ARTIFICIAL INTELLIGENCE (AI) IN THE AGE OF DEMOCRACY AND HUMAN RIGHTS: NORMATIVE CHALLENGES AND REGULATORY PERSPECTIVES

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ABSTRACT

This research comprehensively addresses the impacts of artificial intelligence (AI) technologies on democracy and human rights, deeply analyzing the challenges and opportunities these technologies present. The study initially examines how AI technologies affect the foundational rights of democracy and human rights - freedom of expression, the right to vote and be elected, privacy, and the protection of personal data. In this context, it highlights the potential threats and opportunities AI poses to democratic processes and the exercise of fundamental rights by individuals. The research discusses in detail the multifaceted nature of AI's impact on human rights and how these technologies can affect democracy in both positive and negative ways. This study provides a critical assessment of how normative regulations and policies aimed at AI technologies should be shaped to protect human rights and support democratic values. It particularly focuses on the legislation, ethical guidelines, and international collaborations necessary to regulate the use of AI within the framework of international law. The research develops effective strategies and policy recommendations for managing AI technologies in accordance with democracy and human rights principles. These policy recommendations aim to maximize the positive impacts of technological innovations on society and minimize potential harms. In conclusion, the study proposes a comprehensive framework for the ethical and legal management of AI technologies, offering suggestions on how this framework could be applied at both national and international levels.

Keywords: Artificial intelligence, democracy, human rights, normative regulations, regulatory frameworks

INTRODUCTION

The notion of humans creating an intelligent entity akin to themselves is as ancient as the history of humanity itself. Such that the idea of artificial intelligence (AI) has perennially been a popular theme in science fiction works. As with any approach to the novel, thoughts on artificial intelligence are positioned at two opposing poles. One group has claimed that with AI, humanity will create its own nemesis, posing a significant threat to human existence (Bostrom, 2014). Conversely, another group contends that this technology will usher humanity into a level of prosperity previously unexperienced (Kurzweil, 2005). At the center of these pessimistic and optimistic approaches lies the concept of general artificial intelligence.

General artificial intelligence refers to AI that has reached human-level intelligence and possesses the capability for abstract thinking (Weinbaum & Veitas, 2017). However, an artificial intelligence that has achieved human-level intelligence does not yet exist. Today's AI systems perform limited tasks in narrow domains. For instance, AI systems that understand what is depicted in an image, recognize human faces and the emotions from those faces, and interact with humans in natural language both verbally and in written form are producing results at human level and sometimes even surpassing it.

The successes of today's artificial intelligence are underpinned by machine learning methods. In this method, the machine learns an action thought to require intelligence by mimicking the learning process of children. A child learns new things based on the behaviors they experience and the punishment-reward feedback they receive as they interact with the external world. Similarly, in machine learning, the machine self-learns skills thought to require intelligence, such as seeing and speaking, by analyzing vast amounts of data representing human experiences.

Although AI systems produce results similar to humans in limited tasks, these systems do not think like humans. In fact, the machine learning method is essentially a simplification and formulation of complex and uncertain cognitive processes like seeing and speaking. This method is a modern reflection of science's approach to explaining the universe with mathematics. With this thought, the godfather of artificial intelligence, McCarthy (2007), has argued that the most appropriate term for this field would actually be computational rationality instead of artificial intelligence (Norvig & Russell, 2022:6).

In the last decade, the successes of AI systems have proliferated across many areas of our individual and societal lives. From smart cleaning robots to smartphones, smart home appliances to chatbots, internet search engines to autonomous vehicles, AI systems are being used in many areas of our personal lives (Mercan & Varol Selçuk, 2024). On the other hand, AI systems are being used as decision-makers in many areas of societal life in both commercial enterprises and public power applications, such as predictive policing or individual risk analysis systems.

The actions of AI systems, which have become widespread and commonplace in many areas of individual and societal life, are often not seen as "intelligent." This situation is referred to as the "AI Effect." (McCorduck, 2004:204). This concept denotes the normalization of an action previously thought to be "intelligent" by humans and the cessation of referring to the machine performing the action as "artificial intelligence." One of the most prominent historical examples of this is calculators. The operation performed by calculators, one of the earliest examples of artificial intelligence, is considered "intelligent" by almost no one today. These commonplace systems stealthily infiltrate individuals' decision-making processes without being noticed.

Machine learning inherently and continuously requires large amounts of data. These systems collect data intensively, widely, and instantaneously from their surroundings, thus constructing a vast surveillance system that has spread into individual and societal life and is easily unnoticed. The behaviors of individuals examined by AI systems are predicted and attempts are made to direct them. Such that AI systems now mediate our beliefs and choices in a continuous, immanent, and preemptive manner, as described by Hildebrandt (Hildebrandt, 2016:88-102). While humans shape AI systems on one hand, on the other hand, these systems shape humans' beliefs, thought patterns, and behaviors. This situation poses a significant threat to the ideal of democratic governance based on human autonomy and the right to self-determination. This study examines the potential and serious effects of AI on democracy.

The fundamental issue this study addresses is how and why artificial intelligence affects democracy. Our study does not examine how AI affects democracy in a specific country. Initially, the effects of AI systems, which are used in narrow domains and perform limited tasks, on common area democratic institutions in democratic governments were identified, and subsequently, the consequences of these effects on democratic ideals were examined. Therefore, our study is descriptive rather than normative.

There are no agreed-upon definitions for the concepts of "artificial intelligence" and "democracy" in the literature. Therefore, in our study, we first achieved a definition of artificial intelligence that enables a comprehensive examination of its effects on democracy. Secondly, a concept of democracy that allows determining the effects of AI on democracy was defined.

The definition of artificial intelligence is critically important in identifying the effects of these systems on democracy and in creating effective legal regulations accordingly. Indeed, addressing artificial intelligence from a narrow perspective could prevent the full determination of its effects on democracy. A broad definition of AI, on the other hand, could prevent the establishment of effective legal regulations. An incomplete definition of democracy would lead to similar results. For example, AI systems can be defined as "technical systems" from a narrow perspective. Defining artificial intelligence in this way and only defining democracy in terms of its ideals would lead to a comparison between concrete, technical systems and an abstract universe of ideals, which would be a fruitless endeavor.

Moreover, the relationship between artificial intelligence and democracy necessitates an interdisciplinary examination. While our study is primarily based on legal and particularly public law concepts and studies, it also benefits from concepts and academic works in the humanities, social sciences, and to a limited extent, computer sciences.

This research comprehensively addresses the impacts of artificial intelligence (AI) technologies on democracy and human rights, deeply analyzing the challenges and opportunities these technologies present. The study initially examines how AI technologies affect the foundational rights of democracy and human rights - freedom of expression, the right to vote and be elected, privacy, and the protection of personal data. In this context, it highlights the potential threats and opportunities AI poses to democratic processes and the exercise of fundamental rights by individuals. The research discusses in detail the multifaceted nature of AI's impact on human rights and how these technologies can affect democracy in both positive and negative ways. This study provides a critical assessment of how normative regulations and policies aimed at AI technologies should be shaped to protect human rights and support democratic values. It particularly focuses on the legislation, ethical guidelines, and international collaborations necessary to regulate the use of AI within the framework of international law. The research develops effective strategies and policy recommendations for managing AI technologies in accordance with democracy and human rights principles. These policy recommendations aim to maximize the positive impacts of technological innovations on society and minimize potential harms. In conclusion, the study proposes a comprehensive framework for the ethical and legal management of AI technologies, offering suggestions on how this framework could be applied at both national and international levels.

FUNDAMENTAL CONCEPTS

The conceptual framework of artificial intelligence

Periodically, leaders of technology firms and even scientists have issued public warnings about the potential of artificial intelligence (AI) systems to surpass human intelligence and possess the capability to dominate the world, causing harm to individuals and societies (Tegmark, 2019:15-39). These warnings resonate with the public primarily because of the inherent implications of the term "artificial intelligence" (Norvig & Russell, 2022:36). The phrase "artificial intelligence" suggests entities that could potentially serve as alternatives to human intelligence and may even surpass it one day. However, John McCarthy (2007), often recognized as the father of AI, indicated in an interview that his choice of the term was driven not by a desire to accurately describe the field's essence but rather to differentiate his work from cybernetics studies of the time, stating that "computational rationality" would be a more fitting label (McCarthy, 2007: 227).

Amidst its deceptive public perception, the term "artificial intelligence" lacks a clear and agreed-upon definition in both scholarly literature and legal statutes. As the objectives behind AI research shift, so too does the definition of AI itself. Thus, as perceptions of what constitutes "intelligence" and what actions qualify a system as

"intelligent" evolve, the definitions of "artificial intelligence" also change (Norvig & Russell, 2022:52). Consequently, AI remains a concept that varies over time and from one individual to another.

Narrow vs. general artificial intelligence

Today's AI systems are designed to perform limited tasks within narrow domains, referred to in the literature as "narrow" or "weak" AI. These weak AI systems aim to achieve a limited number of specific goals, and the machine's accomplishment of these goals is deemed sufficient for it to be considered "intelligent."

Apart from weak AI, another category recognized is "general" or "strong" AI systems. Strong AI models are capable of achieving an unlimited array of goals and may even determine their objectives. General AI refers to AI that has reached human-level intelligence and possesses the capability for abstract thinking (Vinge, 1993:11-22). Currently, general AI does not exist.

AI systems designed for narrow domains have outperformed humans in many of these tasks. Some of these narrow tasks include computer vision, natural language processing, and speech recognition. In speech recognition, AI systems analyze human speech. In the field of computer vision, AI systems undertake the task of understanding what is present in an image or video (Zhang et al., 2021:54-62). Numerous sub-tasks within computer vision can be performed by AI systems, such as image classification, generating indistinguishable images, predicting human poses by examining the positions of human organs, face recognition, and determining emotions from human faces.

Another task AI systems excel at is natural language processing (NLP). NLP systems are trained to understand, reason, and generate language. AI systems in the NLP field perform many sub-tasks, such as sentiment analysis, which detects emotions from textual expressions, machine translation, which converts expressions from one language to another while retaining the same meaning, and chatbots (Norvig & Russell, 2022: 21-23). Chatbots are AI systems capable of understanding asked questions, providing answers, and engaging in both voice and written dialogues with humans.

AI applications that outperform humans in narrow tasks have become industrialized, more affordable, and accessible to everyone. As a result, AI systems have begun to permeate our individual and societal lives, with their proliferation into every aspect of life, development of "directly usable" applications in real life, and increased successes through training with more data enhancing their societal impact (Zhang et al., 2021:3).

AI in academic discourse

In academic discourse, the concept of intelligence is defined by some based on human intelligence and by others on rationality. Additionally, perspectives vary between those who base intelligence on observable behaviors and those who focus on thought processes. Stuart Russell and Peter Norvig have categorized definitions of AI in

academia into four groups: systems that act humanly, think humanly, act rationally, or think rationally (Norvig & Russell, 2022: 20).

The approach that defines AI as systems acting humanly aligns with Alan Turing's perspective shared in earlier sections of this work. According to this view, an AI-powered system's ability to mimic human behavior convincingly enough to pass the Turing Test is considered sufficient for it to be deemed "intelligent" (Alpaydın, 2020: 141). However, this approach has been criticized for being overly vague and limited to mere imitation. Efforts to define AI as systems that think or behave like humans necessitate an understanding of how humans think and behave (Norvig & Russell, 2022: 20).

Examples of human-centered definitions include Marvin Minsky's description of AI as machines performing tasks that would be considered intelligent if done by humans, and McCarthy (2007)'s definition of AI as the science and engineering of making intelligent computer programs. While McCarthy acknowledged the relationship between AI and human intelligence, he emphasized that the field's focus is on solving intelligence-requiring problems rather than studying humans (Aksoy, 2021:12). The majority of Turkish legal literature also adopts a human-centered approach.

Rationality, defined as identifying and acting upon the best action to achieve a goal, represents another perspective on artificial intelligence (AI). According to this view, AI systems perceive their environment and adapt to changes. Russell and Norvig describe AI entities as those that perform the most appropriate action in a given situation, while Nilsson (2009) defines AI activity as enabling an entity to function correctly in its environment by foreseeing the best course of action. This rational agent approach, also known as acting or thinking rationally, predominates in current AI research. Machine learning-based AI systems are designed as entities that take correct steps towards achieving their objectives, with "correct" actions determined relative to their goals. For instance, the aim of recommendation systems is to increase individuals' time spent on websites, thereby boosting company profits. Models that analyze large quantities of past behavior data to suggest content most likely to be preferred by individuals are considered to have taken the "correct" steps.

Beyond Russell and Norvig's classification, the literature contains various other definitions. Krizhevsky, as cited by Gershgorn (2018), defines AI as an area of computer science concerned with the automation of intelligence. Say (2018) describes it as the study of how artificial systems can perform any cognitive activity with high success rates, and Turner (2018) views it as the capability of non-natural entities to make decisions through an evaluative process, including systems that make moral decisions.

In legal regulations addressing AI, there is no universally agreed-upon definition of the AI concept. For instance, the European Commission (2018) adopts a rational agent approach, defining AI systems as those capable of displaying intelligent behavior by analyzing their environment and taking actions to achieve specific goals. The European Commission's White Paper (2020) describes AI as "a set of technologies that combine data, algorithms,

and computing power", while the European Parliament (2021) defines it as systems that "exhibit behaviors associated with human intelligence such as reasoning, learning, planning, and creativity".

Legal regulations on artificial intelligence

In legal regulations addressing artificial intelligence (AI), there is no universally agreed-upon definition of the AI concept. For instance, the European Commission, in its report titled "Fostering a European Approach to Artificial Intelligence," adopts a rational agent approach, defining AI systems as those capable of displaying intelligent behavior by analyzing their environment and taking actions to achieve specific goals (European Commission, 2018). The European Commission's White Paper describes AI as "a set of technologies that combine data, algorithms, and computing power" (European Commission, 2020), while the European Parliament defines it as systems that "exhibit behaviors associated with human intelligence such as reasoning, learning, planning, and creativity" (European Parliament, 2021).

The "High-level Expert Group on Artificial Intelligence" (HLEG-AI), established by the Council of Europe to provide recommendations in the field of AI, in its report "A Definition of AI: Main Capabilities and Scientific Disciplines," describes AI systems as software (and potentially hardware) systems designed by humans that, given a complex goal, can perceive their environment through data gathering, interpret collected structured or unstructured data, reason or process information derived from these data, and decide on the best actions to achieve the given goal, whether in a physical or digital dimension (European Commission High-Level Expert Group on Artificial Intelligence, 2019).

The Ad Hoc Committee on Artificial Intelligence (CAHAI) of the Council of Europe, created to guide future legal regulations, defines AI in its feasibility study as software "commonly and currently developed with human intelligence that, for a specific set of goals defined by humans, can produce outputs such as content, predictions, recommendations, or decisions that influence the environments they interact with" (European Commission, 2021).

Technical approaches listed in Annex I include: "(a) Machine learning approaches, including supervised, unsupervised, and reinforcement learning, using a wide range of methods, including deep learning; (b) Logic and knowledge-based approaches, including knowledge representation, inductive (logic) programming, knowledge bases, inference and deduction engines, (symbolic) reasoning, and expert systems; (c) Statistical approaches, Bayesian estimation, search and optimization methods." (European Commission, 2021).

Finally, the "National Artificial Intelligence Strategy" of Turkey, published on 24.08.2021 ("NAIS"), defines the concept of AI as "In its most general form, the ability of a computer or a computer-controlled robot to perform various activities in a manner similar to intelligent beings." It is noted that the term AI is used for systems

"equipped with human-like cognitive abilities such as reasoning in dynamic and uncertain environments, discovering meaning, generalizing, or learning from past experiences" (European Commission, 2021).

These definitions underscore the complexity and evolving nature of AI, reflecting a broad spectrum of interpretations that vary depending on the context of discussion, be it technological, philosophical, or regulatory.

The conceptual framework of democracy

Democracy is a "charmed" concept frequently invoked across political arenas to the microenvironments of daily life. It is considered charmed because it almost acts as a universal key legitimizing all actions. Throughout history, even authoritarian leaders have, at times, claimed to pursue democratic ideals (Barry, 2002).

Today, all political regimes, no matter how autocratic, appear to advocate for democratic governance. In these regimes, authoritarian leaders seek legitimacy through the preservation of fundamental rights and freedoms and through elections that are merely formalities (Schauer, 2002). There is no unanimous understanding of what democracy fully entails.

We find ourselves in an era where everyone's understanding of democracy differs from one another, an era that Sartori has termed as the "age of conceptual chaos" for democracy (Uygun, 2021, p. 352; Sartori, 1987, p. 18).

The lack of consensus on the concept of democracy stems from various reasons. For instance, the term democracy is used on two different planes: to describe actual democratic regimes in the real world and to depict an ideal society (Susskind, 2018, p. 213). Moreover, the concept of democracy itself contributes to this chaotic climate. It is used to refer to political and non-political democracies, micro and macro democracies, as well as majoritarian and pluralistic democracies (Uygun, 2021, p. 2).

Furthermore, the literature presents theories and approaches that tackle the concept of democracy differently. These include etymological, normative, and realist approaches, as well as rational and empirical approaches (Barry, 2002, pp. 427-430).

Therefore, the concept of democracy varies based on the context in which it is used, its literal meaning, and the preferred theories and approaches.

An in-depth examination of the concept of democracy through all these theories and approaches falls outside the scope of this study. Instead, this research focuses on the impact of technical and "sociotechnical" systems on living democratic regimes. Identifying this impact necessitates considering the concept of democracy from both normative and empirical perspectives.

First and foremost, democracy presents societies with a goal to be achieved. The ideals of complete equality and full participation ("self-governance") are objectives that should be pursued (Dahl, 1989, pp. 76, 87-89). These

ideals form the normative nature of the concept of democracy. However, solely focusing on democracy from a normative perspective may lead to the notion of its impossibility, while a purely realist perspective may result in the misconception that democratic governance does not exist in the real world (Sartori, 1987, p. 84).

Indeed, those who adopt a realist viewpoint argue that democratic governance is nonexistent, citing the presence of real-world inequalities and the public's inability to fully participate in governance as reasons (Uygun, 2021, p. 352; Sartori, 1987, p. 18). Therefore, when outlining the framework of democracy, it is necessary to evaluate the normative nature of democracy alongside the conditions of the real world.
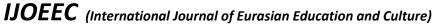
The empirical understanding of democracy, which views the concept through this lens, is an approach "that reveals the principles and institutions of democracy through the study of democratic states and is concerned with the methods and tools of democratic procedure"(Sartori, 1987, p 75).. Thus, the empirical approach is interested in the phenomena within living democracies.

Sartori argues that the existence of democracy is indebted to the tension between fact and value. In other words, even if the realities in living democracies do not align with democratic ideals, the implicit belief of citizens that these ideals are being realized enables democratic governance (Sartori, 1987, pp. 75-77). A citizen can only engage in civic practices if they see themselves as equal to others and believe that democratic governance is possible through their full participation (Habermas, 2023, p. 15). Without this, citizens will neither engage with public issues nor participate in elections. In this vein, Habermas states that "citizens seeing themselves as part of the democratic process from a participatory perspective" is an existential prerequisite for democracy. Therefore, although the normative nature of democracy might be comprised of idealizations, the existence of democracy is made possible through practices and institutions that lend credibility to these ideals.

ARTIFICIAL INTELLIGENCE, DEMOCRACY, AND HUMAN RIGHTS

Human rights are constitutional arrangements that enable the principles and institutions of democracy to be effectively implemented. If individuals cannot use their rights to freedom of expression, the right to vote and be elected, the right to privacy, and the protection of personal data effectively and equally, then democratic participation and equality cannot be realized (Dahl, 1989, p. 61; Nemitz, cited in Schauer, 2002, p. 1). Therefore, there is a close relationship between functioning democracy and the protection of human rights (Dahl, 1999, pp. 166-168). So much so that Dahl argues that democracy is not just a form of governance but also a system of rights. Hence, citizens need to have access to the rights and freedoms necessary for the operation of democratic institutions (Dahl, 1989, p. 60).

Currently, artificial intelligence (AI) systems pose unprecedented threats to the principles and institutions of democracy. Consequently, the importance of international human rights regulations is increasing day by day in the face of these threats (Dahl, 1989, p. 100).

The impact of artificial intelligence on freedom of expression

In today's network society, cyberspace is a domain where citizens access information about public matters and share their opinions (Schauer, 2002, p. 31). In a democratic regime, political discourse in cyberspace requires stronger protection than other forms of expression. Restrictions on freedom of expression in cyberspace will also hinder democratic participation. Cyberspace is shaped by recommendation systems. These systems filter content, suggesting to users content similar to what they have previously preferred (Erdoğan, 2001, p. 8). Public discourse occurs within echo chambers and filter bubbles created by recommendation systems, complicating citizens' access to information about public matters and to others' opinions. Filter bubbles also narrow the scope within which citizens sharing their opinions can be heard (Erdoğan, 2001:8-9).

This suppression of freedom of expression weakens democratic participation in cyberspace. Democratic participation can only occur in public spaces where ideas freely circulate. Manipulations in cyberspace can externally interfere with citizens' access to information. Hiding certain information from individuals in specific locations, burying information in search engine results, or spreading falsehoods are examples of such interference. These situations, which prevent citizens from forming informed opinions, undermine democratic participation (Dahl, 1989, p. 112; Dahl, 1999, pp. 175-176).

In a democratic regime, freedom of expression primarily requires citizens to fearlessly express and share their views about public authorities, the dominant ideology, and socio-economic conditions, even if those views are shocking or disturbing. The advanced surveillance system created by AI systems, both in cyberspace and in the physical world, facilitates the instant tracking and analysis of citizens (Erdoğan, 2001, p. 9). This situation also inverts the public oversight role of freedom of expression. From this perspective, cyberspace becomes more conducive to a space where political authority identifies and suppresses dissenters, rather than a venue for citizens to guide the government through public discussions. For instance, China uses AI systems in cyberspace to detect government-critical posts and predict protest movements. The continuous surveillance that makes citizens feel threatened has a deterrent effect on the freedom of expression.

Online content moderation activities by social media platforms, which can lead to the deletion of posts or account suspensions, pose a threat to freedom of expression in cyberspace (Sartori, 1987, pp. 170, 177). AI systems' generalizing decisions struggle to understand cultural contexts and satire, making it possible for offensive, shocking, and harmful expressions to be automatically deleted in autonomous or semi-autonomous content moderation activities. This not only undermines diversity in cyberspace but also risks damaging it. Online moderation activities have turned companies into the "new gatekeepers" of the digital age, replacing the traditional press (Sartori, 1987, pp. 373-400; Uygun, 2021, pp. 357-367).

Information intermediaries have taken over the role of mass media, hence the independence of these intermediaries should be ensured by states (Sartori, 1987, p. 118; Habermas, 2023, p. 10). States have obligations under international human rights regulations to create environments conducive to freedom of expression. The

Human Rights Committee, in its General Comment No. 231 dated 26 May 2004, stated that states' obligations under the treaty include both negative and positive duties, necessitating legal, judicial, and administrative measures to fulfill these obligations (Habermas, 2023, p. 96).

The European Court of Human Rights (ECHR) has emphasized that the protection of freedom of expression primarily requires communication tools that are accessible to everyone without discrimination and that these tools must be liberal. In addition to states' negative duties, the Court highlighted their positive obligations, stressing the prevention of monopolies in communication channels, ensuring plurality, and securing the freedom of journalists (Ame.İHM, 1985, para. 34).

The ECHR recognizes that states have a positive obligation to ensure that persons within their jurisdiction effectively exercise the rights recognized by the Convention ("ECHR"). Accordingly, states have duties to enact national legislation, develop policies, and create effective remedies to protect human rights. In a decision regarding the removal of news content, the Court noted that news is a perishable commodity, and even short-term restrictions can diminish its value and public interest. Thus, the Court underscored the importance of a legal framework containing judicial guarantees that control the removal of online content and prevent the misuse of this authority (Rainey et al., 2020, p. 102; AİHM, 2018, para. 36).

Therefore, for the values of democracy and human rights to be translated into the realm of artificial intelligence, states must enact effective legal regulations, taking into consideration the unique characteristics of this field.

The impact of artificial intelligence on the right to free elections

In today's networked political campaigns, artificial intelligence (AI) systems are widely used (Bennett, cited in Habermas, 2023, p. 9). These campaigns, involving the use of bots and troll accounts, are referred to as "computational propaganda" (Woolley & Howard, cited in Susskind, 2018, p. 220). AI systems used for this purpose pose a threat to the environment of free and fair elections, exerting pressure on the right to free elections (EDPS, 2018, p. 13).

Networked political campaigns involve close monitoring of voters' online behaviors. Users who prefer not to share their political choices can have these preferences predicted by advanced AI systems analyzing their online behavior data. This undermines the principle of secret voting, thereby pressuring individuals' political preferences and sabotaging a free electoral environment. Furthermore, this situation could lead some individuals to withdraw from cyberspaces, reducing pluralism in these areas.

Today's tools of computational propaganda, including bots and troll accounts, have become a new type of political resource. Parties with access to this new political resource gain significant advantages over their competitors, especially in closely contested elections. In such scenarios, AI systems disrupt the competitive political landscape and hinder the freedom of elections.

A study aimed at detecting the number of bot accounts used during election periods found that in the November 2016 U.S. presidential election, where Donald Trump was elected, there were 17 million tweets sent from 127 unique users on Twitter in the same month. It was determined that bot accounts related to hashtags about Trump were three times more than those related to his opponent, Clinton (Woolley & Howard, Executive Summary, p. 9). These findings indicate a lack of fair competition in elections.

Bot and troll accounts can also be used to intimidate people with opposing views. This creates a deterrent effect on freedom of expression, thereby undermining a free electoral environment (Personal Data: Political Persuasion, pp. 80-81).

Micro-targeting methods can also be employed to discredit political opponents. For this purpose, the dissemination of false information and deep fakes through bots and troll accounts to a wide audience is possible (Woolley & Howard, Executive Summary, p. 7). This not only distorts political competition but can also have a deterrent effect on the freedom of expression of a group.

The threats posed by AI systems to the right to free elections hinder citizens' democratic participation. The right to free elections is an indispensable element of liberal democracy. Therefore, elections that do not occur in a free and fair environment cannot be considered democratic. In such cases, the public oversight role facilitated through free elections becomes ineffective. The feasibility study prepared by CAHAI points out that the surveillance systems created by artificial intelligence (AI) systems threaten individuals' privacy, identity, and autonomy. Continuous monitoring, identification, and influence by AI systems can harm individuals' moral and psychological integrity (CAHAI, 2020, p. 8).

As discussed in the first part of our study, AI systems based on machine learning depend on big data. As AI systems develop and become more widespread, the need for big data increases. Data is systematically collected through AI systems, constructing a widespread, intensive, and sophisticated surveillance system (Rathenau Instituut, 2017, p. 18).

In the cyber realm, thousands of data points about individuals are analyzed by AI systems to create personal profiles. These personal profiles pose a threat to privacy as they are used to predict individuals' behaviors in real-time. Online advertising activities targeting personal profiles, conducting experiments like A/B testing on personal profiles, and various manipulation methods such as microtargeting and spreading falsehoods represent serious intrusions on autonomy and the right to self-determination (Valcke, Clifford, & Dessers, 2021: 68; Rathenau Instituut, 2017, pp. 22-24).

Manipulations by AI systems represent covert intrusions into citizens' decision-making processes. This impedes rational thinking, thereby preventing "citizens from actively exercising their democratic participation rights," i.e., making autonomous decisions.

Surveillance activities by AI systems can gather thousands of data points about a person, which can be stored for many years. Online and offline behavior data serve as a crucial raw material for training and developing AI systems. Data becomes more valuable the more personal it is. Health data like heart rate, stress level, oxygen level, biometric data like fingerprints, skin color, eye color, voice and facial data, exercise behavior data, and preference-indicating data are extensively collected through the Internet of Things devices that listen to their surroundings 24/7. Especially facial recognition applications and emotion analysis applications from faces have a significant impact on the right to privacy and data protection (CAHAI, 2020, p.8; Rathenau Instituut, 2017, pp. 19, 25; Valcke et al., 2021, p. 67).

Sophisticated analysis techniques can combine data from various sources to identify individuals. Advanced AI systems make it possible to identify individuals from data that would not normally be considered personal, necessitating an expansion of the concept of personal data to almost all data types (Yeung, 2018, p. 31). An application can identify individuals based on body shapes seen from the back, even if their faces are not visible, suggesting that body form should be considered personal data (Nemitz, 2018, p. 9).

Data collection for creating datasets used by AI applications or training models often occurs in public spaces (Veale Binns, & Ausloos, 2018).

For example, three billion data points were collected from the internet for the Clearview application used by law enforcement. When an image of a person is uploaded to the application, it produces outputs of all online photos of that person and the URLs where those photos are posted. Clearview executives state that this privately-held application is frequently used by law enforcement (Harwell, 2022).

These examples demonstrate that AI systems pose unprecedented threats to the rights to privacy and data protection. These situations can cause citizens to fear, feel pressured, or even abstain from exercising their democratic rights both online and offline.

Cohen describes societies where AI surveillance has become normalized and powerful, as desired and preferred by citizens, as modulated societies. In such societies, democracy emerges as a modulated democracy (Hill & Krolik, 2020).

Liberal democracy primarily requires a liberal self, which emerges within spaces of privacy. However, modulated democracies, where surveillance activities merge with capitalism, systematically narrow the essential spaces for the construction of a liberal self, leading to a system where citizens cannot create meaningful agendas or engage in rational deliberation on public matters (Cohen, 2013, pp. 1917-1918).

Indeed, in a system where private spaces are shrinking, individuals are constantly directed rather than freely exchanging ideas and forming opinions on public matters, framed by capitalism, the resulting democracy can only be considered a strange mutation of democracy, far removed from its liberal roots.

The impact of artificial intelligence on non-discrimination

As previously discussed, artificial intelligence (AI) systems can produce discriminatory outcomes on certain groups due to the quality of training data, feature selection, system design, and underlying classification policies (Rathenau Instituut, 2017, p. 40). This can hinder the effective and equal opportunity of all citizens to participate in democratic processes.

For instance, the use of biased algorithms in online content moderation activities can lead to the automatic deletion of certain ideas or make them harder to access. Consequently, the freedom of expression for some citizens in cyberspace will be less protected than for others. Thus, not providing all citizens with the opportunity to participate democratically and equally in cyberspace undermines the principle of equality (Klar, 2021).

Today, AI systems used as decision aids or decision-makers in the context of criminal justice can lead to discriminatory outcomes. Such situations, caused by public authorities, can infringe upon the principle of equality before the law. For example, as mentioned earlier in our study, an analysis of the individual risk assessment application Compass, which examined the decisions made for ten thousand defendants and followed these subjects for two years, found that non-offending black defendants were classified as "high risk" at twice the rate of non-offending white defendants. It was also observed that re-offending white defendants were given lower risk scores compared to black defendants. Consequently, it can be said that Compass's higher rate of misclassification of black defendants compared to white defendants leads to racial discrimination (Larson et al., 2016).

This scenario exemplifies how AI can exacerbate existing societal biases, underscoring the need for careful consideration and correction of potential biases in AI systems to ensure they do not perpetuate or amplify discrimination. Ensuring AI fairness and eliminating discriminatory outcomes are essential to uphold the principles of equality and non-discrimination in the digital age, thereby safeguarding the democratic rights and participation of all citizens.

Evaluation of artificial intelligence regulation in the context of its impact on democracy and human rights

Habermas, in a recent study examining the transformation of the public sphere in cyberspace, highlighted the unprecedented threats posed by artificial intelligence (AI) systems to democracy and human rights, emphasizing the critical need to rejuvenate human rights protection mechanisms (Habermas, Kamusallığın Yeni Dönüşümü, p. 106).

The Council of Europe's report DGI (2019)05 titled "Exploring the Impacts of Advanced Digital Technologies (Including Artificial Intelligence Systems) on the Concept of Responsibility within a Human Rights Framework" investigates the functionality of the human rights domain against the threats of AI to democracy (Yeung, 2018).

According to this report, the risk of the human rights domain becoming ineffective against AI first arises from the complex and opaque operation of AI systems. This complexity makes it challenging to identify and prove the causal link between the interventions by AI on human rights and the damages caused (Yeung, 2018: 41,66,71). For instance, if certain job advertisements are not shown to female users on a social media platform, this could prevent women from accessing certain opportunities, leading to gender-based discrimination in the context of employment rights. However, users whose profiles do not display these advertisements are often unaware of their existence, making it practically difficult to prove the occurrence of gender-based differentiation and its hindrance on their employment rights.

Secondly, the human rights domain's reliance on individualized mechanisms, such as consent, can contribute to its ineffectiveness against AI. While individuals have inalienable rights, such as the right to life and the prohibition of torture, the process of obtaining personal consent can become a mere formality in the context of rights where individuals can theoretically waive their protections. This issue is exacerbated by the power imbalances between data subjects and data processors, especially in today's environment where users may forgo their rights to data protection, freedom of expression, and privacy for free services, efficiency, and convenience.

Thirdly, although the impact of AI systems on the principles and institutions of democracy may be minor at the individual level, it can be significant at the societal level. Even if individuals are aware of the interventions by AI systems, they may lack the time, energy, and interest to initiate human rights protection processes. For example, a 2010 experiment by Facebook manipulated the news feeds of 60 million voters, showing a subset of them a button to click while voting. The study found that those subjected to the news feed manipulation were 0.39% more likely to vote than those who were not, indicating the potential for significant influence on voting behavior. Although individuals affected by the manipulation might be aware of it, proving its impact on voting behavior and mobilizing human rights mechanisms in response can be daunting.

AI systems, while appearing to have minor effects on individuals, can profoundly undermine the foundations of democracy and human rights when their outcomes are applied on a large scale and intensively. The cumulative and collective effects of AI systems can threaten societal values and interests not explicitly addressed in the individualistic language of current human rights discourse, weakening the social and technical conditions that enable human rights and democracy (Crawford, 2021).

In response to these threats, the Council of Europe's human rights report suggests creating and preserving societal conditions that protect democratic principles and human rights through preventative approaches. It recommends steps like developing collective complaint mechanisms, states formulating appropriate policies, embedding human rights values in AI research, establishing independent institutions to protect human rights in the context of AI, and framing corporate responsibilities.

Nemitz (2018) argues for considering AI itself as "law," requiring AI to adhere to fundamental rights, rule of law, democratic principles, and legitimacy in its development process. He suggests that AI systems should undergo

legal testing from the design phase, ensuring all stages from data preparation to model training align with democratic values, fundamental rights, and the rule of law. This approach requires states to develop suitable policies and legal frameworks, accommodating the diverse approaches of different countries towards AI regulation.

The Declaration on Digital Rights and Principles, published by the EU on January 23, 2023, is characterized as soft law and is not binding. However, it significantly showcases the EU's comprehensive approach to artificial intelligence (AI). The EU has declared that it will consider this document in its international relations and policies.

The declaration is penned as a bill of rights, defining digital rights and setting conditions for their protection and application. It includes provisions for placing humans at the center of digital transformation; supporting connectivity, digital education, skills, fair and equitable working conditions, and online access to digital public services through solidarity and inclusiveness; reaffirming the importance of freedom of choice in interactions with algorithms and AI systems; promoting participation in the digital public sphere; enhancing safety, security, and empowerment in the digital realm, especially for children and youth; and advocating for sustainability.

The right to participate in the digital public sphere signifies access to a reliable, diverse, multilingual environment and effective democratic participation in plural, non-discriminatory public discussions. Everyone has the right to freedom of expression, information, assembly, and association. The conditions for exercising this right include ongoing protection in the online environment, fostering involvement and democratic participation, protecting these environments from misinformation and manipulation, supporting access to content reflecting cultural and societal diversity, and ensuring the transparency and accountability of digital platforms and services.

The right to privacy and individual control over data entails authority over the use and sharing of personal data. Confidentiality of information on electronic devices is fundamental. Individuals have the right to be free from unlawful online surveillance, widespread monitoring, and eavesdropping. Additionally, everyone has a digital legacy right, allowing users to decide what happens to their accounts and information after death.

In the use of AI, the declaration commits to ensuring transparency, the necessity of informing individuals when interacting with AI, using datasets that prevent discrimination, subjecting AI outcomes that impact human safety and fundamental rights to human oversight, not using AI in a manner that nullifies human choices, and developing trustworthy standards to ensure AI respects human rights.

The declaration, while articulating digital rights in abstract terms, does not propose new regulations but offers a list of objectives for mitigating AI's threats to democracy. It also reflects the EU's determined stance on incorporating human rights and democratic values into the AI domain, making it a notably important document.

The European Union's Artificial Intelligence Act Proposal was suggested by the European Commission in 2021 and approved by the European Parliament in June 2023 with some amendments. The proposal is currently under negotiation in EU countries and has not yet become binding.

The Act proposes a risk-based classification for AI systems, dividing them into four categories: unacceptable risk, high-risk, limited risk, and minimal risk. It mandates that the use of AI systems posing unacceptable risks is entirely prohibited. High-risk AI systems are permitted under specific obligations, while limited-risk systems are subject to transparency obligations only.

Systems posing unacceptable risks threaten human safety, livelihoods, and human rights. The Act's initial version's 5th article deemed AI systems that manipulate individuals using subliminal techniques, exploit vulnerable groups, are used for social scoring, or allow "real-time" remote biometric recognition by law enforcement in public spaces as carrying unacceptable risks.

High-risk AI systems are defined in the Act's 6th article and Annex III. These include systems used in real biometric recognition and classification, critical infrastructure management, education and vocational training, employment, workforce management, access to essential private and public services, law enforcement, migration, asylum, and border control management, and the administration of justice and democratic processes. For high-risk systems, the Act requires risk assessment before market introduction, the establishment of a risk management system, adherence to data governance rules, preparation of technical documentation, human oversight, and transparency. Risk assessments for high-risk systems, excluding those used for biometric recognition, are proposed to be conducted by AI providers through self-assessment.

Limited risk systems, as defined in Article 52, include chatbots, emotion recognition systems, biometric classification systems, and deep fakes that produce or manipulate image, audio, or video content. Biometric data, according to Article 3(33), refers to personal data resulting from specific technical processes concerning a natural person's physical, physiological, or behavioral characteristics, such as facial images or fingerprint data, that uniquely identify that person. Limited risk systems are subject to a limited number of transparency obligations. Violations of these obligations can result in administrative fines.

Systems not falling into these three risk categories are considered low or minimal risk and are not subject to any legal obligations. The Act's implementation calls for national supervisory authorities, national market surveillance authorities with access to confidential information, including AI systems' source codes, and the establishment of a "European AI Board." It also envisages the creation of a regulatory sandbox for testing and verifying AI systems before their market introduction.

The initial version of the Act faced criticism for not adequately addressing the industrial nature of AI systems, ignoring environmental and climate risks, and allowing AI providers to self-assess high-risk systems, potentially

undermining the enforcement of the proposed rules. It also lacked provisions for individual redress, denying those affected by AI systems the right to file complaints or lawsuits.

DISCUSSION and CONCLUSION

In this study, the impact of artificial intelligence (AI) on democracy was examined, and the effectiveness of human rights in the face of these impacts was evaluated. The overarching conclusion is that AI deeply shakes the foundations of democratic institutions.

The concept of AI is one that changes over time and even from person to person, lacking a consensus definition. However, accurately defining AI is crucial for understanding its societal impact comprehensively and for implementing effective legal regulations to address these impacts.

In our study, AI is defined not only in terms of its technical nature but also as a vast industrial area with sociotechnical characteristics. According to this definition, legal regulations addressing the threats AI poses to democracy should not solely focus on technical improvements. The purposes of systems, their application areas, and how human choices will be made at every stage of system design must be regulated. Given AI's status as a large industrial area, reconciling market conditions with democratic principles, maintaining a competitive environment, and not overlooking AI's climate and environmental risks are also of great importance.

The differences in approach to AI in the regulations we examined are clear. The EU appears determined not to hinder the development of AI while ensuring that fundamental rights and freedoms are not compromised. The regulations within the EU aim to control the powers of private actors in the face of public authorities. In this context, the General Data Protection Regulation (GDPR), the Digital Services Act, and the Digital Markets Act each serve distinct and important functions.

The EU takes a pioneering role in transferring human rights and democracy values into the AI domain within a regulatory framework. The GDPR, though not directly referencing AI, encompasses the processing of personal data by AI systems. GDPR's provisions on data protection principles, individual rights, the right to object to profiling and automated decision-making, and transparency offer strong protection for privacy and data protection rights, as well as the prohibition of discrimination. GDPR is crucial for the effectiveness of human rights protection against AI's threats to democracy.

The Digital Services Act contains provisions to protect freedom of expression in the context of AI's impact on online democratic participation. Key provisions include transparency in recommendation systems, the possibility of receiving non-personalized recommendations on very large online platforms, transparency in online advertising, banning political advertising based on political views online, obligations for very large platforms on online advertising information, transparency in online content moderation activities; these are significant provisions that revive and protect human rights. These provisions will enable stronger protection of freedom of expression, privacy rights, and the prohibition of discrimination in online spaces.

The Digital Markets Act includes regulations aimed at reducing the disproportionate power of very large platforms designated as gatekeepers. Lastly, although not yet binding, the AI Act Proposal is a pioneering regulation that comprehensively addresses the threats AI poses to democracy. Prohibiting systems that deeply shake the foundations of democracy and imposing obligations on systems that harm fundamental rights is critically important.

In light of these assessments, it can be said that the European Union, considering AI's technical, sociotechnical, and industrial nature holistically, has enacted comprehensive legal regulations to counter threats to democracy. The General Data Protection Regulation, the Digital Services Act, the Digital Markets Act, and the AI Act Proposal each play significant roles in this framework.

SUGGESTIONS

The main concern regarding the effectiveness of human rights in the context of AI's impact on democracy is that current legal regulations are still in the early stages. In other words, as the field of AI develops and grows rapidly, continuously presenting different threats, the laws expected to mitigate these threats are crawling through slow bureaucratic processes. Aware of this reality, Hildebrandt pessimistically argues that human rights, and thus democracy, cannot exist in the digital age.

The rule of law is the guarantee of human rights. Written rules create an environment that makes human rights and, thus, democracy possible. The rule of law is limited by the possibilities of concepts regulated according to the conditions of their time. Therefore, it is not easy for legal rules reflecting their era to catch up with these rapidly changing systems. Moreover, applying general, abstract, written rules to the personalized and often invisible outcomes of AI systems is very challenging.

Until binding legal regulations capable of addressing the inherent threats of AI are widely and effectively implemented, democratic regimes are at risk of being deeply shaken. Avoiding a new "AI winter" may only be possible through public pressure, demanding the embedding of democracy, human rights, and the rule of law principles into the AI domain, which is highly sensitive to user/consumer interest.

Ethics Statement

"This article complies with the journal's writing rules, publication principles, research and publication ethics rules, and journal ethics rules. The author bears responsibility for any violations related to the article." Since this article was conducted through document analysis, one of the qualitative research methods, it does not require ethical board approval.

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