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ARTIFICIAL INTELLIGENCE BETWEEN CONTROVERSIES AND REGULATIONS

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Abstract: *The paper aims to present the results of the studies carried out over time worldwide, and especially in the last seven years, when the field of artificial intelligence begins to produce consequences of which human society begins to be aware, and for which it is imperative to the field to be regulated legislatively. In our country, Romania, the first National Strategy on AI was drawn up in 2019, but real concerns were manifested only in 2022.*
At the level of the European Union, the EU Act on AI of July 28th, 2023, wants to regulate work with AI. Academics are concerned about various unclear elements in the proposal, such as the broad definition of what constitutes AI, and fear the legal implications, in particular, for vulnerable groups such as patients and immigrants. The law classifies AI applications into four risk groups: low, limited, high, and unacceptable.
The problem of bias in machine learning is likely to become more significant as technology spreads to critical fields such as medicine and law, and as more people without deep technical understanding are tasked with implementing it. Some experts warn that algorithmic bias is already pervasive in many industries and that almost no one is trying to identify or correct it. Some solutions are mentioned to deal with the challenges caused by AI and rapid technological development affecting jobs.

Keywords: *artificial intelligence (AI), legal regulation of AI, risks, biases and errors introduced into AI systems*

INTRODUCTION

According to the *"Future of Jobs"* report presented at the World Economic Forum (WEF), approximately 25% of jobs will be changed, some being eliminated and some created. The WEF expects 14 million fewer jobs over the next five years, as 83 million jobs are expected to disappear, while only 69 million new jobs will be created. The report's findings are based largely on a survey of 803 companies employing a total of 11.3 million workers in 45 different industries worldwide. *"The biggest job losses are expected in: administration, security, manufacturing and trade",* the report said, noting that the decline will be *"mainly driven by digitization and automation."* [1] The emergence of generative AI and tools such as ChatGPT *is one of the biggest drivers of job losses, research indicates.* Other factors contributing to job losses are *supply chain changes* and *the rising cost of living*.

A modeling by Oxford Economics estimates that *by 2030, robotization will lead to the loss of about 20 million jobs in manufacturing industries globally*, of which *about 400,000 jobs in the European Union.*[2]; [8]

A research from Germany estimates that every robot leads to the disappearance of two jobs in manufacturing industries, with robotization responsible for 23% of jobs lost in these industries between 1994 and 2014 (275,000 jobs). Although the losses were offset by new service jobs and greater stability of the remaining manufacturing jobs, *wages fell (especially for middle-skilled workers and entry-level workers were disproportionately affected*.[3]; [8]

According to the OECD, *the number of jobs in manufacturing industries has already fallen by 20% in the last two decades*.[4]; [8] A recent study of the situation in 16 OECD countries from 2011 to 2016 suggests that increasing the number of robots in an industry leads to a reduction in human labor and income levels. The probability of robotization increases with rising prices and wages.[5]

Robotization can also be affected by factors such as [8]:

- unionization,
- dimensions of the organization,

- the ratio between skilled and unskilled workers.

Robotization also produces effects in services, currently rather in structured environments, easy to organize and map. Examples of such work environments are transporting luggage in airports, moving goods in warehouses or cleaning in hotels.[2]; [8] Even if automated systems won't eliminate jobs like professional chauffeur any time soon, the dynamics imposed by organizations using robots on a large scale are already affecting such professions. Delivery drivers have to deal with a more intense pace of work.[6];[8] *Although technologies such as AI or IoT are used in "hospitality" services, the widespread use of robots is called into question by the complexity of constant customer contact and the essential role of emotional intelligence.* [7]; [8] Customers using self-service bots tend to report such issues as well as others such as *reliability* and *safety*. Even if no differences in outcome are observed, *services provided by human employees are perceived as having better quality*. [8]

The results of a study conducted by Saithibvongsa and Yu in 2018 in South Korea, considered to be a qualitative research, in which data were collected by interviewing workers from different industrial sectors and conducting video interviews, present some critical views about industrial revolutions, robotic trends and the effects of AI on working conditions, the environment and the workplace skills, have shown that there are real reasons for concern because [9]:

- has a great influence on employment conditions in the computer age,
- directly and indirectly hinders relationships between people at work,
- contributes to the destruction of the knowledge and human work skills necessary for a job in the traditional world of work,
- gradually demolishes workplace engagement and organizational identity,
- is commonly perceived as a major cause leading to the serious increase in unemployment in contemporary society.

EXPERIMENTAL

The research methodology consists in identifying controversies and regulations that refer to artificial intelligence, and solutions to protect jobs for people, which can be adopted by the management teams of the existing organizations in the business environment. In this sense, an extensive bibliographic research was carried out. From sixty three references, only thirty four reference works were selected, from which a number of twenty one studies were identified, in order to provide an overview of the research subject. The selection criteria of the bibliographic sources were the following: the last seven years, due to the effects produced by AI; the geographical area: Europe, Romania and America; the established databases, including the website of the European Parliament.

On the other hand, we went towards the identification of the relevant legislative aspects in this initial phase for the approach to regulating artificial intelligence, a concept that has evolved rapidly, in the last period, becoming a major reason present in our professional and personal lives, even if the beginnings we find in the 50s.
A bibliographic research was carried out on a legislative level going to two continents, namely: Europe and America. Although we somehow find the beginnings in America, it turns out that Europe currently attaches greater importance to the impact on human rights, the safety of the person, the intrusion in personal life.
Also, Romania has taken important steps in creating the framework for the implementation of the National Strategy regarding AI, through the ongoing project "Strategic framework for the adoption and use of innovative technologies in the public administration 2021 - 2027 - Solutions for the efficiency of the activity".

RESULTS

A study published in 2020 looked at voice recognition systems from Amazon, Apple, Google, IBM and Microsoft and found that they had higher error rates when transcribing the voices of black people than white people.[10] In addition, Amazon stopped using AI in hiring and recruiting because the algorithm favored male candidates over female or minority candidates. This was because Amazon's system was trained with data collected over a 10-year period, which was mostly from white male applicants.[11]

Artificial intelligence (AI) and automated decision-making (ADM) systems are increasingly being used by European law enforcement and criminal justice authorities to profile people, predict their likely future behavior, and to assess their perceived risk of future crime or recidivism.

Predictive policing has been proven time and time again to reinforce discrimination and undermine fundamental rights, including the right to a fair trial and the presumption of innocence. This results in black, Roma and other ethnic people being disproportionately monitored and imprisoned across Europe.

For example, Delia, a predictive system from Italy, uses ethnicity data to profile and "predict" future crime. In the Netherlands, the Top 600 list attempts to "predict" which young people will commit high-impact crimes. One in three people in the "Top 600" reported being followed and harassed by the police, being of Moroccan descent.

Only a total ban can stop this injustice. It campaigned for a ban in the EU's Artificial Intelligence Act (AI Act). This ban must cover predictive surveillance of both people and places, as both methods are equally harmful.[12], [13]

In *Automating Injustice*, case studies are presented to analyze the use of these systems and their harmful impact. Based on these findings, it calls for a ban on the use of AI and automated decision-making (ADM) by law enforcement, judicial and other criminal justice authorities to predict, profile or assess people's risk or likelihood of engaging in "criminal" behavior; and strict legal safeguards are also required for the use of all other forms of AI and ADM. [14]

For many organizations today, improving the work environment increasingly means implementing surveillance systems – monitoring even how workers smile. Under the guise of workplace health and safety, some organizations have implemented remote body temperature or pupil dilation detection systems combined with artificial intelligence software. In one photo, a fisherman is identified as he arrives at his workplace in Thailand. [15]

Canon's office in Beijing has installed smart cameras that prevent any action (such as scheduling an appointment, accessing certain rooms, etc.) unless it detects a smile. In Europe, some companies offer their employees the opportunity to participate in business-related studies, which involve the provision of glasses that establish indicators of emotion. One example is the Shore app, developed by Germany's Fraunhofer Institute for Integrated Circuits IIS and used in Google's "smart glasses".

These practices have also entered into the transport sector. Digital platforms have changed things so profoundly that new groups of workers are emerging; for example, for app drivers invoicing is mainly handled by an e-employment platform (such as: Uber or Cabify). [15]

At the same time, organizations like Amazon have begun monitoring drivers for unsafe driving. The online retail giant recently announced that its delivery fleet will be fitted with smart cameras, claiming it would "enhance the safety" of its drivers.

These cameras, already in half of Amazon's total fleet in the United States, automatically record "events", including driver deliveries. Every time an event is recorded, the camera sends the images to the organization so they can evaluate the worker. The camera not only records and notifies the events, but in addition, a metallic voice scolds the driver - "distracted driver!" - every time. If a camera records more than five events per 100 trips, drivers can automatically lose the bonus, which many of them depend on. [15]

These new practices are far from the previous uses of monitoring mechanisms such as: cameras, GPS and combined artificial intelligence systems to improve central safety and security (such as: theft or fire) or improve the quality of business processes and activity. The safety and health of workers can be a pretext for monitoring the workplace. The European Framework Directive for Safety and Health at Work (89/391/EEC) requires companies to ensure safety, which implies a continuous effort to improve worker protection levels. However, when it comes to workplace risk prevention, there are many situations where businesses cannot monitor or supervise field activity by direct means. The limits of employers' ambitions to monitor everything are set either by collective labor agreements or by law. [16]

According to Stanford's AI Index, the annual number of AI-related laws passed in the 127 countries surveyed increased from one passed in 2016 to 37 passed in 2022 alone.[17]; [18]

3.1 AI Regulation in EUROPE

The EU AI Act of 28 July 2023 classifies AI applications into four risk groups [19]:

1. low risk systems,
2. systems with limited risk,
3. high risk systems,
4. prohibited systems with unacceptable risk.

There should be a ban on AI applications that are capable of oppressing humans. These include surveillance systems based on biometric data, such as real-time facial recognition, automatic emotion recognition, such as that used by investigative authorities, and social scoring systems.

ChatGPT and other chatbots are also affected by the new law. In the future, stricter transparency requirements will apply to such chatbots. Content generated using artificial intelligence must be labeled as such. Those responsible must prevent the creation of illegal content. The new rules set obligations for providers and users depending on the risk presented by the AI system.

Unacceptable risk: AI systems pose an unacceptable risk if they are considered a threat to humans. These AI systems will be banned. They include [19]:

- cognitive-behavioral manipulation of individuals or specific vulnerable groups, for example, voice-controlled toys that promote dangerous behavior in children;
- social score: classification of people according to behavior, socioeconomic status, and personal characteristics;
- real-time remote biometric identification systems, for example, facial recognition.

Some exceptions may be allowed: For example, systems of subsequent remote biometric identification, where identification takes place only after a considerable delay, are allowed for the prosecution of serious crimes, and only with the court approval.

High risk AI systems: AI systems that pose a high risk to the health and safety or fundamental rights of natural persons are considered high risk and are divided into two main categories. [19]

1. AI systems used in products regulated by the EU regarding product safety. These include toys, aviation, vehicles, medical devices, and elevators.
2. AI systems that fall into eight specific areas and must be registered in an EU database:
   - biometric identification and classification of human persons;
   - management and operation of critical infrastructure;
   - education and training;
   - employment, workforce management and access to independent activities;
   - access and use of essential private and public services and benefits;
   - prosecution;
   - management of emigration, asylum, and border controls;
   - assistance in the interpretation and application of laws.

All high-risk AI systems must be evaluated before they are introduced to the market and throughout their life cycle.

Generative AI: Models like ChatGPT should meet additional transparency requirements [19]:

- disclosure that the content was generated by AI;
- designing the model to prevent the generation of illegal content;
- posting summaries of proprietary data used for training.

Limited risk: AI law: first regulation of artificial intelligence Limited-risk AI systems should meet minimum transparency requirements that allow users to make informed decisions. After interacting with the applications, the user can decide whether he wants to continue using them. Users should be aware of this when interacting with AI. This also applies to AI systems that generate or manipulate image, audio, or video content (for example, deepfakes).[19]

3.2 AI Regulation in ROMANIA

Romania has published, since 2019, a National Strategy on Artificial Intelligence. [20] By the Decision of the Superior Council of National Defense no. 148/27.09.2022, *the Interinstitutional Commission for the elaboration of Romania's National Strategy for Artificial Intelligence* was established and, at the level of *the Ministry of Research, Innovation and Digitization, the Scientific and Ethics Council in Artificial Intelligence* was established, which includes specialists who offer their expertise for the development of the field of AI in Romania. The document entitled *"National strategic framework in the field of artificial intelligence"*, is subject to public consultation, was created within the project *"Strategic framework for the adoption and use of innovative technologies in the public administration 2021 - 2027 - solutions for the efficiency of the activity"* , code SIPOCA 704, implemented by *the Authority for the Digitization of Romania (ADR)* in partnership with *the Technical University of Cluj-Napoca* and represents the foundation on which *the National Strategy of Romania in the field of AI* will be articulated. [20]; [21]; [22]

3.3 AI Regulation in the USA

In the European Union, the legislative process on the "Artificial Intelligence Law" ("AI Act") continues to progress according to the Council's position published on 6 December 2022. However, there are difficulties at the level of the European Parliament to reach an agreement on a common position. It's a good time to look at what the United States of America plans to do when it comes to AI regulation.

In November 2020, California voters approved a new law, the California Privacy Rights Act, effective January 1, 2023, which significantly amends and expands the existing consumer privacy law, the California Consumer Privacy Act. Some of the changes brought about by the CPRA, include [20]:

- creating a new California government agency to enforce the CPRA;
- expanding an existing consumer right to opt-out of having their personal information shared for the purpose of "cross-context behavioral advertising," a practice in which consumers are targeted based on personal

information provided outside of the context in which they have intentionally chosen to interact with, make available, advertise specifically to them;
- excluding so-called dark designs – for example, user interfaces that are designed or manipulated in such a way as to significantly affect the user's autonomy, decision-making or choice - as consumers' consent to their personal data and the adoption of regulations that restrict the use of dark models Ban by companies.

On January 7, 2019, following an executive order on Sustaining American Leadership in Artificial Intelligence, the White House Office of Science and Technology Policy released a draft *Guidance for the Regulation of Artificial Intelligence Applications*, which includes ten principles for State agencies United when deciding whether and how to regulate the use of AI applications.[23] In response, *the National Institute of Standards and Technology* published a position paper [24] and *the Defense Innovation Council issued guidance on the ethical use of AI*.[25] A year later, the Administration solicited comments on the regulation in another draft of *Guidance for the Regulation of Artificial Intelligence Applications*.[26]

In January 2023, the New York City Bias Audit Law (Local Law 144) was passed by the NYC Council in November 2021. Originally scheduled to take effect on January 1, 2023, the implementation date of Local Law 144 was delayed to the 15 April 2023, due to the large volume of comments received during the public hearing on the Department of Consumer and Worker Protection's proposed rules to clarify the requirements of the legislation. From 15 April 2023, organizations are prohibited from using automated tools to hire candidates or promote employees, unless the tools have been independently audited for bias. These regulations are likely to affect hundreds of organizations in the city. [27]

3.4 AI approach in collective labor contracts

The agreement negotiated between Enercon Windenergy Spain and its employees (EWS), states the following: "The company has a GPS tracking system in all EWS professional vehicles made available to workers. The company ensures that its fleet is organized more efficiently, with better coordination of technical teams, and regarding worker safety and health. The purpose of installing these devices is not to monitor the behavior or normal activity of workers. However, in accordance with legal principles, the information provided by the GPS system can be used in the application of the disciplinary regime of the enterprise, resulting in minor, serious or very serious violations, given the behavior in question, verified by the data obtained from the system GPS." Ensuring that businesses will not use AI technologies for disciplinary purposes, even if the initial use was for workplace safety reasons, is no easy task. [15]

Another issue relates to the right to leisure, which is a measure that enhances health and safety. However, it is noted that the collective labor agreement in the passenger transport sector in Madrid classifies the decrease in normal performance as a serious misconduct, defined as the driver spending enough time on the platform.

One area that collective bargaining agreements can address is the combined use of different invasive technologies. For example, technology makes it possible for businesses to use video surveillance to observe workers' facial expressions automatically and detect deviations from predetermined movement patterns. This would be an illegal disregard for workers' rights and freedoms. Processing may involve profiling and automated decision-making. Therefore, the negotiation of the collective labor agreement could stipulate that video surveillance cannot be used in combination with other technologies, such as: facial recognition, because the resulting monitoring would be disproportionate according to European and national recommendations.

Using workers' data to incentivize or penalize them could lead to job insecurity and stress. [28] Workplace security is already used to collect and process employee data, but the measures must be part of a prevention mindset. In other words, such practices are only acceptable if they aim to avoid or reduce the risks present in the work environment.

Another guarantee is that measures must be subject to a proportionality test and a risk assessment before they are adopted. Here, the risk that it affects other fundamental rights (such as: privacy and protection of personal data) is real. All the more so to guarantee the participation of workers' representatives at every stage of the AI adoption process.

DISCUSSION

Some possible solutions to implement within the organizations, in order to protect the human beings' jobs, should be the followings [9]; [29]; [30]; [31]; [32]; [33]; [34]:

1. *Develop and implement global laws regarding the development and use of AI robotic machines.*
   AI or autonomous automated robots need to be responsible for their own harmful behaviors, in this regard AI-specific laws and regulations are being created.

Benson, in 2017, insisted that there is a need for laws to control informatics and computer programming, which is at the heart of AI development, to eliminate illegal actions by robots on humans in the future. Otherwise, the person could be exposed to a risk in terms of safety and social security. [29]; [30]
An example is the fact that the use of Chat GPT was stopped for a month in Italy until its developer OpenAI addressed the issues raised by the Italian Data Protection Authority at the end of April 2023. [31]

2. *Controlling and limiting the purposes of the use and development of AI.*
   AI should be created to enhance the skills and capabilities of workers, rather than replace human workers.
   Lack of uncontrolled development of AI will lead to high levels of unemployment in society in the future.
3. *Taxation of AI robotic machines*.
   There are many countries considering tax regulations for AI robots and robot employers, such as: USA, South Korea, EU countries and Switzerland, to share social responsibility with robots. [32]
4. *Adaptation of the educational system.*
   The educational system will help create new skills and knowledge needed by the human workforce to perform work tasks in automated workplaces. [33]
5. *Introduction of staff retraining programs.*
   A rapid and major challenge to the existence of current jobs is likely to arise in the future, the magnitude of which is underappreciated. [34]

On October 4, 2022, the White House Office of Science and Technology Policy ("OSTP") released the Blueprint for an AI Bill of Rights ("Blueprint"), a guide to the development, use, and implementation of automated systems.
Unlike the EU's planned AI Act, the Blueprint is not binding, but contains *five principles aimed at minimizing the potential harm caused by AI systems and provides practical guidance for their implementation* [20]:

Safe and efficient systems

- AI systems should be developed with public and expert consultation to identify potential risks.
- They must be tested before introduction and monitored continuously to prove that they are safe and effective.
- AI systems should not be developed with the intention or foreseeable possibility of jeopardizing security. They should be designed to proactively protect against harm that could result from unintended consequences.
- Use of inappropriate, low quality or irrelevant data should be avoided.
- AI systems should be subject to independent assessments and reports.

Protection against algorithmic discrimination
AI systems should be developed and implemented in a fair manner and not discriminate based on a legally protected characteristic. Developers and operators of AI systems should take proactive and ongoing steps to protect persons and communities from algorithmic discrimination and to use and design systems fairly. Systems should be subject to a proactive assessment of equality and inequality, and developed on the basis of a representative and robust data set. They are intended to ensure accessibility for people with disabilities and to prevent the use of non-representative data that contributes to discrimination. There should be an independent assessment of possible algorithmic discrimination and reporting that is public.

Data protection
Persons should be able to decide how their data is used and should not be monitored. To this end, AI systems should process data in accordance with data protection principles (e.g. data minimization, consent to processing, data deletion). Systems should not use artificial intelligence to make design decisions that hide users' choices or burden them with default settings that invade privacy. Surveillance and control systems should be subject to increased oversight, including assessment of potential harm, and should not be used in areas such as: housing, education or employment, or where surveillance would monitor the exercise of democratic rights in a way that would endanger restricted civil rights and liberties.

Notes and explanations
Designers, developers and operators of automated systems should provide generally accessible, easily understood documentation. It should contain clear descriptions of the overall functionality of the system and the role of automation, an indication of the use of such systems, the person or organization responsible for the system, and clear, timely and accessible explanations of the results. The person should know how and why a result that concerns them was determined by an automated system. Automated systems should provide meaningful explanations that reflect the risk.

Human alternatives, testing and alternative
It should be possible to decide against AI systems and in favor of a human alternative. There should be access to timely human review and remediation through a fallback and escalation process. AI systems intended for use in sensitive areas (e.g. criminal justice, labour, education and health) should also be fit for purpose, provide meaningful access for surveillance, include training for all people interacting with the system and include human considerations for negative effects or risky decisions.

CONCLUSION

Workers can be an important force in ensuring the implementation and use of new technologies in the workplace, in particular through the adoption of the collective labor agreements. In the transport sector, for example, the use of GPS tracking systems is widespread. To protect the health and safety of workers, some employers use the data collected with these systems for disciplinary purposes, which poses a challenge to the implementation and enforcement of collective bargaining agreements. Workers could suffer serious damage to their health or lose their identity as human beings as a result of the demands of a faster pace of work that has been pre-set by the intelligent machines. An innovative approach is needed to strengthen employment guarantees in response to the digital transition, positioning workers and their emotions as key elements in this transition.

There is no doubt that the potential risks of AI have been recognized – on both sides of the Atlantic. However, as with the General Data Protection Regulation, the EU appears to have more regulatory power, while the US relies more on voluntary measures. It remains to be seen which approach will be more successful when it comes to the goal of using AI based on Western values without blocking the technology's opportunities in the context of international competition. In any case, it remains to be seen what the final version of the AI Act will look like and whether the US will follow suit in terms of regulation. Neither will likely be known until late 2023.

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