁰ Publications of the Ministry of Economic Affairs and Employment, 47/2017, *Finland's Age of Artificial Intelligence Turning Finland into a leading country in the application of artificial intelligence. Objective and recommendations for measures.* https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/160391/TEMrap_47_2017_verkkajulkaisu.pdf?sequence=1&isAllowed=y, accessed on 17.02.2023.

⁴¹ <https://fcai.fi/>, accessed on 17.02.2023.

⁴² White paper: <https://ai-white-paper.readthedocs.io/en/latest/>, accessed on 17.02.2023.

⁴³ <https://medium.com/politics-ai/an-overview-of-national-ai-strategies-2a70ec6edfd>, accessed on 17.02.2023.

⁴⁴ <https://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1462558&dsid=8745>, accessed on 17.02.2023.

⁴⁵ <https://www.money.pl/gospodarka/wiadomosci/artkyl/rewolucyjny-plan-dla-polski-powstaje,205,0,2406605.html>, accessed on 18.02.2023.

still unclear when and how this will be achieved.

It should also be mentioned that in Russia there is still no such public strategy, but the remarks of President Putin who declared that: „who will be the leader in this sphere, will be the master of the world” are known.⁴⁶ or that it is not very desirable for this technology monopoly to fit only in someone's hands, although political observers have highlighted that the statements of President Vladimir Putin can be interpreted as evidence for the use of AI weapons.

South Korea is the country that surprised by the statements of government officials, as if investments of over 2,200 billion \$ will be made in the next 5 years,⁴⁷ and the first step will be the realisation in 2022 of 6-degree programs to train over 5,000 specialists in AI (1,400 researchers in AI and 3,600 specialists in data management).

In Romania, unfortunately, there is no national strategy regarding AI and no specific institution to deal with these aspects. The only concern, which can be mentioned, is the initiative of the Authority for the Digitization of Romania⁴⁸ which made public the approach about the new rules that citizens and companies in the European Union will follow⁴⁹ which will use technologies based on AI. The only document⁵⁰ where it is mentioned the possibility of accessing grants by SMEs in the amount of a maximum of 200,000 euros with 15% own co-financing for „*information technology and artificial intelligence; Nanotechnologies and cutting-edge technologies*” is PNRE.⁵¹

3.6. EU AI Law - Resolution [COM(2021)0206 - C9-0146/2021 - 2021/0106(COD)]

European Parliament legislative resolution of 13 March 2024 on the proposal for a regulation of the European Parliament and of the Council establishing harmonised rules on artificial intelligence (AI Law) and amending certain Union legislation [COM(2021)0206 - C9-0146/2021 - 2021/0106(COD)]⁵² proposes that the European Union become „a world leader in the development of safe, reliable and ethical artificial intelligence, as stated by the European Council⁵³, *and ensures the protection of ethical principles, as expressly requested by the European Parliament*”,⁵⁴ and amendment 27 of the same resolution regulates the need to refer to the ethical principles for AI technologies: „*It is important to note that AI systems should make every effort to comply with the general principles that establish a high-level framework promoting a coherent, human-centered approach to ethical and reliable AI, in accordance with the Charter fundamental rights of the European Union and with the values on which the Union is founded, including the protection of fundamental rights, human involvement and oversight, technical robustness and security, privacy protection and data governance, transparency, non-discrimination and fairness, and the well-being of society and the environment*”. All operators developing technologies based on AI and those who will use them will fall under the scope of the resolution which stipulates that the European approach is centered on the human factor with an „ethical” and reliable AI, which is by the Charter and the values that establishes the European Union.

4. Conclusions

I consider that any regulation related to the use of new technologies, based on the use of AI, must be approached with great care, and reporting should be made to respect the values provided by art. 2 and 3 TEU and the Convention for the Protection of Human Rights and Fundamental Freedoms.⁵⁵ There are significant

⁴⁶ <https://medium.com/politics-ai/an-overview-of-national-ai-strategies-2a70ec6edfd>, accessed on 18.02.2023.

⁴⁷ <https://www.joongang.co.kr/article/22625271#home>, accessed on 18.02.2023.

⁴⁸ <https://www.adr.gov.ro/adr-pune-in-dezbatere-publica-prima-propunere-legislativa-privind-inteligenta-artificiala-formulata-la-nivel-european/>, accessed on 18.02.2023.

⁴⁹ 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 <https://eur-lex.europa.eu/legal-content/en/TXT/HTML/?uri=CELEX:52021PC0206&from=EN>, accessed on 18.02.2023.

⁵⁰ Romanian Government, *Planul national de investiții și relansare economică (The National Investment and Economic Recovery Plan)*, July 2020, p. 46, <https://www.adr.gov.ro/wp-content/uploads/2020/07/Planul-Nat%CC%A6ional-de-Investit%CC%A6ii-s%CC%A6i-Relansare-Economica%CC%86.pdf>, accessed on 18.02.2023.

⁵¹ *Ibidem*.

⁵² *** European Parliament legislative resolution of 13.03.2024 on the proposal for a regulation of the European Parliament and of the Council on laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain Union Legislative Acts [COM(2021)0206 - C9-0146/2021 - 2021/0106(COD)], https://www.europarl.europa.eu/doceo/document/TA-9-2024-0138_EN.html, accessed on 05.04.2024.

⁵³ European Council, Special meeting from 01/02.10.2020, Conclusions, <https://data.consilium.europa.eu/doc/document/ST-13-2020-INIT/en/pdf>, p. 6, accessed on 20.04.2024.

⁵⁴ European Parliament resolution of 20.10.2020 with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies [2020/2012(INL)], <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020IP0275>, accessed on 20.04.2024.

⁵⁵ J. Guilhaem (coord.), *Science et sens de l'intelligence artificielle*, Paris, Dalloz, 2020, p. 79.

concerns related to the ethical implications of the use of AI at the level of the European Union, since the resolution (art. 16) of February 16, 2017, adopted by the European Parliament „Civil law norms regarding Robotics” by which „requests the Commission to analyse the possibility of creating a European Agencies for Robotics and Artificial Intelligence, to provide the necessary technical, ethical and regulatory knowledge to support the relevant public actors, both at the level of the Union and the Member States”⁵⁶ until the „opinion” of the EESC on May 31 and June 1, 2017, which called for „the introduction of a code of ethics for the development, implementation and use of AI, so that AI systems remain throughout the process compatible with the following principles: human dignity, integrity, freedom, respect for privacy, cultural and gender diversity and fundamental human rights.”⁵⁷ At the European level, it is the role of the European Commission to deal with the „ethical interests” regarding the observance of the five principles that will be a challenge for cyberjustice: respect for fundamental rights, non-discrimination between individuals and groups of individuals, quality and security, transparency, neutrality and intellectual integrity and user control.⁵⁸

References

Legislation and normative acts

- Amendments adopted by the European Parliament on 14.06.2023 on the proposal for a regulation of the European Parliament and of the Council on laying down harmonised rules on artificial intelligence (AI Act) and amending certain Union legislative acts [COM(2021)0206 - C9-0146/2021 - 2021/0106(COD)] https://www.europarl.europa.eu/doceo/document/TA-9-2023-0236_EN.html;
- Civil liability regime for artificial intelligence European Parliament resolution of 20.10.2020 with recommendations to the Commission on a civil liability regime for artificial intelligence [2020/2014(INL)], https://www.europarl.europa.eu/doceo/document/TA-9-2020-0277_EN.pdf;
- COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Artificial Intelligence for Europe COM/2018/237 final, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018D0237>;
- Commission Decision (EU) 2021/156 of 09.02.2021 renewing the mandate of the European Group on Ethics in Science and New Technologies, <https://beta.op.europa.eu/en/publication-detail/-/publication/e185d59b-6b42-11eb-aeb5-01aa75ed71a1/language-ro/format-PDFA2A>;
- European Council, Special meeting from 01/02.10.2020, Conclusions, <https://data.consilium.europa.eu/doc/document/ST-13-2020-INIT/en/pdf>;
- European Parliament resolution of 20.10.2020 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.pdf;
- European Parliament resolution of 20.10.2020 with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies [2020/2012(INL)]; (2021/C 404/04), <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020IP0275>;
- European Parliament legislative resolution of 13.03.2024 on the proposal for a regulation of the European Parliament and of the Council on laying down harmonised rules on Artificial Intelligence (AI Act) and amending certain Union Legislative Acts [COM(2021)0206 - C9-0146/2021 - 2021/0106(COD)], https://www.europarl.europa.eu/doceo/document/TA-9-2024-0138_EN.html;
- European Parliament, REPORT on intellectual property rights for the development of artificial intelligence technologies, https://www.europarl.europa.eu/doceo/document/A-9-2020-0176_EN.html;
- European Parliament resolution of 20.10.2020 with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies [2020/2012(INL)], <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020IP0275>;
- European Parliament resolution of 16.02.2017 on the situation of human rights and democracy in Nicaragua - the case of Francisca Ramirez [2017/2563(RSP)], https://www.europarl.europa.eu/doceo/document/TA-8-2017-02-16_EN.html;
- 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, <https://eur-lex.europa.eu/legal-content/en/TXT/HTML/?uri=CELEX:52021PC0206&from=EN>.

Thematic works

- Bensamoun, Al., Loiseau, G., *Droit de L'Intelligence Artificielle*, LGDJ, 2019;

⁵⁶ *** European Parliament resolution of 16.02.2017 on the situation of human rights and democracy in Nicaragua – the case of Francisca Ramirez [2017/2563(RSP)], https://www.europarl.europa.eu/doceo/document/TA-8-2017-02-16_EN.html, accessed on 11.04.2023.

⁵⁷ Opinion of the European Economic and Social Committee on ‘Artificial intelligence — The consequences of artificial intelligence on the (digital) single market, production, consumption, employment and society’ (own-initiative opinion) (2017/C 288/01), <https://eur-lex.europa.eu/legal-content/en/TXT/PDF/?uri=CELEX:52016IE5369>, art. 1.7, accessed on 11.04.2023.

⁵⁸ Al. Bensamoun, G. Loiseau, *Droit de l'intelligence artificielle*, Issy-les-Moulineaux Cedex, LGDJ, p. 12 *et seq.*

- Bringsjord, S., Ferrucci, D.A., *Artificial Intelligence and Literary Creativity Inside the Mind of BRUTUS, a Storytelling Machine*, Lawrence Erlbaum Associates, New Jersey, 2000;
- Miranda, E.R. (editor), *Handbook of Artificial Intelligence for Music Foundations, Advanced Approaches and Developments for Creativity*, Springer, 2021;
- Montagnon, P., *Intelligence Artificielle: l'être humain, maître du jeu*, préface d'Axel Kahn, Edi.pro, Liège, 2019;
- Reagan, J.R., Madhusudan, S., *Management 4.0. Cases and Methods for the 4th Industrial Revolution*, Springer Nature, Singapore, 2020;
- Stănilă, L.M., *Intelligența Artificială. Dreptul penal și sistemul de justiție penală. Amintiri despre viitor*, Universul Juridic Publishing House, Bucharest, 2020;
- Surblytė-Namavičienė, G., *Competition and Regulation in the Data Economy. Does Artificial Intelligence Demand a New Balance ?*, Elgar Studies in Law and Regulation, Edward Elgar Publishing Limited, Glos, UK, 2020;
- Wilson, E.O., *The origins of creativity*, Publisher London, UK: Allen Lane, 2017.

Online resources

- Bertolini, A., PhD, LL.M. (Yale), Artificial Intelligence and Civil Liability, [https://www.europarl.europa.eu/RegData/etudes/STUD/2020/621926/IPOL_STU\(2020\)621926_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2020/621926/IPOL_STU(2020)621926_EN.pdf);
- BRUTUS, O abordare logică parametrizată, <http://homepages.rpi.edu/~brings/EVOL/evol6/node7.html>;
- Garcia, G., Artificial Intelligence in Japan. Industrial Cooperation and Business Opportunities for European Companies, https://www.eu-japan.eu/sites/default/files/publications/docs/artificial_intelligence_in_japan_-_guillermo_garcia_-_0705.pdf;
- <https://eur-lex.europa.eu/legal-content/en/TXT/PDF/?uri=CELEX:52016IE5369>, art. 1.7;
- <https://fcai.fi/>;
- <https://medium.com/politics-ai/an-overview-of-national-ai-strategies-2a70ec6edfd>;
- <https://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1462558&dsid=-8745>;
- <https://www.joongang.co.kr/article/22625271#home>;
- <https://www.money.pl/gospodarka/wiadomosci/artykul/rewolucyjny-plan-dla-polski-powstaje,205,0,2406605.html>;
- Opinion of the European Economic and Social Committee on 'Artificial intelligence — The consequences of artificial intelligence on the (digital) single market, production, consumption, employment and society' (own-initiative opinion) (2017/C 288/01);
- Progress Report of Plattform Lernende Systeme Designing Artificial Intelligence for the benefit of society Potentials and challenges for the research and application of AI, https://www.plattform-lernende-systeme.de/files/Downloads/Publikationen_EN/PLS_Fortschrittsbericht_2020_englisch.pdf;
- Publications of the Ministry of Economic Affairs and Employment, 47/2017, Finland's Age of Artificial Intelligence Turning Finland into a leading country in the application of artificial intelligence. Objective and recommendations for measures, https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/160391/TEMrap_47_2017_verkkojulkaisu.pdf?sequence=1&isAllowed=y;
- Romanian Government, Planul national de investiții și relansare economică (The National Investment and Economic Recovery Plan), July 2020, <https://www.adr.gov.ro/wp-content/uploads/2020/07/Planul-Nat%CC%A6ional-de-Investit%CC%A6ii-s%CC%A6i-Relansare-Economica%CC%86.pdf>;
- The Danish government, Strategy for Denmark's Digital Growth, p. 46, https://eng.em.dk/media/10566/digital-growth-strategy-report_uk_web-2.pdf;
- The Independent High-Level Expert Group on Artificial Intelligence established by the European Commission in June 2018, Ethical Guidelines for Trusted Artificial Intelligence (AI), April 2019, <https://ec.europa.eu/futurium/en/ai-alliance-consultation/guidelines.html>;
- The State Council, The People's Republic of China, Plan focuses on digital economy development during 14th Five-Year Plan period, http://english.www.gov.cn/policies/latestreleases/202201/12/content_WS61de9a35c6d09c94e48a385f.html;
- UK Government, Guidelines for AI procurement, 08.06.2020, <https://www.gov.uk/government/publications/guidelines-for-ai-procurement/guidelines-for-ai-procurement>;
- UK Government, New UK initiative to shape global standards for Artificial Intelligence, <https://www.gov.uk/government/news/new-uk-initiative-to-shape-global-standards-for-artificial-intelligence>;
- UK Government, Office for Artificial Intelligence, <https://www.gov.uk/government/organisations/office-for-artificial-intelligence>;
- UK Government, Policy paper Build Back Better: our plan for growth, 03.03.2021, <https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth/build-back-better-our-plan-for-growth-html>;
- Villani, C., Donner un sens à L'Intelligence Artificielle, 2017, https://www.aiforhumanity.fr/pdfs/9782111457089_Rapport_Villani_accessible.pdf;
- White paper: <https://ai-white-paper.readthedocs.io/en/latest/>.