

Criminal Liability Arising from Artificial Intelligence Applications A Legislative and Media Approach

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Abstract:

Artificial intelligence is the latest development in modern technology. Today, it is a reality with multiple applications that simulate human intelligence. The field of media is also among those domains infiltrated by artificial intelligence. This has led to the emergence of what is now known as AI journalism, with robots delivering news broadcasts and more. Some legislations have paid special attention to this matter and seek to support it in order to enhance its strategic role in contributing to the development of the knowledge-based economy. However, the accuracy of these robots in various fields may lead to errors, including in the media field

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1- Introduction:

The pace of modern industrial technology is accelerating day by day to enhance human well-being and to seek the most effective means of comfort and enjoyment of life. In the context of this rapid advancement, artificial intelligence (AI) systems have emerged, and their usage has been increasing significantly, to the extent that it is predicted to become an essential part of everything humans use in their daily routines, such as cars, household appliances, and drones. Economic institutions and banks have started using automated response robots to communicate with customers through applications connected to their smartphones. Internet search engines now track users' choices and preferences, suggesting content they might be interested in without the need for traditional searches through entire databases. Additionally, numerous AI systems have been developed to operate production lines in factories, drive cars autonomously without human presence, assist in medical procedures such as surgeries, and enhance education by improving student efficiency, curriculum quality, and teaching methods.

In reality, the increasing use of AI systems in various aspects of life is expected to have significant legal implications for individuals, raising numerous questions and challenges regarding the compatibility of existing legislation with these advancements and its ability to accommodate the unique characteristics of AI systems. This concern has led the United Arab Emirates to establish the Ministry of Artificial Intelligence and Future Sciences—an initiative that adds to the UAE's impressive track record in adopting innovations in culture, science, and other fields. The UAE has always been at the forefront of researching, acquiring, and implementing new global ideas. The primary goal of this initiative is to enhance administrative efficiency, as integrating AI into management helps organizations adapt to rapid



changes, tackle diverse challenges, and ultimately achieve the competitive advantage they strive for.

The technological attributes of AI systems are beginning to impact general civil law principles. These systems are designed to minimize errors and are programmed to consider safety precautions similarly to humans. Consequently, they cannot merely be classified as objects; rather, they function as entities that substitute humans in bearing legal responsibility without presuming fault. This concept has been acknowledged in European international civil law regulations, initially as a preliminary step, which has led to discussions about granting AI systems a special legal status based on the principles of the **theory of virtual personality in law**.

From a technical standpoint, however, AI technologies are not yet fully developed. These systems often suffer from viruses and technical malfunctions, sometimes causing them to operate in unpredictable or unauthorized ways, potentially leading to significant harm. This raises an important legal question: **To what extent can intelligent systems be held legally accountable, and to what degree can robot journalists be endowed with legal personality, and what are the implications of this for the media landscape?**

1. Identifying terms

- a) **Artificial intelligence:** There are several definitions of artificial intelligence, including the definition of the European Commission as “software systems and perhaps devices designed by humans with a goal that works in the real or digital world by perceiving the environment by obtaining information , by interpreting data , applying analysis to knowledge or processing information derived from that data and

deciding the best actions in order to achieve a specific goal” {Commission européenne, 2019}

The Organisation for Economic Co-operation and Development (OECD) defines it as “a machine-based system that, according to a certain set of human-defined objectives, can make predictions or decisions that affect real or virtual data.” {OECD.2019}

In our study, we can define artificial intelligence as the ability of a machine to compensate humans not only in carrying out the tasks programmed by a human, but also in underlining them and making decisions about them if necessary.

b) Artificial intelligence journalism: It is the techniques of producing journalistic materials such as news, investigations, analytics, news stories and others through artificial intelligence, through programs and techniques that extract huge data from the digital archive and then edit and audit them

c) Press crimes: The crime is an act or omission stipulated by law, and its perpetrator or abstainer is punished with penalties determined by the legislator according to the degree of seriousness

Legal scholars define it as "a legitimate act resulting from a criminal will, and the law determines its punishment or precautionary action"

By dropping this definition on the practice of journalism , we define press crimes as any illegal act issued by a practitioner of the media profession, that is contrary to media regulation or that harms a public or private interest by any media outlet

d) Criminal responsibility: It is the obligation to



bear the legal consequences of the criminal act,
and the subject of this obligation is to comply with
the penalty prescribed by law {Al-Rifai }

The importance of the topic lies in the fact that the involvement of artificial intelligence in the media field is spreading , to the point of the emergence of what has become known as "artificial intelligence journalism" , and none of the creators of these technologies and software has been able to assert that they are " infallible " , which means that this spread will inevitably be accompanied by slips that may sometimes reach what is legally classified as press crimes, in this case it is necessary to identify the perpetrator of the crime and the criminal responsible for it

Our paper also comes at a time when no country in the world – regardless of the different degrees of development and expansion of the use of artificial intelligence technologies in various fields, especially the media – will set a legal framework that determines the responsibility of this "electronic or humanitarian deputy" as called by the European Union, which seeks to be the first to develop a legal framework that limits the risks of artificial intelligence through a draft law proposed by Belgium and approved by the competent committee in the Union on May 11, 2023 { Selim , 2022 }

Beyond this endeavor, the various countries of the world have still not exceeded the regulations and instructions in the hope of being able to control these "moral" creatures , pending their legal control, in which the speed of development of this technology from day to day and from hour to hour has played a major role in delaying it.

In Algeria, the recently ratified Organic Law of the Media does not mention at all the new press technology "artificial intelligence journalism". As for the Penal Code, although it has also undergone

amendments, the last of which was in February 2024 , all these amendments are far from keeping pace with the technological development taking place in the world.

In the absence of legislative texts in this regard – then – the judiciary may find itself facing several problems, including the extent to which it is possible to grant legal and even natural personality to artificial intelligence entities – since they have begun to lag behind journalists and carry out their tasks – how to punish them and moreover how to implement the penalties imposed on them ,which made it (the judiciary) and its assistants stand helpless since they find before them only ordinary laws that do not keep pace with the very rapid technological development.

2. The Concept of Artificial Intelligence Systems:

The concept of artificial intelligence (AI) has recently gained significant attention from decision-makers across various organizations. However, defining AI precisely remains difficult due to differing perspectives among researchers and specialists, as well as the diversity in their respective research fields. This has led to a wide variety of proposed definitions. Moreover, AI systems have manifested in multiple practical applications in the real world, each characterized by unique features and attributes that distinguish them from other technologies.

Artificial intelligence is considered a branch of computer science and one of the foundational pillars of modern technological industries. The term “artificial intelligence” can be defined as the ability of machines and digital computers to perform specific tasks that mimic or resemble those carried out by intelligent beings—such as the capacity to think, learn from past experiences, or carry out mental processes. AI aims to develop systems that possess intelligence



and behave in ways similar to human beings in terms of learning and understanding. Therefore, AI is the science of creating machines capable of performing tasks that would normally require human intelligence (Moussa).

In 1955, John McCarthy—one of the pioneers of AI—was the first to define the term, stating: *“The goal of AI is to develop machines that behave as if they were intelligent.”* AI is one of the modern sciences that emerged from the convergence of technological revolutions in systems science, computer science, and automated control on one hand, and logic, mathematics, linguistics, and psychology on the other. The aim is to understand the nature of human intelligence by creating computer programs capable of simulating intelligent human behavior. These programs allow computers to solve problems or make decisions in specific situations based on a description of the problem (Bouzerb, 2020).

A study published by the **AI Now Institute** acknowledged that there is no single, universally accepted definition of artificial intelligence. It generally describes AI as *“a diverse collection of advanced technologies based on human capabilities.”* Broad definitions of AI systems refer to them as *“technologies that can perform tasks and functions typically carried out by humans.”* The same study emphasized the need to establish clear ethical frameworks to govern the deployment of AI technologies.

AI systems and applications are designed by studying how the human brain thinks, learns, decides, and acts when attempting to solve a problem. The insights from these studies are then used to develop intelligent software and systems.

3. Definition of Artificial Intelligence:

One of the modern definitions of artificial intelligence is that it is *"an attempt to make the computer or machine behave like a human being, whether in thinking, behavior, problem-solving, or practicing all aspects of daily life. This is achieved through studies conducted on humans, from which results are drawn to help explain human behavior and program it for application to machines."* (Khalifa, 2017)

According to the **World Intellectual Property Organization (WIPO)** in its WIPO Conversation on Intellectual Property and Artificial Intelligence, AI is defined as: *"A field in computer science that seeks to develop machines and systems capable of performing tasks that require human intelligence, either with limited human intervention or without any human involvement. For the purposes of this document, general AI is linked to narrow AI, referring to technologies and applications programmed to perform specific tasks."* (Zouatine, 2022)

From this, we can conclude that artificial intelligence is the process of simulating human intelligence through computer systems by attempting to mimic human behavior, patterns of thinking, and methods of decision-making. This is achieved by studying human behavior through experiments in which individuals are placed in specific situations, and their reactions, thought processes, and methods of dealing with those situations are observed. These insights are then used to replicate human thinking patterns through complex computer systems.

4. Types of Artificial Intelligence:

Artificial intelligence can be classified into two main categories:

- First: Based on the **capabilities** it possesses.



- Second: Based on the **functions** it performs.

1. Classification Based on Capability:

Artificial intelligence is divided into three types according to its level of capability:

A. Super Artificial Intelligence (ASI):

This is the most advanced type of AI, capable of performing tasks far better than even specialized or expert humans. It possesses extremely high abilities such as planning, learning, and self-adaptation. In essence, it can solve all problems and provide solutions to both theoretical and practical challenges.

B. General Artificial Intelligence (AGI):

This type of AI is designed to perform tasks that are similar to human capabilities, such as enabling machines to plan and think autonomously in ways that resemble human thought. Research and development in this area are still ongoing, and it represents a key goal in the future of AI advancement.

C. Narrow Artificial Intelligence (ANI):

This is the most common and widespread type of AI. It is also the one that raises the most legal concerns, particularly because it is implemented in many real-world applications, especially autonomous vehicles. This type of AI is designed to carry out specific and well-defined tasks. (Al-Fatlawi, 2022)

2. Classification Based on Function:

From a functional perspective, AI is divided into four types:

A. Reactive Machines:

This is considered the most basic type of AI, as it lacks the ability to learn from past experiences or data. However, it can interact with real-time inputs to provide the best possible outputs. An example of this is **AlphaGo** by **Google**, which became the first program to defeat a professional player in the game of Go.

B. Limited Memory AI:

This type of AI can store and use data and past experiences for a short period. For example, the **Tesla** self-driving system can retain information such as the car's last recorded speed, the distance between vehicles, and the maximum allowable speed the car can reach.

AI Based on Theory of Mind:

In psychology, the "Theory of Mind" refers to the ability to attribute mental states—such as beliefs, intentions, desires, emotions, and knowledge—to oneself and to others.

AI based on the Theory of Mind is considered a highly advanced form of artificial intelligence. It aims to enable AI systems to understand human emotions, beliefs, thoughts, and expectations. This type of AI should be capable of social interaction, accurately perceiving rapid changes in emotional and behavioral patterns in humans.

Despite the many improvements being made in this type of AI, it is still under research and development. A real-life example of Theory of Mind AI is the humanoid robot "**Sophia**", developed by **Hanson Robotics** in 2016.

AI Based on Self-Awareness:

This type of AI is developed as a hypothetical concept intended to closely resemble the human brain. It is based on building machines



with their own consciousness, superintelligence, and emotional capacity—in short, a fully human-like machine.

Of course, this type of AI does not yet exist. If realized, it would mark a groundbreaking milestone in the field of artificial intelligence. It remains unclear how long it would take to develop self-aware AI—some speculate it may take decades.

This type of AI is viewed with caution by many tech professionals. While the development of self-awareness could signify progress for civilization, it could also pose serious threats. Once a machine becomes self-aware, it might seek independence from humans, attempt to dominate them, or even aim to destroy them. *(Mamdouh Ibrahim, 2021)*

5. Applications of Artificial Intelligence Systems:

Artificial intelligence systems have become a tangible reality, manifesting in many applications used in daily life that rival—and sometimes surpass—human intelligence. AI has rapidly evolved across all fields. In **healthcare**, it supports medical staff in analyzing data and medical results to diagnose diseases early, suggest treatments, prescribe medications, perform surgeries, and access patient files via voice commands. Patients can also book appointments using AI-powered systems. Some leading hospitals have already adopted AI-based surgical systems in certain clinical procedures requiring high precision and speed.

In **education**, AI has introduced intelligent tutoring systems capable of recognizing students, interacting with them by reading their facial expressions, and analyzing their brain activity.

Many **scientifically advanced countries** are working on developing AI technologies in the **military sector** to improve the accuracy of target identification in complex combat environments. AI is also used to **predict enemy behavior**, assess weather conditions and environmental factors, and gather data accordingly. In **transportation**, AI integration aims to reduce costs and operational human effort through autonomous vehicles equipped with motion sensors and spatial perception features.

AI has also enabled **access to places physically unreachable by humans**. In 2015, AI systems helped chart a path between planets located **1.4 billion kilometers** from Earth. (*Baha, 2023*)

AI algorithms are heavily present in popular **social media platforms** like **Facebook**, which uses custom systems to display content and ads that match users' interests—even predicting future interactions based on previous posts and behavior. Its image recognition system has achieved a level of accuracy **surpassing that of the FBI** in facial recognition.

In **e-commerce**, AI has played a major role, giving rise to **smart electronic agents**. These agents no longer merely assist users in making decisions but have become capable of **autonomously making purchase decisions** by instantly comparing offers and selecting the best option in a matter of seconds.

Thanks to these wide-ranging advantages, AI systems—which consist of powerful algorithmic models used across many services such as image databases, security logs, healthcare records, traffic data, consumer behaviors, and digital analytics from the web and social media—have begun to **impact individuals' legal status**. This has raised numerous **challenges concerning the compatibility of current**



legislation with AI's unique characteristics and whether the law can fully accommodate these developments. (*Arguro, 2017*)

6. Characteristics of Artificial Intelligence Systems:

Artificial intelligence is distinguished by several unique features and characteristics that set it apart from other systems. These are particularly evident in its immaterial nature, functional autonomy, lack of full control, the impossibility of completely predicting its reactions, and its lack of spatial or temporal limitations. These properties grant AI systems a special status that necessitates careful study in order to provide a legal framework for their personification and the acknowledgment of their legal responsibility. These characteristics are of various types:

A. Immaterial Intellectual Nature:

One of the most significant features of AI systems is their immaterial intellectual nature. Although they may appear in a tangible physical form, they originate from a set of algorithms or software programs. Most comparative legal systems consider these to be intangible assets and products of intellectual and mental effort, thus subject to intellectual property laws. The AI system appears in a physical body controlled by a set of algorithms or software, which form its unseen "mind" once integrated into and connected with that body (El Kaakour, 2017). The system remains inactive until the software is linked to a specific physical medium, at which point it becomes operational.

B. Functional Autonomy:

The common perception of AI systems is that they are automated systems—operating based on pre-programmed instructions that cannot be altered. This is the essence of automation: programming a machine for a specific duration and task. However, the continuous and rapid development of AI has enabled it to simulate cognitive processes associated with humans. It can now respond to each situation uniquely, in ways that are unforeseen and not pre-planned. Consequently, it is impossible to predict its functional reactions, especially when these systems engage in human activities in ways that surpass human intelligence in terms of autonomy, speed, accuracy, and cost (Aw Mandour, 2022).

Accordingly, artificial intelligence systems do not always exhibit fixed, measurable, defined, and predictable reactions. This is especially true for **intelligent cognitive systems** that are capable of **self-learning** and are programmed to act in the most rational way based on their surrounding environment. These systems make **independent decisions** based on experiences, data, and embedded knowledge, without referring back to the manufacturer or programmer. Therefore, in such cases, the user of these self-learning AI systems **cannot be held accountable** for their actions or be required to compensate for damages resulting from them.

C. Difficulty in Tracking and Predicting Actions:

In certain scenarios, AI systems may act without producing any **tangible or visible effects**. For example, when AI provides **incorrect data or information** related to a contract or a commercial project of a company or an individual, it can cause harm to users. In such cases, understanding the actual harmful action committed by the AI and its causality can be difficult due to its **invisibility**.



To address this challenge, it has been proposed to create a "**black box**" for every AI system to **record all events and changes** that occur at a specific moment, and immediately after, so that this black box can be used as a **reference to investigate liability causes** (Adrien, 2015).

D. Lack of Spatial and Temporal Boundaries:

As a result of the **immaterial nature, functional autonomy**, and **unpredictability** of AI systems, another important feature arises: their **lack of spatial and temporal limitations**. These systems are **borderless** and can be used by individuals **at any time and from any place** in the world. This creates **ambiguity regarding the location of the harm** caused by them and gives rise to legal consequences such as the **difficulty of determining the territorial jurisdiction** of the competent court responsible for awarding damages. This situation necessitates **updating traditional legal rules** to better accommodate the unique characteristics and challenges posed by artificial intelligence systems (Aw Mandour, 2022).

7. Artificial Intelligence within the Legal System:

As previously emphasized, AI entities possess advanced capabilities in learning, acquiring experience, and making autonomous decisions without direct human supervision. In addition, they exhibit numerous skills such as reasoning, inference, and adaptability to their surrounding environment. These features enable AI entities to self-develop, autonomously control their decisions, and act independently in various situations, much like human beings.

This capacity raises a critical concern: when a criminal act is committed by such systems, and it stems from their **own free will**

without any interference from the programmer, it would be **unfair to hold the programmer liable** for that error. Thus, a key legal question arises:

To what extent can AI entities be held criminally responsible for crimes committed independently, beyond the scope of their programmed functions?

In the absence of specific legal provisions addressing this matter, two main doctrinal positions have emerged — one **opposing** the recognition of AI's criminal liability, and another **supporting** it.

1. The Position Opposing Criminal Responsibility for AI:

This view maintains that **criminal liability can only apply to human beings**. This principle is widely accepted and is seen as the most logical and consistent with the concept of crime and the **social function of criminal law**. Crime, in this view, can only be committed by a human being — a notion rooted in the belief that humans possess **conscious and informed will**, aware of the actions they commit. Therefore, it is difficult to acknowledge criminal responsibility for artificial intelligence.

1/1 – The Impossibility of Attributing Crime to AI Due to Its Nature:

Crime is not merely a **physical act**, but also a **psychological state**. As such, for criminal liability to be established, it is not enough to simply attribute the act physically to a person; there must also be a **psychological connection** between the perpetrator and the act. This psychological link forms the basis of what traditional legal theory refers to as the “**moral element of the crime**”, which includes the



necessary components for attributing the criminal act to its author mentally.

At the heart of this moral element lies **will**, and in the absence of will, **criminal responsibility cannot be established**. Therefore, only humans can be held criminally liable, as they are the only beings capable of **understanding the law** and the obligations it imposes. It is inconceivable to hold AI criminally liable, as it **lacks the capacity for free perception and choice**.

1/2 – Incompatibility of Criminal Punishment Philosophy with AI Criminal Liability:

Even if we hypothetically accept that a robot committed a criminal offense punishable under the law — something that is not entirely implausible — most of the penalties stipulated by criminal legislation **cannot be applied** to it. Sanctions such as **capital punishment** or **deprivation of liberty** are designed exclusively for **natural persons**.

Criminal penalties require a **judicial ruling** based on a **fair criminal trial**, initiated through public prosecution procedures. This raises significant challenges when trying to apply these procedures to AI systems. For example:

- If an AI device is to be arrested and brought to justice, **how would it be interrogated?**
- What would be the **purpose of pre-trial detention** for a non-human entity?
- How could it know the **location of the court**, or listen to witness testimonies or expert reports and respond to them?
- How could **fingerprints be collected**, or **forensic evidence** be obtained — which are essential for criminal justice?



These procedural challenges highlight that **criminal sanctions were fundamentally designed for human beings**, who are the focus of all penal philosophies (Ben Aouda, 2022).

1/3 – AI Crimes as Pure Application of the Doctrine of the Innocent Agent (Moral Actor Theory):

Based on the approach taken by **traditional legal doctrine**, AI systems are regarded as **inanimate objects** devoid of awareness and judgment. Thus, their use in committing crimes is considered a **pure application of the "moral actor" theory** in criminal law (Mamoun Salama Abdel Moneim Sherif, 2022).

In this theory, the **moral actor** is the individual who manipulates another person to commit the criminal act, with the latter being merely a **tool** in the former's hand — typically because the person executing the act is **in good faith** or **lacks criminal capacity**, such as an **insane person or a legally incompetent minor**.

According to this perspective, while it may be difficult to ignore the capabilities of AI entities, **those abilities are not sufficient** to consider them as criminal offenders. Legally, their abilities are equated with those of **mentally incompetent individuals**, or those whose mental state does not allow for criminal intent.

In such cases, when a crime is committed by such an “innocent agent,” **criminal liability falls on the instigator** — the one who used the agent as an instrument. The **agent** is considered merely a tool (Adwan Mamdouh, 2021).

As an example: If a programmer designs a robot's software to intentionally **set fire to a factory at night** when no one is present, and the robot carries out the act, **the robot is the physical perpetrator**,



but it is merely a tool in the hands of the **moral actor** — the **programmer**, who played a clear, deliberate role in the crime (Abu Al-Maati Saqr, 2021).

1/4 – Granting Legal Personality to Artificial Intelligence Contradicts Intellectual Property Rights:

One might question: **What right does artificial intelligence have to claim authorship of its intellectual creations?**

In response, although AI lacks awareness and consciousness, it is still capable of creativity, innovation, and invention. Thanks to advanced technology, AI entities are now able to produce works and artistic innovations that require no human intervention. For example, the "Benjamin" robot, which can independently generate scripts based on provided data.

The question arises: **Does a human deserve to register these intellectual creations under their name and claim intellectual property rights over them?**

Some have argued that if the public is unaware that these achievements are the work of artificial intelligence, it can be seen as a form of **fraud**. The justification is that traditional legal rights regarding intellectual property should belong to human beings alone, as creativity has always been a **human phenomenon**. Patent registration systems exist to support **human creators**, enabling them to benefit from the products of their intellectual labor. In contrast, **smart robots**, regardless of their degree of independence and their ability to mimic human intelligence and creativity, do not need to benefit from the rewards of their creations. Therefore, granting patents to AI would set **unprecedented legal and judicial precedents**, as



current patent laws never considered the possibility of protecting AI creations (Salama Abdullah, 2022).

1/5 – Attributing Crime to AI Violates the Principle of Legality of Crimes and Penalties:

According to the supporters of this position, if we refer to the texts of the **Algerian Penal Code**, we find that it addresses **natural persons** who possess **awareness, consciousness, and discernment**. Most legal provisions begin with phrases like “**Every person...**” or “**Persons are punished...**”, and there is no mention of phrases like “**Every entity...**” or “**Artificial intelligence entities are punished...**”.

The legal rule applies only to **natural persons**, who have the ability to understand the **legal duties** imposed on them and can bear the consequences of their actions. Consequently, proponents of the traditional approach conclude that **criminal responsibility cannot be assigned to AI technologies**. This is not only from a **legal standpoint** but also from a **practical standpoint**, since it is **impossible** to impose penalties on them. Moreover, humans remain the **creations of God** and cannot be equated with machines. To liken a robot to a human being would diminish the value of humanity itself (Abu Al-Maati Saqr, 2021).

Conclusion on Granting Legal Personality to AI Robots:

From the above, we can conclude that granting legal personality to robots would lead to the creation of a **new society** distinct from the human society, known as the **electronic society**, which may not necessarily be subject to the authority of human law. This is due to the power granted to AI entities to operate entirely outside human control, which could lead to catastrophic consequences for society at large,



and particularly for humanity, especially when robots reach the stage of "**superintelligent AI**", which most manufacturers aim to achieve.

2. The Approach Supporting Criminal Liability for Artificial Intelligence:

Due to the rapid and continuous development of AI systems, contemporary legislations, including the **2017 Civil Law for Robots**, have leaned toward granting limited legal personality to AI entities. This is based on their ability to **self-learn** and make appropriate decisions independently by processing massive amounts of data without being influenced by the will of their owner, manufacturer, or user. We are now facing **artificial awareness** rather than just artificial intelligence. Proponents of this approach argue that for AI entities to be criminally liable, they must first be recognized as having legal personality.

2.1 – Legal Personality Based on the Principle of Adequacy and Legal Necessity:

There are various legal criteria for granting legal personality based on different theories, but the common factor among these theories is that the primary reason for recognizing legal personality is **legal and practical necessity**. With the development of AI technologies and their application in various fields, along with their level of awareness and ability to act independently, AI systems may commit actions contrary to the law. To address this new **criminal phenomenon**, legislators must find an immediate solution and explore how to hold AI criminally accountable. This can only be achieved by **granting AI entities legal personality**.

It has become increasingly important to recognize that **robots** are legal entities in need of legal assumptions, much like other legal entities that have been granted legal personality, such as trade unions, professional organizations, and corporations. These entities were not initially recognized as legal persons, but due to pressing legal and practical needs, different legislations eventually acknowledged them as legal persons, and criminal liability was imposed when they violated the law. The French legislature, for example, recognized in 2015 that animals had a degree of legal personality, albeit limited to suit their nature, and once again, the **legal necessity** was the driving force behind this decision (Abu Al-Maati Saqr, 2021).

2.2 – Their Responsibility is Based on Criminal Dangerousness, Not Fault:

Proponents of this approach—known as the **deterministic or coercive school**—argue that humans are driven to crime by factors beyond their control, and they cannot free themselves from these influences. They act in a specific way, not by choice, thereby denying the principle of free will. According to this view, criminals do not commit crimes freely by their will, and therefore they are not held accountable for their error (fault). Instead, they are held accountable based on **social responsibility**, as their actions reveal a criminal dangerousness. Thus, if an AI system's actions result in a crime, it should be punished based on **social responsibility**, as their responsibility lies in the **criminal dangerousness**, irrespective of fault (Idlibi, 2022).

2.3 – The Possibility of Replacing Human Perception with Artificial Perception:

Proponents of this approach argue that the rapid development of AI technologies suggests that AI entities may eventually reach a level of



awareness and sensory perception and gain the ability to make decisions independently, without human dependency. This would logically lead to the possibility of holding AI systems **criminally accountable** for their actions and decisions. Robots are capable of performing cognitive tasks that surpass human capabilities, and therefore, they should be granted **legal personality** and held criminally accountable when they commit crimes. This argument counters the claim that robots lack human emotions like love, jealousy, hatred, and anger. While these emotions may influence certain crimes, they do not affect the essential elements of crime. Even if they did, their effect would be limited to specific crimes and would not serve as a justification for exempting robots from criminal liability. This idea has been internationally adopted, particularly in **Nevada, USA**, where robots are required to be registered in a special register, and are recognized to have financial liability for their potential damages, making them subject to **compensation claims**. This aligns with the decisions made by the **European Parliament**, where **self-autonomous robots** are held responsible for compensating all the damages they cause to third parties (Al-Ma'dawi)

The Concept of Virtual Personality – Electronic Personality:

Based on the arguments of both perspectives, some legal scholars have proposed the theory of a **virtual personality** or **electronic personality**, which creates a **third category** of personality between **natural persons** and **legal persons (entities)**. This theoretical personality would have characteristics that align with the nature of an AI-powered machine, providing it with certain rights and obligations similar to both natural and legal persons. In other words, it would be granted a specific set of legal rights and responsibilities based on the characteristics of the AI entity and its nature of operation.

Thus, as we look toward the distant future and the developments that science may bring, once AI entities reach complete autonomy and this becomes a **reality**, we may recognize criminal responsibility for the crimes arising from AI actions, albeit as a **partial and limited responsibility**, as an exception to the general rule. It should be noted that even with partial recognition of criminal liability, this responsibility will be tied to the **artificial perception** of the AI entities, and their ability to act **outside human control** entirely. This partial recognition of criminal responsibility would effectively fulfill the **criminal law's function** of regulating criminal behavior, while minimizing harm to victims, especially when it is impossible to assign liability to any connected party. However, this conditional recognition of AI criminal liability does not absolve the **programmers, manufacturers, owners, or users** of the AI from **criminal liability** for their actions, which remains applicable under the Algerian **Criminal Code**.

8. Is an AI Journalist a Natural or Legal Person?

A. Natural Person:

A. natural person refers simply to a human being who is distinguished from other living creatures by their intellect. The legal personality of a natural person begins from the moment they are born alive. A natural person is granted rights even before birth, such as the right to life (e.g., the prohibition of abortion) and the right to gifts and bequests, provided they are born alive. These rights continue until their death, at which point they end.

The legal personality of a natural person is characterized by several aspects, including a **name**. According to the first paragraph of **Article 28 of the Civil Code**, it is stipulated that: "Every person must have a surname and name, and the surname follows the children of the



person" (**Ordinance No. 75-58**, dated September 26, 1975, on the Civil Code). This pertains to the **official name**, but the law also protects other types of names, such as **pseudonyms**. These are used by some journalists for personal or professional purposes and can be legally used, as long as the journalist informs their supervisors (**Organic Law No. 12-05**, dated January 12, 2012, related to media).

Another characteristic of a natural person is their **political status**, represented by their political affiliation, and their **civil status**, which includes beliefs. This does not extend to matters concerning family status and relationships, such as marriage and affinity, nor does it address what occurs after the death of a natural person, such as inheritance.

When we apply these characteristics to AI entities in general and **virtual journalists** specifically, we see that only the **name** is applicable. Even with this, several questions arise regarding the virtual entity's name:

- Does registering the name of a virtual entity with the relevant authorities, such as research centers or patent offices, resemble the registration of a natural person's name in civil status records?
- Is the name assigned to the virtual entity a real name, or is it a pseudonym?
- Does the "**death**" of a virtual entity correspond to the death of a natural person? If so, should the inventor or creator of the virtual entity register its "death" with the relevant authorities, as natural persons' deaths are registered by their family members?



- If a virtual entity is replaced by a more advanced and precise version, does this require a legal declaration of death, similar to what occurs in the case of a natural person being lost?

As for the **political and religious status** of AI journalists, this has not been discussed so far. However, it is important to consider whether an independent robot journalist could adhere to the editorial line of the media organization to which it belongs.

B. Legal (Moral) Personality:

Legal (Moral) Personality is defined as a collection of people or assets that unite for a specific purpose, and the law recognizes this union as a legal entity.

Article 49 of the Civil Code defines a legal personality as: "Any group of people or assets granted legal personality by law." The same article limits legal personality to the following: the state, the province, the municipality, public institutions with an administrative character, civil and commercial companies, associations, endowments, etc.

In other words, legal personality only arises when four elements are present:

1. A group of people or assets.
2. The will to unite.
3. A specific goal for the union.
4. Legal recognition of the union, creating the legal entity.

The "**life**" of a legal entity begins from the moment the law grants it recognition through an official contract if the goal is to achieve a private interest. The goal does not have to be material, as the law grants legal personality to charitable associations, for example. The



goal may also be a public interest in the case of the state, province, or municipality.

It is worth noting that the law only recognizes the legal personality of a union to the extent that it allows it to achieve the goal for which it was created.

The "**life**" of a legal entity ends when it achieves its goal, as **Article 437 of the Civil Code** states: "A company ends at the time specified or when the goal for which it was created is achieved." This is a natural or ordinary end. However, it can end exceptionally if the natural persons forming the entity die, or if they agree to dissolve the company. This too requires a legal contract or a court ruling.

A legal entity has several characteristics, some of which it shares with natural persons, such as a **name**. Each legal entity has a name that distinguishes it from other legal entities. This name is protected by law, and any infringement upon it can lead to legal consequences.

One of the most important characteristics of a legal entity is its **independent financial status**. This financial status consists of the total assets and debts of the entity. It means that the legal entity can acquire money, be a creditor, and owe debts. Its independent financial status guarantees the entity's debts, and the court can seize its assets if it fails to meet its obligations.

Legal capacity is also a feature of a legal entity. It is granted based on the entity's purpose, meaning that the rights and obligations of the entity are determined by the goal for which it was created.

The **nationality** of a legal entity is also one of its important legal distinctions. It is completely different from the nationality of the

people who constitute it. The significance of nationality lies in determining the applicable law to the legal entity.

There are various criteria used to determine the nationality of a legal entity, including:

- The place of its establishment.
- The country where it conducts its activity.
- The location of its main office, which is the standard practice in **Algerian law** (Law No. 05-02, dated February 6, 2005, amending and supplementing Ordinance No. 75-59, dated September 26, 1975, which includes the Commercial Code, 2005).

The Right to Litigate for Legal Entities:

The law grants a legal entity the right to litigate and allows others to bring lawsuits against it, as stipulated in **Article 49 of the Civil Code**.

Based on these two features, some may argue that AI journalists are closer to a legal entity. Each robot has a nationality—though it is often undisclosed—based on the place where it is first announced to the public or where it performs its "journalistic" activity. Examples include the Korean robot "Kim," the Qatari robots "Betkar" and "Nora," the Kuwaiti "Fidda," and finally the Algerian "Hidaya." While their nationalities are not officially declared, what if each of these "journalists" were asked to prove their nationality through documentation or a registered contract?

Regarding the right to litigate, it is well known that the one who exercises it is a natural person on behalf of the legal entity,



which does not exist in reality. One of the members forming the legal entity might act as its representative. However, the AI journalist is a single entity, not made up of a group of people. In this case, would the "robot" directly negotiate with the lawyer? How would it choose one from among the thousands of practicing lawyers, and how would it pay them their fees?

This becomes even more complex in cases that require the personal presence of the defendant. If an AI journalist were to bear criminal responsibility and become a defendant, it would have to appear before the court. This issue will be further explored in this research paper.

9. AI Journalist as a Defendant:

As previously mentioned, criminal liability is the obligation to bear the legal consequences resulting from a criminal act, which is done through compliance with the prescribed punishment. However, it is known that a punishment follows the existence of a crime, and neither of these can be said to exist without a legal text, as "there is no crime or punishment except by law" (*Article 1 of the Penal Code, 2021*). This means that the crime must be defined by law, and the punishment must also be established, which legal scholars categorize as the "legal element" of a crime. Two other essential elements are also added: the material element and the moral element.

The **material element** is represented by the criminal act and its result, along with the causal relationship between them. That is, the criminal result must be based on the criminal behavior. Some criminal acts, such as theft or murder, have tangible results, while others, like defamation or slander (often associated with journalists), have intangible or moral results. One notable danger of artificial

intelligence, highlighted by AI pioneer **Geoffrey Hinton**, is that excessive use of AI will make it "impossible to distinguish between what is true and what is false" (*Al Jazeera*, 2023).

The **moral element** involves assigning the crime to a person who has the required capacity to bear criminal responsibility. This capacity is linked to **awareness** and **freedom of choice**. The absence of either of these elements means a lack of capacity, which results in the dismissal of criminal prosecution.

If we apply these elements to crimes related to AI journalism, we might find that the **material element** exists. An AI journalist could make errors that might classify as journalistic crimes, causing harm, most of which would be moral harm to individuals or the state, as stipulated by general legislation like the **Penal Code** and specialized media laws.

However, for the crime to be considered, the **moral element** must also be present, which is synonymous with the capacity linked to awareness and freedom of choice. This leads us back to the question: Is the AI journalist fully aware of everything it does? Does it have the absolute freedom to choose?

If we set aside some characteristics of natural persons and accept that AI journalists can be granted the same rights and duties as regular journalists, it would mean that AI journalists are required to perform the same tasks, and even make decisions that a "real" journalist may hesitate over and defer to their superiors within the media institution.

Now, if we attempt to apply the features of a **legal entity** to an AI journalist for criminal prosecution, it suffices to examine its **independent financial status** and its ability to incur debt and settle debts, along with the possibility of imposing a lien on this entity, to



realize how far an AI journalist is from being considered a legal person in the eyes of the law.

This does not even touch on the other attributes that legal entities share with natural persons, such as the right to a name and the right to litigate.

10. Advantages and Disadvantages of Artificial Intelligence:

A. Advantages of Artificial Intelligence:

1. **Continuous Work:** AI systems can perform tasks continuously without experiencing boredom or fatigue.
2. **Ability to Provide Many Applications:** AI is integrated into daily life through essential applications, such as smartphones.
3. **Elimination of Repetitive Tasks:** AI can be used to handle routine tasks that require the same work process each time.
4. **Accuracy and Reduced Margin of Error:** AI helps reduce errors during task execution, ensuring high precision in performing these tasks. (*Mohamed Jibril, 2022*)
5. **Digital Assistance:** Advanced tech companies use digital assistants to interact with users, eliminating the need for human employees.

B. Disadvantages of Artificial Intelligence:

1. **Lack of Awareness of Ethics and Human Values:** AI systems lack the ability to make ethical judgments. They only focus on executing their programmed tasks without considering what is right or wrong in the process. (*Mohamed Jibril, 2022*)
2. **Hacking:** AI is particularly effective for cybercriminals because of its ability to predict potential outcomes. There are

malicious programs, like the Pegasus spyware, that specialize in encryption or decryption and are designed to hack and infiltrate systems, including smartphones.

3. **Limitations of Data Used in Story and News Writing:** The data available for use in generating stories or news is often limited, restricting the scope of AI-generated content.
4. **Lack of Creativity, Excitement, and Human Mystery:** AI lacks the creativity and the emotional depth that humans bring, making its output lack the intrigue and excitement that human-driven journalism or storytelling can provide.
5. **Bias in Data:** Sometimes, the data used to train AI systems is biased toward a certain viewpoint, which undermines the credibility of AI-generated media for the audience. (*Larara, 2023*)

Conclusion:

From this, it is clear that an AI journalist, no matter how independent it may become from humans in performing its activities and making decisions, cannot be considered a legal entity that bears criminal responsibility, at least according to the current legislative texts in effect.

It is neither a natural person who assumes the responsibility that a human journalist typically would when an alleged journalistic act carrying their signature is classified as a journalism crime. In such cases, the journalist would appear before a criminal judge to respond to charges like defamation, slander, or threats to state security, potentially facing penalties. Nor is it a legal entity subject to the provisions governing companies and organizations, which would obligate it to pay fines for damages caused by journalistic crimes committed by the AI journalist, nor could it be subject to the legal procedure of dissolution.



Furthermore, even if the judge bypasses the AI entity itself and turns to the responsible parties behind the AI journalist, another dilemma arises: Should the responsibility fall to the operator of this AI journalist, the media organization's head, or both?

Therefore, it has become crucial to reconsider legal texts and explore the addition of a new category of persons beyond the natural and legal persons—one that clearly defines the characteristics and attributes of AI entities. These entities, particularly AI-driven ones, should be specifically addressed by laws that align with their technological uniqueness, especially since they are likely to evolve to a point where their inventors, operators, and users could conceal their identities, potentially evading legal consequences and accountability.

Until that time comes, it is essential for scientists worldwide to unite in finding solutions to control AI entities, independent of politicians, who appear to be the primary beneficiaries of the gap between technological advancement represented by AI and its legal regulation.

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