

Examining the Problem of Holding Artificial Intelligence (AI) Entities Accountable for Criminal Offenses

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Abstract

The issue of assigning criminal responsibility in cases involving artificial intelligence entities has become increasingly intricate. This complexity arises from the multitude of stakeholders associated with these emerging criminal scenarios, including the owner, user, programmer, and even the artificial intelligence entities themselves. Furthermore, the potential involvement of third parties adds a layer of confusion and uncertainty, especially in the absence of specific legal guidelines addressing these novel criminal situations. Consequently, the challenge of determining accountability for crimes stemming from the utilization of artificial intelligence entities has come to the forefront of legal debate and scholarship.

Henceforth, divergent jurisprudential approaches have emerged in the endeavor to formulate specific principles and theories applicable to ascribing criminal culpability in cases involving artificial intelligence entities. The authors have chosen to distill these approaches into three key concepts: the accountability of the individual representatives (i.e., owner, user, or programmer), the theory of prospective liability, and the theory of direct liability for artificial intelligence entities themselves.

The paper concludes by mentioning that the concept of criminal liability has piqued the interest of jurists and criminal law specialists in their search for solutions to the challenges posed by artificial intelligence issues, and it has gained significant importance now. Many studies and research attempts were made to define the legal foundation on which this duty could be built, and the matter became a reason for the criminal legislator to intervene and control, with clear texts, liability for the usage of these entities.

Keywords: *Artificial Intelligence “AI”, Criminal Liability, Legal Challenges, Programmers, Robots.*

1. Introduction

Many legal problems have arisen because of technological advancement, the most famous of which being criminal liability for crimes committed utilizing artificial intelligence entities. Can artificial intelligence entities be held criminally accountable? [1].

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This subject carries significant gravity and relevance, given the multitude of calamities and offenses that our contemporary society has witnessed due to the infiltration of artificial intelligence entities into various facets of existence. This development has underscored the imperative need to address the legal challenges associated with establishing criminal culpability concerning the utilization of these entities.

This study is centered on exploring the foundational principles within criminal law that may underpin the establishment of criminal liability. The objective is to evaluate the extent to which these principles are applicable to this particular category of offenses, as well as to identify potential exceptions or deviations from these norms.

Who bears responsibility: the organization that developed the AI programming, the individual who utilized these entities for criminal purposes, or the AI entities themselves, deemed as autonomous agents capable of decision-making?

Undoubtedly, addressing these issues is a formidable and intricate task, particularly in light of the ongoing evolution and consolidation of these contemporary paradigms across most societies. Their intricate nature extends beyond our current human understanding of digital capabilities. Consequently, they present an array of challenges, foremost among them being the suitability of existing legal frameworks in grappling with the complexities posed by the involvement of artificial intelligence entities in criminal culpability. However, could conventional principles of criminal liability potentially offer insights into these inquiries? This consideration is especially pertinent since most legal statutes have yet to comprehensively scrutinize the multifaceted aspects of artificial intelligence technology.

The paper opens with defining artificial intelligence (section 2), followed by “extent to which general criminal liability rules apply to crimes committed using artificial intelligence” section. The owner, programmer, or user who produced, created, or used the artificial intelligence machine, or who provided it with the artificial intelligence program is the subject of)section 4(.

The theory of potential liability is examined in) section 5(. “The Theory of the Artificial Intelligence Entity's Direct Liability” section then examines the crimes committed by artificial intelligence entities themselves.

The paper concludes in (section 8) by mentioning that the concept of criminal liability has piqued the interest of jurists and criminal law specialists in their search for solutions to the challenges posed by artificial intelligence issues, and it has gained significant importance now. Many studies and research attempts were made to define the legal foundation on which this duty could be built, and the matter became a reason for the criminal legislator to intervene and control, with clear texts, liability for the usage of these entities.

2. Defining Artificial Intelligence

There are numerous definitions of artificial intelligence, and opinions and trends differ. Some define it as "the search for means to provide information systems with cognitive abilities comparable to those possessed by humans." It involves machine learning and autonomous natural language processing “TALN” [2].

Others define it as "the ability of machines to make decisions and adopt behaviors usually attributed to humans or animals, but with a lower level of performance" [3].

In view of this disparity, some proposed a definition of artificial intelligence in 1978 as "the science of getting machines, or computer systems, to perform tasks that require intelligence if they were performed by humans, or perhaps animals" [3].

Some preferred to provide a more specific definition of artificial intelligence, stating that it is "concerned with the study and design of computer systems that display a form of intelligence. So that they are able to learn new concepts and tasks, analyze and draw useful conclusions, understand natural language and perceive the visual field, and perform other types of activities that require certain levels of human intelligence" [4].

We can define artificial intelligence as "the ability of digital computers to accomplish specific jobs that replicate and resemble those performed by intelligent individuals, such as the ability to think or learn from previous experiences, or other operations that require mental functions."

Artificial Intelligence showcases its versatility through a range of forms and applications encompassing everything, from assistants like Siri and Alexa to more advanced systems utilized in healthcare and self-driving cars. It's important to recognize that AI often operates discreetly behind the scenes of software systems silently making decisions and adjustments. For instance, predictive text on smartphones or recommendation algorithms on online shopping platforms represent impactful examples of AI in our lives. These systems constantly learn from data and user interactions to deliver personalized and efficient experiences [2].

Despite the advantages and capabilities of AI it also brings forth concerns and potential risks. One major concern revolves around determining the level of autonomy for these systems well as defining the boundaries for decision making. This becomes particularly critical in situations where human lives are at stake such as, in healthcare or autonomous driving scenarios. Ethical considerations also extend to safeguarding data privacy since AI systems heavily rely on amounts of information. As we continue to advance AI technology and integrate it into aspects of our lives it is vital that we address these challenges head on and establish guidelines to ensure utilization [2].

3. Extent to Which General Criminal Liability Rules Apply to Crimes Committed Using Artificial Intelligence

The general rule is that only humans are legally accountable, and this rule is one of the fundamental concepts upon which modern criminal legislation is built. Will only belongs to a human being as the law does not consider it until it is conscious, and it is only conscious because it is a human psychological force [5].

In the absence of the concept of independent artificial awareness of artificial intelligence entities, discussing its criminal liability becomes complicated, but this does not imply the absence of criminal liability rules for the criminal consequences of its activity. What is required is a search for the roots of the concept of this obligation in the applicable criminal legal rules, which remain insufficient in covering the numerous aspects emerging from this liability.

The legal character of artificial intelligence entities continues to make assigning criminal liability to these entities challenging. Is it possible to integrate the legal liability of artificial intelligence entities in the legal description in legal legislation of the idea of legal personality, in its natural and legal forms [6].

Since artificial intelligence systems are vulnerable to human penetration, many texts dealing with countering information technology crimes may be able to accept actions of illegal access into these systems.

The problem, however, is that crimes committed by artificial intelligence entities without external intervention or technical penetration are more complex, as is imagined with self-driving cars and machines controlled and driven by robots rather than humans, which would transfer the element of actual control from humans to artificial intelligence, including making decisions related to the process being implemented. Therefore, criminal

jurisprudence differs in its endeavor to present some concepts and theories that can be used to establish criminal liability for the usage of artificial intelligence entities. These perspectives can be divided into three perceptions: the person in charge (owner, user, or programmer), the theory of prospective liability, and the theory of direct liability on the part of the artificial intelligence entity.

One viewpoint argues that the person in control, whether it's the owner, user or programmer of an Artificial Intelligence (AI) system should be held responsible for any harm or criminal behavior resulting from its use. This perspective is based on the concept of liability, where one person is held accountable for the actions of another. On the hand there is a theory suggesting that liability should be determined in advance by considering the harm and criminality associated with AI use. This approach implies that accountability could be assigned before the AI system takes any action. Lastly there is a theory proposing liability on the part of the AI itself as an entity to be held accountable. These various theories and perspectives aim to address the nature of AI systems and their potential involvement in activities. However, establishing an accepted framework for determining AIs criminal liability remains an ongoing challenge that requires further exploration and discussion. These perceptions will be presented in the following sections.

4. Person in Charge: Owner, User, or Programmer

The (owner, programmer, or user) who produced, created, or used the artificial intelligence machine, or who provided it with the artificial intelligence program, bears liability. Legal individuals who use these entities may likewise be held liable. It is expected that any of these individuals will abuse the artificial intelligence entity, resulting in the commission of a specific crime, such as the owner or user disabling the automatic control of self-driving cars and continuing to follow the voice instructions issued by the artificial intelligence program. Therefore, he is the only one in control of the car, and if he receives a warning from the program with a specific command to avoid an accident and does not follow it, then criminal liability falls solely on him, unless the owner of the self-driving car changes the operating commands in it with the assistance of a specialist in this field, in order to utilize it to conduct a crime, the user, programmer, or owner may be held accountable [7].

According to the general rules, the producer may be questioned about crimes and errors caused by the use of artificial intelligence entities, particularly those caused by defects in manufacturing or design or a lack of security systems. He may also be questioned about his failure to warn users and inform them of potential risks and mechanisms for dealing with them, or the negligence that leads to the crime occurring [8].

If the user uses unlicensed artificial intelligence devices in a way that violates established medical principles or because of subjecting the patient to treatment experiments using artificial intelligence devices that are not technically approved, the user may be asked whether he is a natural person, such as a doctor [9].

This does not exclude a legal institution, such as a hospital, from being held liable if the crime was committed as a result of the facility's inability to provide the required infrastructure for artificial intelligence devices to work properly.

The difficulty in this assumption lies in determining who is liable for the crime caused by the artificial intelligence entity in light of the decomposition of the natural or legal person who owns the artificial intelligence system or the programmer from the element of leadership and decision-making, which breaks the causal link between their liability and the crime committed. As long as it has not been proven that there was a previous defect due to the artificial intelligence's manufacture, programming, or design, it is necessary to prove that the artificial intelligence entity was completely subject to the will of the user

and used the robot with prior knowledge, so that the artificial intelligence entity can be said to be merely a tool to commit the crime [10].

Considering this trend, it is possible to apply the theory of the Moral Actor, "anyone who subjugates others to carry out its implementation, and this other person is merely a tool in his hand because the person carrying out the crime has good intentions or is not qualified to bear criminal liability, such as the insane person and the indiscernible boy" [11]. Al-Majzoub, as a foundation for establishing criminal liability for crimes committed with the goal of using artificial intelligence entities, while treating those entities as innocent agents. However, if the crime was done without the user's or programmer's intentionality, the Moral Actor Theory would be legally inapplicable in determining blame [12].

Based on the theory of potential liability, which we will present in section 5, if the crime was committed because of negligence in using, operating, or manufacturing the artificial intelligence entity, the representative can be held accountable for those unintentional crimes, such as negligence that causes damage or death [13].

The moral actor does not directly commit the act that comprises the material part of the crime, but rather employs another person of good faith or a machine to do so. Comparative legislation has addressed the concept of the moral actor of the crime, with some explicitly stipulating moral actor accountability, such as German law under the text of Article 25/2 of the Penal Code [14]. The Italian Penal Code agrees with the text of Article 111 of the Penal Code, as does English law, where jurisprudence and the judiciary in England support the theory of the moral actor, and French law agrees with these laws according to Articles 121/6 and 121/7 of the Penal Code [15].

In Arab legislation, the theory of the moral actor was adopted by Algerian law in Article 45 of the Penal Code, the Kuwaiti Penal Code in Article 43, the Iraqi Penal Code in Article 47, and the Moroccan Penal Code in Article 131 of the Code of Criminal Procedure, as well as the United Arab Emirates Penal Code in Article 44 and the Bahraini Penal Code in Article 43.

Other legislations, such as the Penal Codes of Egypt, Syria, and Lebanon, leave the matter to the judiciary to have its say in accordance with the circumstances surrounding the crime, and then the concept of the moral actor is applied in demonstration of the general rules, as in Article 40 of the Egyptian Penal Code. Which considered incitement as a form of criminal participation without taking into account whether the perpetrator of the crime was qualified to bear criminal liability or had criminal intent [16]. In addition to the text of Article 42 of the Egyptian Penal Code, the moral actor is regarded a collaborator in the crime since his behavior is deemed an inducement to do the crime. It states that if the perpetrator of the crime is not punished due to permissibility, lack of criminal intent, or other conditions unique to him, the accomplice shall be punished with the maximum penalty stipulated by law.

The perpetrator of the crime is defined in the penal codes of Syria, Lebanon, and Jordan as the one who creates the elements that comprise the crime, and this idea of the moral perpetrator applies to anybody who commits the crime while using a tool to commit it.

At the level of criminal jurisprudence, French jurisprudence's perspective on the theory of the moral actor has clarified as a result of what the judiciary has embraced in some of its judgements. Where it was declared that a person who seizes a jeweler's money found by another person is regarded a primary offender of theft, but it was merely a tool in the accused's hands through which he gained the lost thing. Although the French legislator has defined cases of involvement and limited them to incitement and assistance in order to ensure that the judge does not expand on the description of the perpetrator, the judiciary has not always followed this standard. (Cass. Crim 23 oct. 1958. D. 1959. S. 23, Cass. Crim. 18 mai 1876 S. 1876. 1 317, D. 1866. 1. 95, Cass Crim 15 dec. 1959, D. 1960. 1.p. 190)

Some Egyptian legislators believe that there is nothing in Egyptian law that prevents the adoption of the concept of a moral actor; however, in order to resolve this debate, the Egyptian legislator should have drafted a special text in which he acknowledges the adoption of the concept of a moral actor [16,17].

As the theory of the moral actor is applicable to situations in which the perpetrator of the crime has good intentions or lacks criminal competence, the legal basis for the idea of the moral actor serves for crimes committed by artificial intelligence.

Accordingly, the theory of the moral actor emerged as a result of jurisprudence adopting a trend that takes the doctrine of absolute subordination to criminal complicity, and it was established primarily to find justification for considering the instigator as the original perpetrator of the crime when he pushes a person who is not criminally responsible to commit it. The idea of total subordination was accepted by German jurisprudence, which states that in order for a partner to be held accountable for the actor's actions, the latter shall be criminally liable [18].

We can present a series of justifications for applying the moral actor theory to crimes committed by artificial intelligence entities.

First, the moral actor theory's foundation can be used to establish criminal liability for crimes done with the assistance of artificial intelligence entities.

Second, adopting the moral actor theory would address the legislative void in regulating criminal liability for the use of artificial intelligence entities in the face of the tremendous development in the pattern of committing crimes using artificial intelligence entities, especially since this theory was developed by German jurists to address the same deficiency in contemporary criminal legislation at the time.

Third, the capabilities of artificial intelligence entities are equal to those of a mentally incompetent human, such as unable or incompetent youngsters and the mad. In this situation, the genuine actor's criminal accountability [19] is predicated on his being the true actor on the one hand, and to be liable for the artificial intelligence entity as innocent on the other.

In these cases, criminal liability lies on the programmer of the artificial intelligence program, or the user or owner, as the case may be, as the programmer may build a program that allows artificial intelligence entities to conduct crimes.

Liability may lay on the user, such as someone who utilizes artificial intelligence entities to order them to conduct a crime, such as someone who employs a robot to assault someone. In such circumstances, the real actor is the user or programmer.

The adoption of the concept of a moral actor in some forms of crimes committed with artificial intelligence is supported by the fact that the law equalizes the means used by the offender in committing the crime, as he may use his body or a tool separate from his body, such as a machine, to commit the crime [20].

From this, we can see that the concept of the moral actor of the crime accommodates some types of crimes committed using artificial intelligence entities and is considered an appropriate solution to them if the user of the artificial intelligence entities or the programmer has the criminal intention to commit them.

5. The Theory of Potential Liability

It is assumed that the programmer had no intention or plan to conduct the offense in this case. However, the crime is committed as a result of an error in the artificial intelligence's behavior, and the cause is linked to a flaw in the way the artificial intelligence entity should have thought.

Therefore, the theory of potential liability may be valid in this case, given that the programmer or user had the ability to determine the chance of committing the crime and that it is a possible result of the employment of artificial intelligence entities. Despite the fact that neither the programmer nor the user was aware of the likelihood of the crime being committed. Hence, this theory allows for the attribution of criminal liability, which can take one of two forms:

First Form: A circumstance in which the programmer or user intends to commit a crime using an artificial intelligence entity, but the latter deviates from the plan and commits other crimes in addition to or instead of the crime intended by the programmer or user. However, it is a probable outcome of the planned crime. If the elements of expectation and acceptance are present, the programmer or user will be liable for the potential crime [20,21].

Second Form: A circumstance in which the programmer or user is negligent when developing or utilizing the artificial intelligence unit, without either of them intending to commit a crime. Similarly, if the robot programmer failed to provide safeguards that prevent it from killing human life or setting fires, etc. [20].

In this instance, criminal liability extends to the user, programmer, or owner if the law requires him to directly supervise the conditions and methods of exploitation of these entities. If an artificial intelligence entity commits a crime, it may be quickly confirmed that the owner, user, or programmer has breached his obligations, and he may be held criminally liable. In this case, the liability stems from a failure to follow the regulations and rules for dealing with such entities, because these regulations and rules are either directly or implicitly addressed at the person in charge of these operations. It imposes obligations on him for this behavior; thus, an organizational error is sufficient to cause liability for the user, programmer, or owner.

In the field of intelligence there is a complex debate surrounding the issue of criminal liability particularly when it comes to unintentional actions. The main question revolves around who should be held responsible, for any harm caused by AI entities when their behavior deviates from their programming. One theory that plays a role in this discussion is liability, which suggests that users, programmers or owners of AI entities can be held accountable for any resulting harm regardless of their intentions. This theory emphasizes the importance of understanding the risks associated with employing AI entities and taking precautions to prevent harm. It underscores the need for planning, thorough testing and robust safeguards in both developing and utilizing AI entities. If harm does occur due to a failure to adhere to these precautions strict liability provides a framework, for assigning responsibility and addressing the consequences.

In this context, either legal attribution or contractual attribution can be used:

5.1 Legal attribution method

We observe that it is uncommon for legislators to specify the perpetrator's personality in criminalization texts, but on the contrary, we observe the legislator's tendency in many of the organization's legislations for new crimes to specify the perpetrator's personality, and this increasing definition of the perpetrator's personality in economic crimes.

Is it possible to adopt this attribution mechanism to combat artificial intelligence crimes? There is no question that the claim to employ this method is supported by the enormous number of duties imposed by law on users of artificial intelligence computers.

5.2 Conventional attribution method

It means that the employer or establishment selects a person from among his employees to be held accountable for all violations committed as a result of artificial intelligence machine activities, and this type of attribution is consistent with the nature of artificial intelligence crimes for the following reasons:

1. The method of contractual attribution achieves effective deterrence for crimes committed within the framework of a legal person's activities, particularly in legislation that still excludes criminal liability of legal persons, because this type of attribution is regarded as an alternative to determining legal person criminal liability.
2. The employer or establishment is the most capable person who can identify the responsible person, and then, by agreement, the person responsible for crimes committed by artificial intelligence entities can be determined since he is responsible for monitoring, operating, and following up on them.
3. The method of contractual attribution is especially important when the specializations within the institution or establishment are intertwined and complex, making it difficult to determine the causal relationship, particularly in companies, factories, and hospitals that rely on robots for their work.

6. The Theory of the Artificial Intelligence Entity's Direct Liability

It is possible to imagine that the crime was committed by artificial intelligence itself, without any error on the part of the programmer or owner or the intervention of any external party, using modern technologies that enable the artificial intelligence entity to think and make autonomous decisions because of self-development in the artificial intelligence system that works in it [7].

In this situation, the artificial intelligence entity is directly and fully liable. This trend confers legal personality on these entities, even though they do not apply to them as human beings because their nature is different from theirs, nor does the quality of things apply to them, and this is the direction of the legislation of some countries such as Japan, South Korea, and China [22]. In these countries, there is a general tendency to reconsider the legal adaptation of machines that rely on artificial intelligence, by distinguishing them from the concept of the thing that has stuck to them for a long decade, and by granting them a legal status different from the concept of the thing in the law to protect society from irrational or illegal use for those entities, given that these machines have a tangible physical presence as well as a directed mental existence that cannot be disregarded [22,23]. Therefore, they are not just objects, but rather intelligent, multi-skilled robots with the ability to interact with their surroundings and make decisions, as well as the potential to learn. What distinguishes it as a distinct being cannot be stated as an object, nor can it be promoted to the concept of a human being. It is a being that has gone beyond the bounds of the machine but not beyond the human [24].

This ostensibly new legal position for these corporations has broadened the prospect of holding them criminally liable [25].

6.1 Determination of the legal basis

According to this trend, the legal basis might be determined as follows:

- a. The physical reality of the artificial intelligence entity's existence. It is possible to speak about the physical existence of a natural person based on its palpable physical consideration. Its hypothetical or legal existence cannot be stated as it is a visible and palpable item, yet it does have a concrete physical presence.
- b. His sensual existence differs from the physical, sensual existence of a human being, and hence he cannot be classed as a human being, and thus the legal status of a human being cannot be ascribed to it. It is a concrete physical entity, yet it is not of the blood and flesh variety. Although it is dependent on many of a person's cognitive skills and abilities, such as reading and analysis, he does not have the ability to simulate conflicting concepts, despite numerous attempts in this field, particularly within the framework of theories of illogical ambiguity, which is incompatible with logical analysis

based on interconnected and consistent logarithmic facts [26,27]. It is a colossal, cumulative, collective, quantitative intelligence that vastly outnumbers the cognitive stock of the human mind in a human life assessed at the typical lifespan of a human person, which does not surpass ninety years at best. However, it is currently unable to possess the components of human analysis of opposing philosophical and social notions, such as those connected to philosophical simulation and legal debate.

Therefore, it is an independent intelligence with the quality of existence and independence, but it is an intelligence that is not "realized" and incomplete, which may be why numerous legal reservations have been expressed within the context of preserving this intelligence.

c. It is neither legal nor virtual being. We see and feel it all around us, thus it cannot be considered to have a legal or virtual existence.

Hence, we can say that this object enters the circle of tangible physical entities from the circle of intangible legal entities. Based on this concept, the legal nature of these entities can be determined within the context of ethical and legal principles that highlight the numerous separating lines between them and both natural and legal persons. This requires granting it a special and autonomous legal personality that separates it from other natural and legal people, and then holding it criminally liable and inflicting criminal penalties consistent with that nature. This does not exclude a natural person from being held liable if he willfully employs artificial intelligence entities to conduct a crime based on the concept of the moral perpetrator of the crime, in which case we are faced with double liability.

Then we acknowledge artificial intelligence beings as having legal personality, and we are confronted with a new form of person. Some argue that the robot is not a human nor an animal, but rather a new type, and the new type indicates a new legal category [28].

Legal personality is founded on social value rather than perception, will, or human character [29].

According to this viewpoint, the automated system is not only made up of tangible and intangible elements, but it may also have the concept of legal personality [30], because it is an entity with self-awareness and independent will, and thus it is eligible to have legal personality and thus can be held criminally accountable.

It is possible to say that artificial intelligence entities contain the elements of criminal liability, which are the exterior aspect represented by the illegal conduct and the internal element represented by the criminal purpose. There is no doubt that artificial intelligence entities, like legal person entities, can fulfill these two characteristics [31].

When it comes to the exterior element, artificial intelligence entities are available as long as they operate a mechanical machine or mechanism to move their moving parts.

As for the internal element as a necessary requirement for imposing criminal liability, it is represented by knowledge, intent, and negligence, and knowledge is the sensory reception of factual data and the understanding of that data, and most artificial intelligence entities are equipped for such reception (sensory, sounds, physical contact, touch, etc.). These receptors then communicate the incoming real-world data to central processing units, which interpret the input in a manner similar to human comprehension, and artificial intelligence algorithms aim to mimic human cognitive processes [20].

Furthermore, if we accept the traditional postulates for determining the nature of the moral element in its two forms, intentionality and unintentional error, we will not be able to punish crimes committed with these entities effectively, nor will we be able to protect ourselves from their dangers.

Accordingly, criminal liability can still be imposed as these entities cannot resemble humans in some emotions, like as love and hatred, because these emotions are rarely required in many crimes, such as hate and racial crimes. Hence, criminal liability cannot be imposed on AI entities for crimes requiring these emotions.

This approach appears to have been adopted by the European Economic and Social Council in relation to granting autonomous legal personhood to artificial intelligence entities, adopting the term "Human in Command" (Avis published on 31 May 2017).

He considered it as a sensible means of ensuring the logical and steady evolution of these robots, which do not break from these constraints in that they are governed solely by human will and are guided in accordance with the directions of this will [22]. According to the European Union Legal Committee's suggestion submitted in February 2017, the committee advocated implementing unique regulations for the robot, such as giving it legal personality, rights, and financial liability [32]. The committee decided to give the robot a specific legal standing in the future with the advent of new generations, allowing it rights and placing obligations on it. This tendency has given rise to the prospect of developing a separate legal system for artificial intelligence entities, such as the most advanced robots that act independently of others. Which electronic persons can be regarded responsible [9,29].

The authors conclude from this that artificial intelligence beings are an unavoidable truth and reality, just as society understood when accepting the notion of the legal person, which started in reality and was established by the legislator in his legal system through the use of a legal trick. He referred to it as the concept of a legal person, which does not exist in reality, and for pragmatic reasons, he recognized it, accorded it legal personality, and chose to hold it criminally liable, subject to a set of rules and requirements.

From this standpoint, the issue arises: is it conceivable to prosecute artificial intelligence entities?

There is no doubt that the response will be yes if we acknowledge its legal personality and then impose criminal penalties proportionate to the nature of those entities, according to the logic of this trend. Such as the penalty of confiscating the computer programmed with artificial intelligence, destroying it, or withdrawing the license under which it functions.

6.2 Evaluation of the trend

Despite the validity of this perception, it is not currently accepted by some, owing to the fact that artificial intelligence entities, regardless of their stage of artificial intelligence, are considered incapable of bearing full liability due to their inability, as well as a lack of awareness and understanding of the elements of criminal liability. If someone reaches or exceeds the level of natural intellect, he cannot be held legally liable for his conduct [22]. Furthermore, some jurisprudence has spoken out against this trend. Claiming that recognizing the legal personality of these AI-enabled automatic systems leads to irresponsibility on the part of their creators or users, which is what jurisprudence considers intolerable moral harm [29].

This may spark a discussion on the accountability of the programmer, user, or owner, as it may be a key contributor to the crime perpetrated by artificial intelligence, as the programmer must take all safeguards into account while designing artificial intelligence software. In order to work in a smart environment in terms of indications and signals that he must understand and translate in order to make the correct decision. However, some dangers exist to prevent the approval of such obligation, which can be classed as force majeure or a sudden accident, such as a traffic signal malfunction or bad road infrastructure. This can result in a misreading by artificial intelligence or a failure to read or deal with it correctly, which is a major factor in the occurrence of a crime.

In response to this fear, some believe [13] that the robot must remain subordinate to the human and be servile to serve him, and thus not provide artificial intelligence entities any personality or legal capacity similar to humans in terms of rights and duties, on the one hand. Furthermore, the development of a robot to the point where it could become a fully capable creature, legally independent of a human, is prohibited. However, we oppose this trend and believe that artificial intelligence entities should be granted legal identity under the term "Human in Command," and their criminal liability should be recognized in the same way that legal persons are. This does not preclude the programmer, user, or owner from being held liable if the conditions for his criminal liability are met in order to achieve the desired goal of imposing the criminal penalty, and it is important to note that acknowledging criminal liability for artificial intelligence entities does not constitute a cover used to avoid liability for natural persons or the legal entity who committed the crime.

7. Discussion

Determining responsibility in cases involving AI entities is a complex and ever evolving issue. As the use of AI technologies increases the question of who should be held accountable for crimes stemming from their utilization has become a topic of debate and scholarly discussion.

It's worth noting that existing legal frameworks often struggle to keep up with the advancements in AI technology resulting in a lack of guidelines for attributing criminal responsibility. The absence of laws addressing these types of criminal situations can lead to confusion and uncertainty. As a result, jurists, experts in law researchers and lawmakers are actively working towards establishing the foundation upon which criminal liability for the use of AI entities can be determined.

The paper's conclusion highlights the growing significance and attention given by the community to liability, in cases involving AI. Extensive studies and research have been conducted to address this issue and establish a foundation. It is crucial to involve legislators in defining guidelines for assigning criminal responsibility in AI related crimes.

In summary, the field of AI poses challenges especially regarding criminal accountability. It is important to establish frameworks that precisely outline responsibility when it comes to AI related criminal incidents. Not only does this ensure justice, but also fosters the responsible advancement of AI technologies. Collaboration among researchers, lawmakers and AI professionals is essential to develop frameworks that effectively navigate the complexities associated with AI and criminal liability. The upcoming conclusion section proposes recommendations, including granting legal status to AI entities adhering to professional standards and developing precise legal guidelines as potential steps, towards addressing these challenges and shaping the future of AI related criminal law.

8. Conclusion & Recommendations

The concept of criminal liability has piqued the interest of jurists and criminal law specialists in their search for solutions to the challenges posed by artificial intelligence issues, and it has gained significant importance at the present moment. Many studies and research attempts were made to define the legal foundation on which this duty could be built, and the matter became a reason for the criminal legislator to intervene and control, with clear texts, liability for the usage of these entities.

This study arose from a research attempt to determine who is responsible for crimes committed using artificial intelligence entities, so that we, along with other researchers,

can contribute to the development of a framework that defines the features of criminal liability for crimes committed using artificial intelligence entities.

Given the information provided it is evident that the developing field of intelligence brings about various complex legal issues, particularly concerning criminal responsibility. As we explore this territory it is essential to establish strong legal frameworks that clearly define accountability in cases involving AI related criminal incidents. This does not ensure justice is served but also promotes the healthy advancement of AI technologies. The collaborative efforts of researchers, lawmakers and AI professionals are vital for the success of this undertaking. This study represents a step in tackling the complexities surrounding AI and criminal liability.

Through this study, we have concluded with a set of recommendations, which we present as follows:

- Artificial intelligence entities should be granted independent legal personality, just like legal persons, using the term "Human in Command," especially considering the growing European discussion about granting legal personality to artificial intelligence in its physical form represented by robots and holding it liable for its actions.
- AI technology should be used in accordance with professional, industry, ethical, and regulatory standards.
- Clear legal texts must be developed that define the mechanism for attributing criminal liability for crimes committed using artificial intelligence entities, taking into account the balance between the design, production, and use entities, as well as the level of development that artificial intelligence technology has reached.

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