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THE DARK SIDE OF ARTIFICIAL INTELLIGENCE ON THE BASIS OF PUBLIC ADMINISTRATION

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Abstract

Artificial intelligence (AI) is used to build robots that understand, monitor, reason, predict, interact, learn, develop and work like humans and solve complex problems. The world is changing rapidly, robots are getting to the level where people can take their jobs, and in the future, perhaps, we are evolving into a world where robots and humans are the main actors. However, a lot of countries have recognized the serious effect of the AI on effectiveness, security, social and welfare. AI systems cause severe worries about the rule of law, equality and human rights and the possibility of the biased AI cause concerns in societies. Especially as the use of AI becomes widespread in the public administration, the emergence of the discrimination disturbs public administrators. This study focuses on the discrimination and bias problems of AI in the public administration, addresses the discrimination that arises in the AI applications in the public administration, evaluates in which areas biased problems and discriminative behaviours are most applied, and focuses on possible risks.

Keywords

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KAMU YÖNETİMİ TEMELİNDE YAPAY ZEKÂNIN KARANLIK YÜZÜ

Öz

Yapay zekâ, insanlar gibi anlayan, izleyen, akıl yürüten, tahmin eden, etkileşim kuran, öğrenen, geliştiren, çalışan ve karmaşık sorunları çözen robotlar oluşturmak için kullanılır. Dünya hızla değişmekte, robotlar insanların işlerini ellerinden alacak seviyeye gelmekte ve gelecekte belki de robotların ve insanların baş aktör olduğu bir dünyaya doğru evrilmekteyiz. Bununla birlikte, birçok ülke yapay zekânın etkinlik, güvenlik, sosyal hayat ve refah üzerindeki ciddi etkisini kabul etmiştir. Yapay zekâ sistemleri, hukukun üstünlüğü, eşitlik ve insan hakları konusunda ciddi endişelere yol açmakta ve yapay zekânın ön yargılı olma olasılığı toplumlarda endişelere neden olmaktadır. Özellikle kamu yönetiminde yapay zekâ kullanımı yaygınlaşırken ayrımcılığın ortaya çıkışı kamu yöneticilerini tedirgin etmektedir. Bu çalışma, kamu yönetiminde yapay zekânın ayrımcılığına ve ön yargı sorununa odaklanmakta, kamu yönetiminde yapay zekâ uygulamalarında ortaya çıkan ayrımcılığı ele almakta, önyargı sorunlarının ve ayrımcı davranışların en çok hangi alanlarda uygulandığını değerlendirmekte ve olası risklere odaklanmaktadır.

Anahtar Kelimeler

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INTRODUCTION

AI has started to do various tasks and connections, and productivity has increased and has become useful in many areas. AI is one of the most popular and complex topics in computer science that has been studied for decades. To a certain extent, this complexity is due to its unique, uncertain and unprecedented existence. However, especially today, AI has become significantly popular in all aspects of life and its applications are used commonly in society. However, when its effects are considered, it has the potential to cover many areas. Studies in this field started shortly after the World War II. The concept of the AI technology was first introduced by John McCarthy at the Dartmouth conference in 1956 (Moor, 2006: 86). Afterwards, studies in this field continued to increase significantly. Today, the transformation in AI takes place at an unprecedented speed and intensity. Technological developments such as big data, deep learning, AI and machine learning affect people's lives and provide the increased work efficiency, cost reduction, optimization of resources and new job opportunities. In particular, AI acquires the information simply by simulating conscious human behaviours, analyses and examines the expression methods of the information, and basically tries to imitate human behaviours such as learning, reasoning and decision making (Ulaşan, 2023: 110). It had remarkable results in designing intelligent robots from AI with recognition, natural language processing, image processing and many other features (Zhang and Lu, 2021). By transforming data into a self-reinforcing cycle, AI can greatly help people financially, scientifically and socially. Traditional professions are transformed by AI. Existing occupations and jobs come to the end, some occupations' capacity increases and decreases, and new occupations are formed. Although AI is highly likely to create many new jobs and professions, it is thought that AI will take many jobs out of people's hands, especially thanks to the automation technology. According to the World Economic Forum report in 2018, although today 71 percent of existing jobs are done by humans, it is expected that this rate will decrease to 52 percent in 2022, and that 48 percent of jobs will be done by machines and algorithms, and 14 percent of existing jobs will quickly switch to automation systems (Yükseköğretim Kurulu, 2019: 32). Also, due to AI at houses, workplaces, schools and other public spaces in the future, new contacts will occur between humans and robots, and this can bring up social and legal issues that may challenge existing legal regulations. Today, robots are typically treated as manufactured products and therefore ordinary product liability or consumer protection law is applied to robots. There are many robots that are programmed to take care of children and the elderly to perform jobs such as manufacturing, cutting, transport, assembly used in the industry and to repeat the same simple and continuous tasks. In the future, AI will advance, become more complex and become involved in people's lives. Even today the information obtained from people, surveillance and monitoring may not be regulated ethically and can legally threaten the fundamental rights and freedoms of individuals. Although governments use AI without the need for any regulation due to its complicated structure, in the future, they will need to regulate the use of the AI.

People's constant requirement for tools has driven them to work in the field of the invention of machines that resemble humans. Although there have been ideas and projects for mechanical systems during different time periods in history, the real development and robot ideas started to sprout in the 20th century and mechanical systems have been included in

people's lives in the form of auxiliary work machines. These machines are designed to help people with simple tasks and are designed to reduce people's work. The aim was to establish a production line that is faster, cheaper, tries to reach a low error rate and the same high quality. As a result of revolutionary developments and transformations in AI, big data, natural language processing, deep and machine learning systems, these machines have progressed. AI researches have tried to apply their findings on robots by focusing on nature and living things and examining their movements and behaviours. AI robots that can imitate people and work in the same environment with them have the high interaction with people and can help people and even replace them in common work areas (Gürgüze and Türkoğlu, 2018: 54). However, AI contains some threats within itself. There are some essential contemporary issues which should be dealt with such as the potential prejudices and discrimination in AI based systems. The accountability and legal standards in AI-based decision-making processes does not make a progress at the same speed at which AI makes a progress (Ulaşan, 2021). The increasing autonomy and evolution of robots are thought to challenge traditional human-made criminal law principles such as causation, shared responsibility and fault. In addition, technological developments have become more important than human rights. Autonomous weapons endanger the world. Filters and the AI technology can undermine freedom of speech. AI-assisted courts can undermine the right to a fair trial.

Bias has become a matter of debate, especially with the AI technology. Bias can be considered as a wide-ranging category of behaviours that include discrimination and other actions which demean or intimidate individuals or groups due to personal characteristics, beliefs, or expressions (Burgess, 2023). Discrimination is defined as a state of mind in which a person or group sees another person or group as an inferior as a human being based on distinguishing characteristics such as religion, language, race and gender. These people do not treat some people or groups the same way they treat other people. Discrimination is not based on rational reasons. It is known as an attitude that is formed for various reasons (experiences, misinformation and etc.). This attitude can occur especially in public institutions. Civil servants working in the public sector can discriminate more easily and more severely by taking advantage of the state power. Public administration is changing with the use of digital transformation and AI systems in public administration. Although this situation has positive features, it also includes some risks. When AI is responsible, the design, development and usage steps must be controlled and precautions must be taken for possible risks. The possibility of the use of AI in public administration to discriminate against certain individuals, groups or classes, how discrimination can occur in the chain of command and how the precautions that can be taken pose problems. One of the biggest problems of AI in public administration is the issue of the discrimination. Prejudiced approaches and models, which manifest themselves in many ways, starting from big data, which is the biggest input of AI, create doubts about the application of AI in public administration. Since AI systems are 'trained' using data, unfair results may arise if this data is discriminatory. If discriminatory issues in large data sets are not taken into consideration, it may lead to discrimination and injustice towards certain groups (Criado and Aller, 2021: 57). AI does not have any emotions and due to this, AI is considered by some people to act without prejudice. However, it is possible that AI used in selecting the data, taking samples, and measuring the data may be biased. Discrimination can become a source of national or international conflict. Sometimes

even constitutional systems and bodies may embrace the superiority of some groups. As a result, hostilities and bloody conflicts may occur. Through AI applications, it will be investigated about whether AI has the potential to change this situation and whether it will be a continuation of humans or whether AI has the potential to end discrimination will be evaluated. The aim of the article is to address discrimination situations that occur in AI applications in public administration, evaluate in which areas it is mostly applied, and analyse possible risks. The first part is devoted to the definition of the public administration, AI and the types of AI. In the second part, it introduces the definition of discrimination and related concepts, debates on the philosophical aspects of ai, key challenges in the transition from the traditional public administration to the AI public administration and aspects of discrimination reflected in AI on the basis of public administration.

1. Conceptual Framework

The approaches and theories have been put forward about how the services provided in public administration should actually form the basis of the discipline. These approaches, which have transformed and developed public administration over time, have led to the emergence of many concepts within the framework of the idea of how public services should be presented to citizens in the best way. The concept of 'public value', which is the most obvious example of this situation and which can be considered quite new in many ways with a meaning beyond the concepts in question, has emerged (Çelik and Akca, 2021: 384). The concept of public value is presented as a new approach to public administration. Values that define the nature of the relationships between individuals and society and ultimately affect how individuals or groups meet their basic needs are called 'public values'. Public value derives from social experience. Public value involves a complex connection between the individual and society through dynamic network considerations. Therefore, individual and social levels must be taken into account when creating public value. According to public value theory, responding to citizen preferences, negotiating and directing service networks, and renewing trust by increasing service quality are among the primary goals of managers. The service is directed towards multiple goals, including satisfaction, sustainability, trust and legitimacy. They must be accountable to citizens, customers and taxpayers (Köseoğlu and Tuncer, 2014: 150 and 159). Public value has received increasing attention after Moore's work *Creating Public Value* in 1995. Moore (1995) did not provide a definition of the concept in his study, but treated it as a part of the managerial process. While some of those who work on public value after him consider the concept as the value created by the state through services, laws and other actions; Another part perceived it as principles such as equality, impartiality, justice, honesty, continuity, accountability and transparency, which are at the centre of public administration. In this article, public value, which is taken as a theoretical approach, is perceived as equality and impartiality and is considered on the basis of discrimination and AI (Erten, 2021: 105-106).

1.1. Artificial Intelligence

The virtual world is called the 'virtual, cyber, digital, online/online' realm, and where everything happens on the screen and carries the mind, emotion, behaviour and speech from the real-life process to the virtual process. Monitoring or sharing real and correct information in the digital interaction is less likely than tracking or sharing untrue and false information. The transformation that societies experience in the era where cybernetics, nano-technology and digitalization elements dominate can be called as 'Digital Age, AI age, Cybernetics, Industry 4.0 or 5.0, Post-human Age' (Dağ, 2021: 176). Especially, in this age, AI is dominant and very popular. AI can be defined as the dominant concept of the Fourth Industrial Revolution as a super/umbrella concept with an interdisciplinary perspective. This definition should be used in a legal term and the boundaries of the definition should be predictable and inclusive for AI-related fields such as engineering, statistics, linguistics, logic and computer science. Since AI is utilized in a lot of different fields and its use by these fields is diverse, and it should be inclusive of its possible future developments, there is no common definition that everyone can agree on. However, although there is no consensus on it, there should at least be an accurate definition that an AI law can focus on and use. Nilsson explains AI as an activity devoted to create the intelligence of machines/robots and considers the intelligence as the feature which allows entities to work accurately and predictably in the environment. This definition suggests that humans, animals and insects can be classified as intelligent beings. For example, in a table of beings with varying degrees of the intelligence, many insects and animals are placed at the bottom end of the list (Nilsson, 2018: 13). OECD (2019:6) defines AI as "human-like cognitive functions. affecting real or virtual environments for machines fulfilling and a set of defined targets". It defines it as "a machine-based system that can make predictions, recommendations or decisions". In addition, AI can imitate human intelligence, but it is not easy to say that it happens every time (Ili´c, Păun, Popovi´c Ševi´c, Hadži´c, Jianu, 2021: 3). AI is a research area that aims to make machines do the jobs humans normally do. AI can be seen as a science that develops algorithms and AI aims to give the general features of the human intelligence to robots. Humans try to develop systems that can reveal and interpret intelligent behaviours like humans, make decisions, and produce solutions to difficulties. AI is expected to understand information, create a cause-effect relationship and derive the new information from the data in the past (Öztemel, 2021). AI is considered as a computer program with a learning mechanism and utilizes the information to make decisions in new situations, as people make. Once AI learns the information, this knowledge can be used elsewhere (Çinici and Kızılgeçit, 2023: 754-755). People are logically talented at learning complex concepts and see an object such as a melon and later recognize a different melon. But robots do not have a flexible concept of 'like'. A robot can easily recognize whether two images of a melon or two sentences are precisely the same or not. But a robot can distinguish a picture of the same melon taken from various angles or various lights and a robot can capture the visual idea of a melon. This is titled as '*generalising*', or making a view rooted in resemblances in data, rather than just images or texts. This notion can be applied to things robots have not recognized before (Gershgorn, 2021).

1.2. Debates on the Philosophical Aspects of Artificial Intelligence

AI researchers and theorists claim that advanced systems with better thinking and decision-making abilities that reach human thinking abilities and surpass humans will be possible, and they even expect them to reach the human-level capacity. Contrary to these claims, some scientists agree that this possibility is impossible. Although it is an undeniable fact for most AI researchers and theorists that low-performance AI is possible, doubts about high-performance AI are still not resolved (Yeşilkaya, 2022: 120). It is necessary to briefly touch upon three well-known arguments such as 'Turing Test and Searle's Chinese Room Argument', which are among the classical propositions in terms of the philosophy of AI, and to clarify the lines of AI related to philosophy. Firstly, Alan Turing published an article in 1950 and addressed the question 'can machines think?' He created a thought experiment called the 'Imitation Game or Turing Test'. This game is played with a computer and two people, one of whom is an interrogator. Players are located in three different rooms connected to each other by telegraph, provided that there is no visual or auditory contact. The game is based on evaluating the answers given by the other two players to the questions posed by the interrogator, and as a result, the interrogator guesses which room contains a computer and which room contains a human. The main challenging part of the game is that the computer is programmed to imitate a human and tries to convince the interrogator that it is human with answers (Turing, 1950; Avaner, 2018: 183). It is understood from here that the condition for a computer to win this game is to either be able to think like a human or to deceive the interrogator in this regard. The purpose of the Turing Test is to test a machine's ability to imitate a human. The test is intended to observe a machine's ability to imitate human interactions. In the game, both the machine and the man try to imitate something that is not them. At the end of the game, if the machine performs less badly than the human, it is considered to have passed the test. In the text Computer Mechanism and Intelligence, Turing does not actually give a definition of thinking or intelligence. The fact that the machine passed the test shows that the machine can exhibit some form of thinking practice. Turing suggests that a properly programmed machine can act like a brain. But a machine that can imitate the human brain would be much more powerful than existing computers (Topal, 2017:1350). Secondly, the argument and thought experiment known as the Chinese Room Argument was presented by American philosopher John Searle in the article *Minds, Brains and Programs* published in the journal *Behavioral and Brain Sciences* in 1980. He argued that a digital computer executing a program could not have a 'mind', 'understanding', or 'consciousness' regardless of how intelligent they are or human-like they look like (Yüce, 2022). The Chinese Room Argument begins with the assumption that a person who speaks no language other than English is locked in a room alone. This person is given a set of cards with Chinese symbols and an English rule book. The person in the room takes a piece of paper with Chinese questions written on it and throws out another piece of paper with Chinese answers to these questions. The answers to the questions are so precise that a native Chinese speaker cannot distinguish them. Now the most important point to understand in this allegory is that the person in the room does not understand the content of these writings at all. Recognition of the symbols on the cards is completely limited to their shapes, and the association between card sequences is provided with the help of the rule book. Therefore, the person in the room just followed rules in the book and manipulated the symbols that he did not understand and did this

unconsciously. Searle thinks that this argument shows that a system can develop a program that will perfectly imitate some of the human abilities (Searle, 2004: 68; Searle, 1980). Even if a computer writes Chinese texts by combining Chinese words, it does not mean that the computer knows Chinese. The person in the Chinese Room is like a translation program running on a computer; Although it performs a successful translation, it does not understand the content of the translated expressions. What computers do in terms of language is just syntactic representation. Therefore, it has no relation with the meaning that is the semantic aspect of the language (Dore, 2012: 34). On the basis of the philosophical discussions, AI has types according to its development level. Today, 4 main types of AI can be identified:

- Reactive machines can be called as the simplest AI robot and do not obtain any memory and take actions just on the present data. This type of the AI technology just takes into account the current situation and can do a narrowed range of pre-coded tasks and works. It does not learn and use it. Every action is pre-determined before. Because an input permanently delivers the same output, the responses of these machines can simply be described as 'reactive'. For instance, a reactive machine can be the IBM Chess program who won the world champion, Garry Kasparov (Lateef, 2023). Also, other examples are IBM Watson[2], Google AlphaGo[3], recommendation engines in streaming videos and audio services (Sintelly, 2020). This kind of machines does not have any power with the obtained knowledge to discriminate any human. If this machine discriminates some people, the codes make the machine do this. Also, this machine discriminates not a single person and it can discriminate all groups that have the same features. In addition, if this machine discriminates any human, this means that the machine does not have any responsibility and the designers, users or producers can be guilty for these discriminated actions.

- A robot with the limited memory has a limited sense for the past and can benefit from it. This type is more advanced than reactive machines. It does not form any memory, but it can be aware of a recent past and is able to utilize the information taken at that time to affect their choices. It can save the data for a short time, but it cannot add it to their memory as an experience. A lot of self-driving cars utilize this memory such as the speed of vehicles close to your vehicle, traffic density, lane lines, the distance of vehicles and etc. This machine uses machine learning models and produce the knowledge from previously-learned information for a short time and it generally has the experiential knowledge from actions. It does not save the knowledge for a long time and it forgets the information after the event that requires memorization by the machine finishes. The machine continuously observes conditions around it (such as what other cars do, where objects are and how traffic signs move). This machine is utilized by virtual voice assistants, chatbots and self-driving cars. For instance, autonomous vehicles developed by Mitsubishi Electric can calculate missions thanks to the filtering technology. These autonomous cars can save people from certain dangers and give the same quality of trust to drivers (Costello, 2022). This kind of

[2] This robot was primarily created to response questions on the quiz show Jeopardy and had the victory over Brad Rutter and Ken Jennings on Jeopardy, taking one million USD in 2011.
[3] It is called as the first computer program defeating a Go world champion.

machines just observes the situation to get the obtained knowledge, but this machine does not have any consciousness and do not save the knowledge for a long time. If this machine discriminates some people, the codes make the machine do this. If this machine discriminates any human, this means that the machine does not have any responsibility and the designers, users or producers can be guilty of the discriminated actions.

- Theory of mind can be called as an important social-cognitive skill (Baron-Cohen, 1995) refers to the group of procedures which permit a person to attribute mental states to other individuals. This contains the capability to attribute mental states, such as sentiments, needs, beliefs, and knowledge, and know that individuals' opinions and views might differ from each other (Cherry, 2023). For example, if you see your friend checking the refrigerator, you can think that your friend is hungry and you can give him food. The capability of putting yourself in somebody else's shoes can be considered as a vital evolutionary benefit gained by people and this skill permits people to make a better contact with the environment and with other people. Theory of mind should be installed into machines provided that machines share environments made by humans for humans. The key point for the usage of autonomous cars can be called safety. Safety depends upon autonomous vehicles cars which comprehend and forecast human behaviours. Naive pattern recognition cannot produce precise estimations of compound, complicated and unplanned human actions. AI with theory of mind can play a noteworthy role in empathetic healthcare, understanding and taking care of people with neurological diseases, such as Alzheimer, psychiatric disorders and schizophrenia. AI with theory of mind can advance the usefulness of psychological treatments like the cognitive behavioural therapy and can be robotic companions for disabled individuals to understand and predict emotions. AI with theory of mind can not only predict the future behaviours of an individual, but also can explain the reason of these behaviours (Cuzzolin, Morelli, Cîrstea and Sahakian, 2020: 1058). However, there can be some ethical problems for AI systems because they can discriminate some people. The goal is to permit a robot with theory of mind to recognize creatures' motives, feelings, expectations and intentions and can act according to them. For instance, big companies, corporations and countries can manipulate this process and discriminate against individuals (Berman, Cook and Dajee, 2019). Also in some communities, minor groups can be detected and maybe in some ways can be criminalized purposely and they can use the AI robot with theory of mind to understand and observe some people's conditions and aims.

- Self-awareness is seen as the last type of AI. Great advances have been made in AI especially in the last twenty years. Digital assistants (Alexa, Siri and etc.) can understand speeches, translate it into the searchable data, and send back to replies according to the searches. Some AI systems are able to pass the bar exam and produce artworks (Lupsha, 2023). The latest generations of AI models do not give any hint about self-awareness expected by important theories of human consciousness (Sparkes, 2023). Self-awareness can be considered as the capability to be the object of

one's own attention (Morin, 2011: 808). It establishes the active state of individuating, checking, saving, regaining the data. Synonyms are called as 'self-observation', 'introspection' and 'self-focused attention'. Self-aspects contain private elements like opinions, feelings, and motives, and also public elements like presence, gestures, and others' view of self. AI with self-awareness should effectively makes contact with people and require to utilize first-person pronouns, self-describe and be receptive to self-focusing stimuli in its close surroundings (Chella, Pipitone, Morin and Racy, 2020: 16-17). AI with self-awareness not only has the knowledge or perception of feelings and mental states of other creatures, but also their own. When the AI is achieved to the level of self-awareness, AI will have the human-level consciousness and equals human intelligence with the same requests, needs and feelings (Marr, 2021). At the moment, AI has not been reached the level of the self-awareness and has not obtained the hardware or algorithms that will support the self-awareness. This level can be seen as one of the ultimate goals anticipated from AI. When AI has the possession of the subjective experience capacity, AI can gain subjective experiences to make representations about themselves that affect how they feel or recognize reality. These robots can be morally permissible to have their own legal status and may pay taxes. When they make discriminatory actions to people or others, they need to take the responsibility like humans.

2. Discrimination and Related Concepts

Discrimination comes from the idea of equality between humans and the idea that every person has to have the same rights from birth. Every person has certain rights that cannot be taken from them and have been accepted for centuries. Throughout history, although, people have been exposed to discrimination in various regions and places, there have always been religious and conscientious references against discrimination and the stance against discrimination gained ground within the framework of basic human rights. The fight against fascism in World War II caused a strong reaction against the inequality and its treatment of racial minorities. There is an indivisibility relationship among racism, equality and discrimination, and non-discrimination constitutes an integral element of the principle of equality and racism. This reaction triggered the stance against discrimination over time. The problem of discrimination also affects justice, equality and human rights and constitutes a vital obstacle to human rights and freedoms. The stance against discrimination, which is thought to be agreed upon within the framework of modern legal laws, can be understood in various ways due to differences in the levels of internalization and interpretations of legal principles among societies. The basis of prohibitions of discrimination is to protect human dignity and freedoms. The prohibition of discrimination has been included in constitutions and laws all over the world. However, these laws could not completely prevent people from being morally devalued (Göregenli, 2012; Yıldırımalp, 2021: 322).

Discrimination often comes to the fore with concepts such as prejudice, racism, xenophobia and hate speech. The mental dimension of discrimination consists of prejudices that are antipathy based on an erroneous or inflexible generalization. Discrimination can turn into observable behaviours by feeding on these mental attitudes, which are sometimes obvious but mostly implicit. Generally, discrimination can be defined as behaviours with

discriminatory motives against the people and members of a group due to their characteristic situations such as ethnicity, skin colour, gender and religious belief (Sağlam, 2020: 271). Discrimination can be seen even in daily life in the world. Even though countries have taken action against discrimination with laws, public announcements and hard punishments, there are not enough to eradicate the discriminative actions. Because of this, non-governmental organizations have involved in this situation and act together with governments to fight against discrimination. For example, the Council of Europe established training programs to examine the effects of AI on discrimination. These courses have been designed to support participants in gaining initial knowledge on discrimination and AI issues to make them ready for and to recognise and fight against discrimination mainly from the AI technology. These courses give opportunities to recall non-discrimination principles applied to verdicts based on algorithmic processing (Council of Europe, 2023). It is necessary not only to detect the existence of discrimination and catch criminals, but also to reveal the reasons behind discrimination and root it out.

2.1. The Social Consequences of AI on Discrimination

AI has been one of the most discussed topics in last 20 years. Humans have tried to create some machines that are conscious, can think, and has a moral and ethical status like humans. The use of AI systems brings together some positive and negative effects. Robot judges do not make any mistake because of tiredness, lack of knowledge, lack of experience and do not have any family affair or money problem. However, the actions of the AI can have consequences on fundamental human rights and freedoms. AI, which exists in all areas of life and facilitates important processes, accelerates works and reduces workload, despite all the opportunities it offers; it contains various discriminatory elements such as discrimination, racism and marginalization. Especially, discrimination and prejudices appear in AI as a reflection of social reality. Provided that the society has some discriminative actions and thoughts such as xenophobia or Islamophobia, AI robots can behave them in the same way as society. If the society does not give jobs to Muslims or foreigners and does not prefer them, the engineers coming from these people may have the same opinion, and AI they make will treat these people in the same way. Even if robots are made completely free of discrimination, AI may still discriminate unintentionally because it will benefit from previous experience and seek the maximum benefit by evaluating previous processes. For example, in 2014 Amazon created a computer program to analyse job applications. In 2015, this firm detected that the computer program discriminated against women applicants for software developers and technical positions, since computer algorithms were trained to vet applicants by checking patterns in resumes submitted to Amazon over ten years. Basically, models were gender biased. Thus, AI self-taught that applicants with masculine language were favourable candidates and the system unfairly picked male applicants rather than female applicants (Dastin, 2018).

The effects of AI robots on human rights are one of the most important dynamics that determine the time people live in. AI touches the lives of every person, from smart home applications to social media, and are gradually utilized by public authorities to assess people's character or abilities, distribute sources, and make important verdicts for vital situations. Numerous studies have highlighted the risks posed by AI to equality and non-discrimination

for employment, the provision of goods or facilities especially in the public sector, the fight against fraud, and the principles of public safety (Council of Europe, 2023). Firstly, ethical issues are very important to prevent discrimination for AI. In recent years, AI robots have been invented to distinguish whether people tell the truth or not. For instance, the deception detection model was produced utilizing the Random Forest machine learning technique, and it collected information like pulse measurements and facial expressions. This information helped the robot to understand whether individuals tell the truth or not by checking the fluctuation of the pulse and the changes of face expressions. The accuracy of the system was estimated to be between 75 percent to 80 percent and it may be a useful instrument for many sectors such as justice and law enforcement offices (Muhammad, 2023). In this example, even if robots do not have any intimation about their consciousness, they directly interfere with human lives and lead them in their decisions. These transformative effects can be used in malicious ways and big companies, firms and states try to take the information unlawfully and can violate human rights, democracy and the rule of law.

Ethical rules have to be created and controlled strictly. If ethical rules are used well, discrimination against humans by robots can be reduced over time. For instance, states have thought that robots could be used in the military industry in order to prevent the casualties of human soldiers. However, at this time, there will be some dangerous risks about whether robots harm innocents or not and whether robots can measure the risk levels of so-called enemies efficiently. For instance, in 2013, the US navy successfully landed the X-47B prototype autonomous drone on an aircraft carrier at sea. The X-47B does not have a pilot. Its flights are carried out through lines of software code executed by computer systems (Jalabi and Ackerman, 2013). The Pentagon designed an AI robot leading the hunt for Islamic State militants. Codenamed Project Maven was designed to analyse aerial surveillance videos to look for similar patterns which help operators (Prigg, 2017). AI can be very important for the national security. For this reason, countries are developing AI for military and defence technologies. A lot of experiments were carried out and large investments have been made for this purpose. The USA, China and Russia are shown as the leading countries using AI for military purposes. China is following the steps of the USA in the research of AI. China does not only use AI for its domestic purposes, but also aims to become the world leader in AI by 2030 and is vital for the future of the military and economic power race, with leadership in the AI technology. It tries to show that military AI R&D for China is imaginable and challenge the American military hegemony easily (Özdemir, 2019: 18).

2.2. Key Challenges in the Transition from Traditional Public Administration to Artificial Intelligence Public Administration

Public administration has separated from its traditional systems in order to serve the public better, especially with the development of the internet and AI systems. In particular, the use of AI in public administration is not limited to bureaucratic services. In addition, AI has areas of the use in public administration in terms of organization, duty, operation and public officials. Traditional public administration generally has a large-scale structure with a rigid organizational structure, centralism, strict hierarchy, and the dominance of the central management. Public administrators generally have limited powers. Bureaucratic type

administrator style is common. Quantity is preferred in services. Loyalty to public administrators is essential and there is no risk-voluntary structure. With the integration of AI into the public administration system, a more flexible organizational structure, more decentralization, soft hierarchy, minimal state, smaller-scale structure, transparency and a management style capable of multi-faceted evaluation have emerged. AI facilitates risk taking by helping administrators to make decisions, reduces the employment because AI can perform repetitive and simple operations, and can help public administration by making multifaceted evaluations as AI processes and systematizes more information (Berkün, 2017: 656).

Table 1. Similarities and Differences between Traditional Bureaucracy and AI Bureaucracy

	Traditional Public Administration	**AI Public Administration**
Organization	Top-down Hierarchy	Collaboration and mixture of vertical and horizontal, top-down and bottom-up management systems
Rules and Services	Rules are strict and services follow them.	Rules can be flexible according to the needs of the public and services can be tailored to the needs of the public.
Knowledge	Specialization is vital.	Collective intelligence is vital.
Tools	Paper records stored in files or electronic archives .	Retrievable records informing decisions in real time.
Values	Procedural equality	Equality of results

Source: Vogl, Seidelin, Ganesh and Bright, 2019: 953.

Some of the services provided by the public sector are not directly aimed at citizens, but citizens benefit from them indirectly. These services support public officials. For instance, the fact that the AI system acts as an automatic assistant by reporting makes the work of public officials easier. In addition, if the feedback from the public is processed into the system, is presented and is evaluated in categories, public officials can have the necessary time to work on more complex, innovative and important data analysis projects. In order for AI to be used effectively in public administration, multiple AI systems must interact. For example, virtual assistants do the work in the field, and middleware bots provide support to public officials and other professionals (Vogl, Seidelin, Ganesh and Bright, 2019: 950). It is difficult to determine whether AI systems comply with ethical values. The influence of human subjectivity in algorithm design and configuration is not easy to determine and can only be understood after some time of testing in the field. Even with sufficient resources, it is difficult to find the underlying reasons of problems. Algorithms are prone to biased decision making.

Even if an algorithm is set to find the best or most efficient option, it incorporates the value judgments of its designer into its decisions. Moreover, there may not always be a right path to choose, and many possible options may be correct (Mittelstadt, Allo, Taddeo, Wachter and Floridi, 2016). According to Friedman and Nissenbaum (1996), bias can arise from pre-existing social values, technical constraints, and situations arising from the process.

AI aims to be a tool to accelerate growth for governments and a driving force to help solve the traditional problems of developing countries. The need for capacity building, ethical problems and radical change in education, the unpredictability of the differentiation of the workforce stand in the face of AI as a challenge. The process of learning AI technologies is difficult and the application of this technology should be followed by experts. Recruiting AI experts from the public sector will become more difficult. In order to hire AI experts in the public sector, it will be necessary to promise very good salaries and good living conditions. In addition, the systems and algorithms made by the AI experts are difficult to control and can only be followed by experts. Errors made by AI robots in public administration will be difficult to detect, and repairing damage is also challenging. The wider the area is controlled by AI robots, the less the reliability of public institutions is in case of making mistakes. Public institutions lack the ability to integrate and execute AI robots. Acquiring these skills takes time and is costly. In addition, public administrators do not have the knowledge to supervise the necessary implementation of their policies by AI (Kaplan, 2016). Since the information held by some of the public institutions is related to the privacy of the public, necessary precautions should be taken in case of AI usage. In addition, states that demand AI models want to be given the authority to regulate and customize them. Apart from this, there are serious concerns about the reliability of outsourced AI models. Procurements for public institutions generally take a long process. Provided that the experts who know AI quit their jobs, it is very likely that the work will be disrupted due to the critical position they are in. However, if people who need to be filled immediately are in the public sector, recruitment may take a long time due to the recruitment processes (Surya, 2019: 10).

Also, there can be some problems with AI robots taken by governments from foreign companies. Some AI robots cannot be useful in some countries according to these countries' features. For instance, IBM Watson uses patient medical records to constantly learn for personalized treatments. It is primarily trained by the North-American patient data. Racial differences (China and Western states) may have different diseases. Western states get more vascular-related diseases, but China gets more hepatic diseases. This means that IBM Watson can be less useful in China because their robots are not trained well about hepatic diseases. Also, the differences in medical methods and practices are not taken into consideration by IBM Watson and recommendations may be useful for citizens which have different cultures, religions and regions. In some countries, surgery can be a good way to get rid of some cancer types. But in other countries, they try to get rid of cancers with traditional methods and consider a surgery as a last resort. For instance, normally milk is seen as very healthy especially in Western culture but Asians have difficulty in drinking milk because of lactose intolerance. Due to this, even AI nutritionists should give different recommendations to people coming from different countries. When AI nutritionists are trained with the data coming from the

Western culture, the data does not work for the Asian culture and sometimes the recommendations can be dangerous for health (Sun and Medaglia, 2019).

3. Aspects of Discrimination Reflected in Artificial Intelligence on the Basis of Public Administration

AI has potential benefits in public services, but there are also serious dangers associated with the use of AI. One of the main risks is the risk of algorithmic bias, which could result in unfair or discriminatory decisions. If algorithms are programmed by humans and these programmers have biases, those biases will be incorporated into the algorithms and existing biases will persist. In addition, AI can be manipulated and make discriminatory decisions without being aware of it. In addition, using AI in making important decisions is risky. AI can perform limited tasks and can be used for simple tasks. But it cannot override human judgment. AI robots can discriminate in many ways just like humans. For example, discrimination can be made on the definition, nature and characteristics of the target variable, as well as in terms of class. Apart from this, discrimination can be made by sampling differently, giving different data to train AI, or using historical prejudices. Additionally, discrimination can be made based on the different characteristics people have or indirectly. Those with decision-making power can discriminate against people they do not want by manipulating the AI system. AI robots are known as black boxes (Pasquale, 2015). It is generally very difficult to understand the reason for a decision made by AI. Since the decisions made by AI robots are not transparent, it becomes difficult to understand why people are discriminated against. AI robots can classify the data shown to them by finding correlations in datasets. For instance, companies look at incoming mail, label it and send it to their authorized units. These mails can be classified as human resources, legal department or general directorate. The company feeds the AI robot with tags containing previous sample messages and data about where they went. These tagged messages are training data. AI finds the relationship between which features of which message should be affixed to which unit. The set of discovered correlations can be characterized as a 'pattern' or 'prediction model' (Borgesius, 2018: 15-16). For example, messages to the legal department often contain specific phrases. (court, law, criminal, etc.) or it may be sent from specific addresses (such as court, prosecutor's office). AI robot examines the previous cases and learns which unit the letters should go to according to their qualities and characteristics. The purpose of AI is to find the target variable as a result of data mining. Class labels simply define values related to the target of the data mining process and define paths to the target variable. Provided that class labels are not qualified correctly, the target variable will not produce the desired result and there will be a risk of causing discrimination. For example, poor people may have to take the bus to get home from work, and the last time the bus leaves may be after work, and poor people may have to leave their work 5 or 10 minutes before to catch the buses. The company may choose to *leave work as late as possible or stay at work as long as possible* as the class label to evaluate if employees are 'fine'. However, provided that the poor leave before work to go home, even if they outperform other workers, their late exit from work will put them at a disadvantage. Discrimination can infiltrate AI due to the way organizations define target variables and class labels (Barocas and Selbst, 2016: 10-11).

Although AI has many applications, it has not yet been successful enough. In particular, the utilization of the AI in public administration may cause some inconveniences. The utilization of AI for crimes can help courts, prosecutors and law enforcement agencies tremendously. But the danger of discrimination is a big problem. Criminal justice and primarily law enforcement need to evaluate the utilization of AI for fundamental human rights such as confidentiality, equity and non-discrimination, and be wary of the growing thought that AI is more impartial and cleverer than humans. Even if the functioning of the AI seems to exclude human intervention, there is a margin of error because it is designed by humans, and some value judgments of humans may also be reflected on robots because it is designed by humans. The data given to AI has passed through human prejudice and then given to AI (Idder and Coulaux, 2021). Algorithms trained on police data can generally cause bias by including data that reflects over- or under-policing of certain individuals or communities, flawed or illegal practices. For example, black men are more likely to be stopped outside and searched than white men, and this is entirely due to people's prejudice. When the data is used for AI, bias is combined into datasets of AI and subsequently biases the results of applying those datasets. The influence of biased samples is permeated into algorithmic predictions through the feedback loop. More police going to a certain area just because of certain issues should not cause the people there to be subjected to more control and oppression. In police data, people from disadvantaged sociodemographic backgrounds are likely to interact more frequently with law enforcement officers and have more data about these people, but having more interactions with the police may increase their risk rates (Babuta and Oswald, 2009: 12-13). The UK has designed an algorithm to assist police in making detention decisions. Durham Constabulary and computer science researchers developed the Harm Assessment Risk Tool (HART). It is created to expect if suspects have risks of committing crimes for the future within a 2-year period. It is intended to help police decide whether to refer suspects to a rehabilitation program. The program was designed to interfere with proceedings (Burgess, 2018). It was utilized by the Durham police to categorise individuals arrested on the suspicion of a crime as high, moderate, or low risk of committing crimes in the future and decide if they should be charged or referred to a rehabilitation program which is named as Checkpoint. People considered as the 'moderate' risk should participate in a rehabilitation program and are freed from judgment when they complete it. The numbers demonstrate that 12,200 individuals were evaluated by HART 22,265 times between 2016-2021. The majority of assessments were rated 'moderate' risk (12,262) and 'low' risk (7.111) of recidivism. According to studies, this system has the 53.8 percent 'accuracy' rate. Durham police obtained data profiles from Experian to allow HART to make decisions. Profiles include some types: Asian Heritage, Disconnected Youth, Crowded Kaleidoscope, Families in Need or Low-Income Workers. More offensive 'features' were given to these profiles. For example, people classified as Asian Heritage were described as: Large families in neighbourhoods with a strong Asian tradition ... they live on low-cost Victorian terraces ... these individuals usually work in low-paying jobs such as transportation or catering. An offensive profile, the Crowded Kaleidoscope, was thought to consist of ‘multicultural’ families likely to live in ‘frequent’ and ‘crowded flats’. Profiles were called with stereotypical terms that Abdi and Asha were associated with the Crowded Kaleidoscope. Low-income people, were labelled as ‘underqualified’ and ‘heavy TV viewers’ with labels like Terrence and Denise, while Families in Need were rated as having ‘a range of

help' and names like Stacey. They have utilized the predictor until 2021 (Fair Trials, 2022). Also, South Wales Police uses AI as a part of the facial recognition system and utilizes face scanning technologies in real-time. The Welsh police have been using this system since 2017. A large number of arrests were made after cross-referencing people in a database of 500,000 detention images. The City Police, on the other hand, have been using a system called PredPol since December 2012 to forecast where crimes might happen. It is trained with the historical crime data and shows police officers areas where they may be needed (Burgess, 2018). Joy Buolamwini, Timnit Gebru, and Deborah Raji, founder of the Algorithmic Justice League, have examined the relationship of facial recognition systems to racism and police violence. While racist problems in facial recognition systems have come to light in many states of the USA, restrictions have been imposed on their use. Daniel Santos, who teaches in the USA and whose achievements have been rewarded many times throughout his career, was fired because he was classified as a 'bad' teacher after the algorithms were put into use by the school administration. There have been many similar cases. Despite not being able to learn the reasons for their dismissal, the court considered that the teachers had not been treated fairly (Öney, 2021: 5).

CONCLUSION

Discrimination is the deprivation of certain members of a state or society from certain rights and privileges provided to others. Some individuals or groups may be the subject of 'categorical discrimination' and are socially classified either because of race, religion, gender, or any other definition used to distinguish members of a society from each other. It means that some people will be the target of worse treatment on the grounds that they may have negative qualities based on legal definition, opinion or assumption. This discrimination can become racial discrimination when some people are treated unequally because of their colour or other racial characteristics. Such discrimination can become a source of national or international conflict. Racial discrimination is dominated by the assumption that some groups are naturally superior to others. Sometimes constitutional systems and bodies have also adopted the superiority of certain groups and treated other groups unequally. Over time, the privileged begin to discriminate more to protect their status. As a result, hostilities and bloody conflicts may occur (Cashmore, 1988; 79; Plano and Greenberg, 1989). The only way to stop this is for an emotionless, impartial and consistent machine to intervene in the system established by humans. Many people think that this may be possible with AI. AI, which is the most important technological development of the new century, affects society, economy and states in many ways. The technological infrastructure and data mining provided by AI technology have shown great development in the last two decades. AI has transformative effects on the public sector. States have begun to develop strategies to control the transformative effect of AI and use it for their own interests. In particular, states use AI in areas of the public administration such as health, finance, justice, transportation and marketing. Although AI has great benefits to public services, there are also serious dangers associated with the use of the AI.

AI robots must be properly designed and trained. Otherwise, it can make biased decisions and increase already existing inequalities. AI algorithms in public administration should basically be designed impartially, transparently and accountably. The utilization of AI in public administration can cause employees to lose their jobs. States should pay attention to

employment while placing AI in the public administration and prevent their people from suffering economic difficulties due to AI. In addition, AI systems can store and use large amounts of data. Precaution should be taken to protect the data. AI is incapable of understanding and solving complex social, political and ethical problems. When using AI, public administrators should intervene as the situation requires human judgment. AI requires a large infrastructure investment and must be backed up by strong training afterwards. Being dependent on AI can create a security risk, and to avoid this, at least a copy of the data should be kept with traditional methods. In addition, AI may encounter resistance from people working in the public sector. Changes can cause uncertainty in public officials and create a lack of confidence. Employees may be happy with the current system and are likely to resist situations that disrupt their routine work. For instance, there may also be conflicts between public institutions in the use of AI. For example, hospital administrators may not see a problem in the use of AI in hospitals in terms of efficiency, while supervisors may complain about costs, and doctors may have difficulty in doing their jobs due to hesitations in the operation of the AI. Since the cost of the public sector to produce AI systems is very high, they will have to cooperate with companies that produce AI systems. In addition, since AI robots are very costly, the number of existing companies will be limited and the public sector will have to try to keep on good terms with these companies. Other problems will arise when public institutions introduce AI applications into their systems. Inconsistency in critical elements of public decision-making, problems with ethical exchanges, problems with creativity, and problems in terms of personal and community identity will likely happen in the future.

AI used in selecting the data, taking samples, and measuring the data may be biased. Discrimination stems from the idea of equality among people and the idea that every human being should have the same rights from birth. Every person has certain rights that have been accepted for centuries and cannot be taken away from him. Although people have been discriminated in various regions and places throughout history, there have always been religious and conscientious references to discrimination, and the stance against discrimination has gained ground within the framework of basic human rights. AI robots can also discriminate in various ways, and this discrimination is based on previous statistics. Basically, AI robots statistically encapsulate the choices humans make, knowingly or unknowingly, into a system, and AI's advanced profiling capabilities can turn it into a very harmful tool when it falls into the wrong hands. When abused, AI can reinforce stereotypes, mask systemic discrimination, and target minority individuals and groups. In the public sector, organizations should be mindful when seeking help from AI-driven systems that have far-reaching human impacts. AI robots are known as black boxes and it is often very difficult to understand the reason for a decision they make. Since the decisions made by AI robots are not transparent, it is difficult to understand why people are discriminated against. For these reasons, care should be taken when using AI systems and the system should be checked at all times.

Research and Publication Ethics Statement

I confirm that this work is original and has not been published elsewhere nor is it currently under consideration for publication elsewhere.

Contribution Rates of Authors to the Article

This article was prepared by a single author.

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