

Civil liability for damages to artificial intelligence systems in Algerian legislation

المسؤولية المدنية عن الأضرار أنظمة الذكاء الاصطناعي في التشريع الجزائري

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الملخص:

تتعلق المسؤولية المدنية عن أضرار استخدام أنظمة الذكاء الاصطناعي بتحديد الأضرار الناجمة عن تصرفات هذه الأنظمة وملاساتها. قد تنشأ المسؤولية عندما تتسبب هذه الأنظمة في أضرار مادية أو معنوية للأفراد أو الممتلكات. يتعين على الضحايا إثبات العلاقة بين الأضرار وسلوك النظام الذكي، سواء كان ذلك نتيجة لبرمجة خاطئة، أو فشل في الصيانة، أو استخدام غير مسؤول، تنتوع الأطر القانونية في معالجة هذه المسائل، مما يستدعي تحديث القوانين لضمان حماية فعالة للمتضررين. بالنظر إلى التطور السريع للذكاء الاصطناعي، فإن النقاش حول المسؤولية المدنية يصبح أكثر أهمية لضمان العدالة وتعويض الأضرار بشكل مناسب.

الكلمات المفتاحية: الذكاء الاصطناعي، الروبوت، المسؤولية المدنية، النائب الإنساني، المسؤولية عن فعل الأشياء.

Abstract:

Civil liability for damages resulting from the use of artificial intelligence systems relates to determining the harms caused by the actions of these systems and their circumstances. Liability may arise when these systems cause material or moral damages to individuals or property. Victims must prove the link between the damages and the behavior of the intelligent system, whether due to programming errors, maintenance failures, or irresponsible use. The legal frameworks addressing these issues vary, necessitating updates to the laws to ensure effective protection for the affected parties. Given the rapid development of artificial intelligence, the discussion surrounding civil liability becomes increasingly important to ensure justice and appropriate compensation for damages.

Key words: Artificial Intelligence, Robot, Civil Liability, Human Proxy, Liability for Acts of Things.

Introduction:

Artificial intelligence is considered the product of industrial development and the remarkable technological progress the world has witnessed in recent times. Humanity has increasingly relied on artificial intelligence in all areas of life, which has significantly impacted the nature of modern human life, now characterized by comfort, efficiency, and rapid task completion. It is not an exaggeration to refer to our current era as the "Era of Artificial Intelligence."

Artificial intelligence applications have proven their efficiency in various fields. In the medical field, AI has been used to assist doctors in surgeries, evaluate patient conditions, and aid in disease detection. It has also entered the industrial sector, where global corporations are competing to showcase self-driving cars. AI has had a significant impact on the military sector as well, with the use of drones and robots with prosthetic limbs in battles and wars. Additionally, artificial intelligence has made a substantial and clear contribution in the realm of social media by providing valuable services that save AI users time and effort, enabling them to access accurate and verified information that rivals that of researchers and specialists.

The technological leap brought by artificial intelligence has placed a new burden on legal professionals. The law is in a constant race with life's innovations, aiming to provide legal regulation and protection. While humanity enjoys the comfort and immense progress brought by AI, it also faces the potential harm that artificial intelligence can inflict. AI is a double-edged sword, requiring legal confrontation to address the damages caused by AI applications and to compensate those who suffer harm.

The issue of artificial intelligence raises significant difficulties and multiple challenges. Legal scholars find it challenging to apply traditional civil liability principles to address the damages resulting from AI applications. Furthermore, these applications are still in the development phase, necessitating the urgent enactment of specific legislation regarding artificial intelligence applications. This is what the researcher will demonstrate in this study.

Study Problem:

The problem of the study lies in answering the question of whether the provisions of civil liability are sufficient to address the damages caused by artificial intelligence. From this main problem, several sub-problems arise:

- How can we reach a resolution to the doctrinal dispute regarding the legal basis for liability arising from damages caused by artificial intelligence?
- To what extent is it necessary to issue a specialized Algerian legislation on artificial intelligence, to be referenced before reverting to the general rules of the Algerian Civil Code?.

Study Questions: This study raises several questions, which are;

- What is the concept of artificial intelligence and what are its types?
- What is the legal basis for artificial intelligence, and is it conceivable to hold artificial intelligence itself accountable for the harm it causes?
- What are the legal solutions necessary to address the damages caused by artificial intelligence?

Scope of the Study:

To achieve the intended purpose of the study, it will focus on outlining the provisions of civil liability arising from damages caused by artificial intelligence applications. Accordingly, the scope of the study will be limited to the provisions of comparative laws and the provisions of the Algerian Civil Code, if they exist.

1-The Concept of Artificial Intelligence and Its Legal Adaptation::

First and foremost, before delving into the provisions of civil liability for damages caused by artificial intelligence, it is essential to study the concept of artificial intelligence and examine its legal adaptation. This will be framed within two main sections: in the first section, the researcher will clarify the concept of artificial intelligence, and in the second section, we will explore the legal adaptation of artificial intelligence.

1.1-Concept of Artificial Intelligence

There are multiple definitions formulated by legal scholars regarding the concept of artificial intelligence, which the researcher will reference. Moreover, artificial intelligence has permeated all areas of life and has had a significant impact on them. Therefore, the researcher will highlight some of the most important of these areas as examples, as follows:

Branch One: Definition of Artificial Intelligence

There are various definitions established to define the concept of artificial intelligence. John McCarthy, the father and founder of artificial intelligence, defines it as the science and engineering of creating intelligent machines, especially smart computer programs¹. It is a branch of computer science aimed at developing² intelligent machines. Others define it as the process of mimicking human intelligence through computer systems and programs, imitating human behavior, thought processes, and decision-making methods. Meanwhile, another perspective views artificial intelligence as the science aimed at enabling machines to acquire the attribute of intelligence, allowing them to simulate human logical thinking capabilities.

Despite the importance of artificial intelligence, there is still no unified definition for it.

Branch Two: Forms of Artificial Intelligence

Artificial intelligence is used in many areas of life, providing a sense of comfort, luxury, and achievement. It has become a characteristic and indicator of a country's advanced status in the world. The forms of artificial intelligence can be classified into two categories: first, the

classification of artificial intelligence based on its fields, and second, the classification of artificial intelligence based on its capabilities.

A- Artificial Intelligence Based on Its Fields

Artificial intelligence has vast and diverse fields, including, but not limited to;

***Medical Field:** Artificial intelligence, through its applications, plays a significant role in the medical field due to the remarkable tasks it performs. Notably, it involves the use of medical robots in surgical procedures. There are types of robots designed for rehabilitation, aimed at supporting the human motor nervous system and its sensory functions. Another type of medical robot is used for diagnosing chronic diseases, in addition to prosthetic limbs that serve as human arms, facilitating the necessary mobility for artificial intelligence technologies. Furthermore, there are robots that assist in treating patients by improving treatment plans and monitoring the success of therapies, thereby making the work of healthcare assistants easier³.

***Field of Vehicle Operation and Transportation:** Global companies have competed to produce self-driving vehicles, which are designed to carry out transportation tasks without human intervention and without direct control over any level of decisions or responses. These are autonomous vehicles.

***Field of Social Media and Individual Services:** Artificial intelligence applications have demonstrated a prominent role in search engines and providing services to individuals through social media applications. An example of this is the services offered by the Turing robot, which excels in voice recognition and natural language processing across various applications⁴.

B- Applications of Artificial Intelligence Based on Their Capabilities:

Artificial intelligence applications can be classified based on their capabilities into three main categories:

1-Weak Artificial Intelligence Applications:

- These are the most common types of applications, designed to perform specific tasks.
- An example of this is self-driving cars that carry out specific tasks such as controlling the vehicle and making driving decisions within certain limits.

2-Strong Artificial Intelligence Applications:

- Also known as general artificial intelligence.
- The purpose of these applications is to simulate human cognitive abilities in general.

3-Superintelligent AI Applications:

- They are the expected future of artificial intelligence.

- These applications are characterized by capabilities that far exceed those of humans.
- They rely on deep learning and self-awareness, enabling them to solve complex problems and make innovative decisions.

1.2-Advantages and Disadvantages of Using Artificial Intelligence Systems

Like any other technological innovation, artificial intelligence has several advantages and benefits, as well as drawbacks and disadvantages. This is what we will address in this section.

First branch: Advantages of Artificial Intelligence

Artificial intelligence has several advantages, which can be summarized in the following points:

First: Reducing Human Error⁵: One of the main advantages is that it minimizes the occurrence of errors when programmed correctly, unlike humans, who make mistakes from time to time⁶.

Second: 24/7 Operation: An ordinary human can work up to 9 hours, including breaks, whereas machines can operate continuously without stopping or needing rest.

Third: Risk Reduction: AI technologies can overcome many hazardous limitations for humans.

Second branch: Disadvantages of Using Artificial Intelligence Systems

Some of the main disadvantages include:

First: Increased Human Laziness: This results from a heavy reliance on machines.

Second: Increased Human Laziness: Some jobs have become entirely dependent on robots, completely eliminating human labor, which raises concerns about the increasing number of unemployed individuals⁷.

Third: High Production Costs: The devices and software require maintenance and repairs to meet the latest demands, which incurs significant costs.

2-Civil Liability Arising from the Use of Artificial Intelligence Systems.

Civil liability is considered one of the most important subjects in civil law due to its connection with most of the rights dealt with by individuals. This is because civil liability forms the foundation for the protection of rights, and every individual has the right to protect their rights, regardless of the source of those rights.

Civil liability, at its core, obligates the liable party to compensate the injured party when the conditions of liability are met. In this regard, Article 163 of the Egyptian Civil Code states: "Anyone who commits an act that causes harm to another shall be liable for

compensation." Similarly, Article 227 of the Kuwaiti Civil Code provides: "Anyone who, through his wrongful act, causes harm is obligated to compensate for it." Civil liability is defined as an obligation imposed on an individual to compensate for the harm they caused to another as a result of a breach of a duty incumbent upon them.

As a result of technological advancements and the widespread use of artificial intelligence devices and machines in various fields, which may lead to certain damages arising from their use, legal scholars have begun to explore the nature and extent of the legal characterization of the actions of such machines and their liability. Civil liability for damages caused by artificial intelligence is divided, as is general civil liability, into contractual liability and tortious liability. This liability may arise from a contract in the case of contractual liability, or it may be tortious if the harm caused by artificial intelligence occurs outside of a contractual relationship⁸.

However, no issue arises in such cases, as it is easy to identify the person responsible for the harm, the connection between the fault and the harm, and the causal relationship. Likewise, there is no problem when the harm is established, and the relationship between it and the responsible person is clear, which is the essence of strict liability. The problem arises when it is difficult to identify the person responsible for the harm because multiple parties may be involved in the artificial intelligence process, such as the manufacturer, the programmer, the owner, the user, and others. In this case, it may be difficult to determine the liable party. Another issue arises when the behavior of artificial intelligence results in harm to third parties, which is difficult to address under traditional civil liability rules. This is because AI systems can make autonomous decisions without receiving any instructions from their owner, making it hard to control. These factors make AI a source of general risk, as it cannot always be determined whether the harm was caused by behavior it learned from the environment in which it operates or due to a defect in its design.

2.1-Types of Civil Liability Arising from the Use of Artificial Intelligence.

As previously explained, civil liability, whether in general or in the context of artificial intelligence, is divided into contractual liability, tortious liability, and strict liability. We will address each of these in a separate section.

Section One: Contractual Liability

When two parties enter into a valid contract, and one party fails to fulfill their specified obligation, the other party has the right to be released from their obligation and may also claim compensation. The amount of compensation can be specified in the contract itself. If not specified, the court can determine it based on the losses suffered by the injured party and the gains they missed out on. Consequently, the debtor is liable for foreseeable or reasonably anticipated losses at the time of assuming the obligation, as a likely result of failing to fulfill it. Fulfillment of the obligation must be in accordance with the agreed quantity and specifications, or in such a way that the delivered item conforms to the agreed specifications or the standards required by professional rules and business customs. Breach of contract can

take various forms, such as, for example, the seller failing to deliver the goods according to the specifications outlined in the contract.

In Europe, if the robot does not conform to the contract, the buyer has the right to terminate it. Therefore, contractual liability⁹ arises when the robot's performance is not as agreed upon in the contract, even if no harm or injury has occurred. The non-conformity of the robot to what is specified in the contract establishes the buyer's right to compensation. As such, the creditor is not obligated to accept something that does not meet the contractual requirements, even if that item is of equal or greater value. The seller is also obligated to deliver the sold item to the buyer in the same condition it was in at the time of contracting, in addition to their obligation to guarantee that the item is fit for its intended use and free of defects. Undoubtedly, this latter obligation is a contractual one.

From this, it becomes clear that fault is based on two elements: the first is material, which is the violation or deviation, and the second is moral, which is awareness and discernment.

To obtain compensation under the tort liability system, the injured party must establish the fault, the damage, and the causal relationship between them. This can be applied to the person responsible for damages resulting from the use of artificial intelligence. For example, if a doctor relies on an AI-supported clinical decision support program to prescribe medication, but the program issues an incorrect recommendation that could have been noticed and ignored by a specialized physician in similar circumstances, then the doctor may be held liable for the resulting damages and injuries expected to occur to the patient, rather than for the incorrect recommendation issued by the artificial intelligence.

It is worth noting that applying tort liability law to artificial intelligence faces numerous significant challenges. However, courts that encounter the liability requirements arising from the actions of artificial intelligence must identify the legal or natural person responsible for the damage caused by those actions. We observe that the increasing autonomy of artificial intelligence in some cases makes it difficult to evaluate the basis for liability, if not impossible. Furthermore, in situations where artificial intelligence makes independent decisions, traditional rules are insufficient to establish legal liability for the harm caused by the robot.

In France, Article 1242 of the French Civil Code, issued by Decree No. 131 of 2016, which corresponds to Article 178 of the Egyptian Civil Code and Article 243 of the Kuwaiti Civil Code, states that a person is not only liable for damages resulting from their own actions but is also liable for damages caused by the actions of individuals for whom they are responsible or by objects in their custody. Since artificial intelligence cannot be considered a person, some legal scholars believe that applying liability for the custody of objects to it appears to be appropriate.

French law distinguishes between legal custody and actual custody. The judiciary in France has established, since the ruling in the 1941 Franck case, the acceptance of the theory

of actual custody, which posits that the custodian is the one who has actual authority over the object in terms of its supervision, management, and direction¹⁰.

In Egypt, legal scholars agree that the emphasis is on actual custody when determining liability for damages caused by the actions of objects. Thus, it is evident that applying the concept of custody to artificial intelligence raises problems related to the degree of autonomy enjoyed by AI. A robot that can acquire experience and learn from its mistakes, in addition to making independent decisions without receiving any orders from its owner, becomes difficult to control. This lack of control renders it not subject to the oversight and authority of its custodian, thereby negating liability if it is established that the damage incurred was due to an action for which the custodian was not responsible.¹¹

Section Three: Strict Liability

As previously mentioned, the fundamental purpose of civil liability is to remedy harm and compensate the injured party. This becomes challenging in the context of artificial intelligence. Therefore, the new legal situations raised by AI technology require a different approach from traditional rules concerning the determination of the person responsible for the damage caused by AI systems. It is necessary to abandon the traditional foundations based on defect and fault and seek new foundations that justify civil liability in the field of artificial intelligence.

Therefore, some legal scholars suggest establishing and imposing strict liability in relation to the use of artificial intelligence in certain contexts and circumstances, on the grounds that it constitutes a dangerous and abnormal activity¹². This would lead to a departure from the traditional system of civil liability, which requires fault as its basis.

According to strict liability, the injured party only needs to prove the damage without the necessity of proving fault. Strict liability is a responsibility for an act in which fault does not play a role.

Some define it as the liability that arises from the mere existence of a causal relationship between the damage and the activity that caused it, without considering the fault of the responsible party, even if the activity itself is sound and correct.

Liability arises when its two elements damage and a causal link between that damage and the defendant's act are present. According to this type of liability, the responsible party cannot deny their liability, even by attempting to sever the causal link between their act and the damage. Thus, establishing liability based solely on the existence of damage provides the injured party with genuine protection and relieves them of the burden of proving fault on the part of the responsible party.

As for strict liability specifically in the field of artificial intelligence, it has been addressed by the European Directive issued on July 25, 1985, No. 374/85/EC, which establishes producer liability based on the principle and foundation of liability without fault¹³

If there is more than one person liable for the same damage, liability is joint. Consequently, European Union law governs liability based on damage caused by products, not just within the contractual framework. It is not necessary to claim

The drafters of the European Directive affirmed that the applicable system is strict liability. However, it is not sufficient to establish liability merely because the product caused damage; the product must also be defective, and the defect must be the cause of the damage for which compensation is sought.

This directive was issued to harmonize and balance the laws, regulations, and rulings of the member states regarding producer liability for defective products, as well as the obligations placed on manufacturers and programmers to ensure product safety and mitigate the risks posed to consumers.

However, the most important aspect is to identify the person responsible for the damage, which becomes extremely difficult when the artificial intelligence program is open source, especially when multiple individuals have contributed to the production of the good or product. Moreover, artificial intelligence faces numerous challenges because it cannot be controlled, as the element of risk is inherent in its function. This is what has made artificial intelligence a source of public hazards.

There may also be difficulties in certain cases of artificial intelligence due to its self-learning system and its ability to make independent decisions. Therefore, it can be challenging to prove the existence of a defect in the artificial intelligence product, especially if such defects were present at the moment it left the hands of its manufacturer.

The product can be exempted from liability if it is proven that the damage resulted from an external cause for which it bears no responsibility, in accordance with the general rules of civil law.

We believe that the injured party should only be required to prove the damage and not be burdened with proving the defect on the part of the product—specifically, artificial intelligence devices. Instead, the burden should be on the manufacturer or producer to demonstrate that there is no defect in the product and that the damage resulted from an external cause. We also advocate for joint liability among all parties involved in the production, manufacturing, or use of artificial intelligence. This approach aims to avoid the challenges of proving a defect or identifying the individual responsible for it, ultimately providing greater assurance to the injured party and enabling recovery of compensation for damages.

2.2-The Basis of Liability for Damages Caused by Artificial Intelligence.

Given the immense and ongoing development in the field of artificial intelligence and its unique nature, legal scholars have been compelled to explore the foundations of liability for damages resulting from its use. They have identified three applicable bases in this area: the first basis is liability based on contract; the second basis is the theory of liability for

inanimate objects ('custody of things'); and the third basis is the theory of human representation responsible for robots.

Branch One: Liability Based on Contract.

In order for contractual liability to apply, there must be a valid contract and a breach of a contractual obligation by one of the parties. This breach constitutes the basis of contractual liability. There must also be a contractual fault, meaning a breach that originates from the contract, whether this fault is intentional or due to negligence. Furthermore, this fault must result in damage, which refers to the harm that may be inflicted on an individual in a legitimate interest protected by law or in one of their rights. A causal relationship must exist between the fault and the damage, meaning that the fault is the cause of the damage. The creditor is tasked with proving this causal relationship, while the debtor can deny the existence of this causal link to exempt themselves from liability if they demonstrate that the non-performance of the contract was due to an external cause, which could be force majeure, an unforeseen event, or the fault of the injured party or a third party.

We observe that both the Egyptian and Kuwaiti civil codes are still at an early stage regarding the legal regulation of artificial intelligence, as they have not established specific provisions to govern the relationship between artificial intelligence and its users.

However, this does not prevent liability from arising on several specific bases, including the following.

First: Establishment of Contractual Liability Based on Consumer Protection Law.

Article 27 of the new Egyptian Consumer Protection Law No. 181 of 2018 states that the producer shall be liable for any damage caused by the product if it is proven that the damage arose from a defect in the product attributable to its design, manufacturing, or assembly. Additionally, Article 9, paragraph one, of the Kuwaiti Consumer Protection Law stipulates that "the consumer, in addition to any other rights provided by laws and regulations, has the right to ensure his health and safety when provided with any goods or services and to be free from harm while using the goods or enjoying the service.

If a latent defect is found in artificial intelligence entities, the buyer may choose between filing a lawsuit for the return of the sale or a lawsuit for a reduction in price within a specified period. This raises the issue of the existence of a latent defect that may not be discovered until a later time, as its use requires a prolonged duration.

The European approach has adopted this theory in an innovative manner, as indicated in Article 1, which states that "the producer shall be liable for damages resulting from defects in its products." Furthermore, the French Parliament's Office for Scientific and Technological Assessment acknowledged in its report dated March 15, 2017, the theory of liability for defective products, noting that the burden of compensation lies with the manufacturer of the robot, and, in exceptional cases, with the owner or user.

Based on the above, the damage caused by artificial intelligence as a result of the producer, regardless of whether it is a manufacturing company, programmer, or designer, failing to provide safety and security measures to control the autonomy of the robot can be considered the basis for liability. However, proving a defect in artificial intelligence is challenging due to its capacity for learning and evolution. Additionally, it is difficult to distinguish between damage caused by the artificial intelligence's independent decisions and damage that results from a defect inherent in the product itself.

Section Two: The Theory of Liability for Inanimate Objects (Guardianship of Objects):

Article 178 of the Egyptian Civil Code states: "Anyone who assumes the guardianship of objects that require special care or the supervision of mechanical devices shall be liable for any damage caused by these objects, unless it is proven that the occurrence of the damage was due to an external factor for which they were not responsible. This is without prejudice to any specific provisions that may apply." Additionally, Article 243 of the Kuwaiti Civil Code stipulates: "Anyone who takes on the guardianship of an object requiring special care to prevent harm shall be obligated to compensate for any damage caused by that object."

It is evident from the aforementioned articles that the guardian of an object is the one who has actual control over the object, even if they do not own it.

This liability was introduced by the directive issued under No. 85/374 dated July 25, 1985, and its provisions were incorporated into the French Civil Code in 1998. According to the previous articles, the liability of the guardian of the object requires the fulfillment of two conditions: the first is "the guardianship of the object," which the Kuwaiti legislator defined as the actual authority over the object and the ability to use, manage, and supervise it. The second condition is the occurrence of damage caused by the object. Once these conditions are met, civil liability arises for the damages caused by artificial intelligence. This means that if a robot used in performing surgical operations causes harm to a patient, the party responsible is the one who has actual control over the robot, which may be the surgeon using the robot during the procedure, the owner of the hospital, the manufacturing company, the programmer, or any other person with control over it.

However, this theory has faced several criticisms, including: the difficulty of considering intelligent systems as objects due to their intangible nature, even when supported by a physical component (such as robots, chips, or machines). The concept of guardianship of objects is not suitable for applying to the liability of robots due to the self-learning nature of machines and the inability of humans to control them, whether in terms of operation or shutdown. It is impossible to know what occurs within the intelligent program or to predict the harmful actions of smart devices. The manufacturer, designer, and owner do not possess the status of guardian because they do not have the authority to use, direct, or supervise the object.

This compels us to seriously consider seeking more appropriate foundations to address these modern systems.

The third section: The Theory of the Human Deputy Responsible for the Robot.

Most developed countries are moving towards changing the legal status of artificial intelligence machines, no longer considering them as mere objects. This is being achieved by granting these machines a legal status distinct from the traditional concept of objects. In contrast, the European Parliament issued a resolution in February 2017 concerning the civil law for robots. This law established a new theory as a basis for liability for damages¹⁵ caused by robots, resembling the liability for defective products. This approach aligns with the increasing autonomy of robots and their ability to learn and interact with their external environment. The responsibility is placed on the human accountable for them, referred to as the "deputy."

Among the most prominent challenges are the impacts on lifestyle patterns and the surrounding environment, in addition to the ethical and legal aspects related to artificial intelligence. With the increasing reliance on AI across various fields, questions surrounding the legal and economic responsibilities arising from errors or damages resulting from the use of this technology are gaining importance. Who is responsible for the decisions made by AI? Is it the manufacturers, the programmers, or the users? Can AI itself be held accountable? These questions spark widespread debate and necessitate clear and definitive answers to protect the rights of individuals and communities.

Moreover, there are challenges related to privacy and data security, as AI can collect and analyze vast amounts of personal data, raising concerns about the misuse of this information. Therefore, the development and application of AI require the establishment of a clear legal and ethical framework governing its use, ensuring the protection of the rights of individuals and communities.

Conclusion:

Despite the transformation that has affected all fields and human activities since the widespread adoption of artificial intelligence systems, which now compete with natural intelligence, legal scholarship has not kept pace with this development. As a result, traditional legal rules are inadequate to establish a suitable legal framework for addressing the damages caused by intelligent systems and determining the legal basis for liability and compensation. This situation necessitates the establishment of legal frameworks that regulate these systems to mitigate their risks, in line with the unique capabilities of artificial intelligence.

Through our examination of the topic of civil liability for damages caused by artificial intelligence systems in Algerian legislation, we have concluded that the Algerian legislator faces a fundamental task of overhauling civil legislation rather than merely making amendments. This is essential to address the tremendous technological advancements, achieving a balance that both supports and encourages innovation while simultaneously protecting rights.

First: Results;

- There is no unified definition of artificial intelligence, as numerous definitions exist around the concept, most of which revolve around the idea of transferring intelligence

to machines and enabling them to mimic human cognitive abilities. Current laws and regulations place full responsibility on the individual using the robot, without considering environmental conditions and surrounding factors. In our view, the appropriate theory for assigning civil liability for damages caused by artificial intelligence systems is based on the theory of liability for inanimate objects, which is founded on presumed fault, as well as liability for defective products. Recognizing the legal personality of robots could have severe consequences, leading to individuals involved in the production and use of robots evading responsibility.

- The Algerian legislator has not mentioned artificial intelligence and its systems at all in its general and specific legislations, neither directly nor indirectly, despite the widespread use and application of AI across all aspects of life and in various fields.
- The European legislator's innovation of the concept of the "human deputy" addresses a temporary problem, namely the issue of identifying who is responsible for damages resulting from the use of intelligent systems.

Second: Recommendations;

We recommend that the Algerian legislator recognize the legal personality of robots.

-The necessity of amending the Algerian Civil Code to include liability for damages resulting from AI applications.

-Mandatory insurance: The necessity of applying mandatory insurance to machines that operate using artificial intelligence.

-The necessity of establishing specialized courts to handle cases related to artificial intelligence, with the provision of experts and judges specialized in this field.

-The necessity of establishing compensation funds to compensate those harmed by damages caused by artificial intelligence. These funds can be financed through taxes on robot sales.

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