

¹*Legal problems arising from artificial intelligence programs*

المشكلات القانونية الناشئة عن برامج الذكاء الاصطناعي



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Date of transmission: 05/03/2024 date of acceptance: 16/05/2024 date of publication: 01/06/2024

Summary:

In the twenty-first century, the most powerful facts in the world have emerged in the human encounter with the abstract machine, which works with what is known as artificial intelligence technology, to enter into the most important dilemmas of our lives, as it conflicts with human beings in many matters, the most dangerous of which is its disagreement with them in making decisions.

Based on this, the importance of studying this new space within the field of legal studies emerges, in a way that contributes seriously to creating a new culture and knowledge. This is what makes studying artificial intelligence systems cognitively useful for the purpose of finding legal solutions to new issues imposed by practical reality, at the top of these issues is the problem of the reality of the legal personality of artificial intelligence programs, given their independence in acting from the natural person, and the problem of bearing the responsibility for the mistakes that are committed and determining the responsibilities for that.

key words: Digital transformation, artificial intelligence, legal personality, legal responsibility

الملخص:

في القرن الحادي والعشرين، ظهرت أقوى الحقائق في العالم في مواجهة الإنسان مع الآلة المجردة، التي تعمل بما يعرف بتقنية الذكاء الاصطناعي، لتدخل في أهم معضلات حياتنا، إذ تتعارض مع الإنسان في كثير من الأمور، وأخطرها اختلافه معهم في اتخاذ القرارات. ومن هنا تبرز أهمية دراسة هذا الفضاء الجديد ضمن مجال الدراسات القانونية، بما يساهم بشكل جدي في خلق ثقافة ومعرفة جديدة. وهذا ما يجعل دراسة أنظمة الذكاء الاصطناعي معرفيا مفيدة لغرض إيجاد حلول قانونية لقضايا جديدة يفرضها الواقع

العملي، وعلى رأس هذه القضايا إشكالية واقع الشخصية الاعتبارية لبرامج الذكاء الاصطناعي نظرا لاستقلاليتها في التصرف انطلاقاً من الشخص الطبيعي، وإشكالية تحمل المسؤولية عن الأخطاء التي ترتكب وتحديد المسؤوليات عن ذلك.

الكلمات المفتاحية: التحول الرقمي ; الذكاء الاصطناعي ؛ الشخصية القانونية ؛ المسؤولية القانونية

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Introduction:

Artificial intelligence is one of the most advanced fields in the modern era. It has proven its efficiency in multiple fields, such as medicine, education, business, industry, transportation, and others. Artificial intelligence aims to understand the nature of human intelligence by creating computer programs capable of simulating human behavior characterized by intelligence, so that it can make independent decisions without referring to its user.

There is no doubt that granting artificial intelligence legal personality means granting it an independent legal status, enjoying rights, such as the right to independent financial liability, the right to name, as well as intellectual property rights, etc., and it bears obligations and responsibilities, such as its obligation to compensate for the damages that result from its illegal actions, and this is the subject of our research. Which focuses on studying the legal personality of artificial intelligence and its effects.

The importance of the research is evident in answering many of the questions it raises, which are worthy of seeking answers to, the most important of which are the following:

- **To what extent is it possible for artificial intelligence systems to be recognized as independent legal personality ?**
- **What are the scope or limits of legal personality if it is recognized and granted to artificial intelligence systems ?**
- **What are the implications of granting legal personality to artificial intelligence ?**

The research will rely on the appropriate descriptive approach to conclude various provisions related to artificial intelligence within the framework of applying traditional legal rules as well as new rules. Accordingly, the research was divided into two axes. (The first axis) is the extent of recognition of the legal personality of artificial intelligence, and (the second axis) is the effects of the personalization of artificial intelligence.

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The extent of recognition of the legal personality of artificial intelligence

Legal personality is the ability to acquire rights and assume obligations. It originally confirms the natural person, i.e. the human being, as being able to acquire rights and assume duties. But the legislator also recognized a group of funds or persons as a legal entity, taking into account certain practical and economic necessities.

But the question arises: Can legal personality be extended and linked to artificial intelligence systems, given the characteristics it has that bring it closer to humans, the most important of which are the ability to self-learn, interact with others, and the ability to make decisions independently ? This, of course, in turn raises many legal problems, including those related to the extent and limits of the rights that artificial intelligence can enjoy and the extent of its responsibility for the damage it causes to others?

The first requirement: Conceptual framework of legal personality and artificial intelligence

The basic idea of legal personality is the recognition that a person or entity has rights and obligations. As a general rule, legal personality is only established for a human being, i.e. a natural person. However, this personality may be established for a group of people, or funds, which are called legal or legal persons, as the legislator appreciated the social and economic value and great importance of these groups, which necessitated recognition of their legal personality.

First section: the concept of legal personality

The majority of legal systems recognize two forms of the legal person: the natural person¹ and the legal person², Natural persons are recognized for the simple fact that they are human beings. In comparison, legal persons are human entities granted by law certain rights and duties.

¹ - Regarding Algerian legislation, the legal personality of a natural person (human being) begins with a legal event represented by his complete birth alive, where the life of the fetus is achieved according to birth with distinctive signs such as crying and screaming (Article 25, paragraph 2 of the Algerian Civil Code). As for the end of legal personality, it is through natural death. Likewise, by legal or judgmental death, in the case of the missing or absent person (Articles 109 and 110 of the Algerian Family Code).

² - See amended article 49 of the Algerian Civil Code.

Therefore, the legal person is the entity that can enjoy rights and bear obligations, and this undoubtedly requires the real existence of this entity, regardless of its nature, whether human or legal, in addition to the contribution of this entity to achieving the goal of the law to acquire legal personality.

Based on the above, legal personality is not only established for humans, but also for non-human beings who do not perceive the senses. Despite this, they enjoy legal personality. The company, for example, enjoys legal personality independent of the personality of its partners. This personality gives it the authority to acquire rights and obligations.

Accordingly, it can be said that the legislator's tendency is to recognize and grant legal personality to any entity, even if it is not a human being, whenever practical, social and economic necessities so require. This is what prompts us to say that the legislator may also recognize the legal personality of artificial intelligence based on the same considerations, especially with the importance of artificial intelligence and its penetration into our daily lives, such that it has become indispensable.

The Second section: definition of artificial intelligence and its features

Artificial intelligence is one of the sciences branching out from computer science, which is the science concerned with making computers perform tasks roughly similar to human intelligence processes, including learning, deduction and decision-making¹.

Artificial intelligence mimics human performance to produce certain effects by making decisions in a free and independent manner, but in its origin it relies on algorithms that have inputs and outputs that can only be moved by a set of tangible physical means.

Artificial intelligence has basic characteristics that make it have a special personality and unique features, and the most important of these features are:

- Intangible nature. Artificial intelligence, in essence, is an application consisting of a set of algorithms or software, so it is legally considered intangible money.

The difficulty of quantifying the actions of artificial intelligence and the unpredictability of its actions, that is, the difficulty of identifying and

¹- Asma Belilita, Legal and Regulatory Enshrinement for Artificial Intelligence in Algeria, International Journal of Artificial Intelligence in Education and Training, University of Algiers 1, 2022, p. 19.

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quantifying actions or their harmful effects. The reason for this is that programming artificial intelligence means providing it with many actions that it can perform¹.

- Using it to present presented problems in the absence of complete information because of its ability to think and perceive, the ability to learn and understand from previous experiences and expertise, and the ability to also use old experiences and employ them in new situations.
- The ability to imagine, create, and provide information to support administrative decisions, in addition to processing a huge amount of information.
- Speed in analysis and response, regardless of the quantity, nature and size of the data, and adapting to the relative absence of information and finding solutions despite that.

Section Three: legislative regulation of artificial intelligence

Many legislations have issued laws specifically for robotics and artificial intelligence. In 2017, the European legislator issued a law specifically for robotics, in which it abolished the description of “thing” for a robot, and used the term “electronic or human representative.” Then the European Union issued it in 2019. A set of guidelines on how to develop the previously mentioned artificial intelligence applications.

As for the United States of America, it issued the “The Future of Artificial Intelligence and Its Prospects in the World” law in 2017, which is the first law centered on artificial intelligence systems.

As for the position of the British legislator, a select committee on artificial intelligence was appointed by the House of Lords in the year 2017, to consider the economic, ethical and social impacts in the field of artificial intelligence, while we find that the European Parliament in the year 2018 proposed to the member states of the Union Developing legislation on the legal aspects of developing the use of robots and artificial intelligence, then the European Union issued supplementary texts to the European General Personal

¹ - Mustafa Abu Mandour Musa Issa, The adequacy of the general rules of civil liability in compensating for artificial intelligence damages, a comparative analytical study, Journal of the Faculty of Law, Damietta University for Legal and Economic Studies, Issue 5, January, 2022, p. 234.

Data Protection Regulation, which sets a framework for the free flow of non-personal data in the European Union N 1807 of 2018¹.

With regard to Arab legislation, we find that the Egyptian legislator has issued by the Council of Ministers Resolution No. 2889 of 2019, regarding the establishment of a national council for artificial intelligence, which is responsible for developing national plans on artificial intelligence, implementing them, following up on them, and updating them, in order to be in line with international developments. We also find that the country The United Arab Emirates has developed many principles and guidelines regarding artificial intelligence systems and controls for the use of artificial intelligence.

As for Algerian legislation, and in the midst of the laws issued within the framework of regulating electronic transactions, especially Electronic Commerce Law No 18-05² the Algerian legislator did not completely refer to artificial intelligence and its applications, directly or indirectly.

The second requirement: Legal center for artificial intelligence

The issue of recognizing the legal personality of artificial intelligence systems faces intense jurisprudential and legislative controversy, between supporters and opponents of this idea. In view of the characteristics that artificial intelligence possesses, as we have shown, opinion has moved towards the necessity of amending the legal regulation to include artificial intelligence and granting it legal personality in comparison with the legal personality enjoyed by the legal person, taking into account practical and economic considerations and necessities.

However, the issue of granting legal personality to artificial intelligence is not an easy matter. Rather, it is fraught with many legal risks and challenges, the most important of which is the difficulty of recognizing it with some rights, or their lack of suitability to its nature. It is also difficult to burden it with obligations, the most important of which is responsibility for the damages it causes.

¹ - Omar M. AL- Muhammedi, The basis of civil liability arising from damages of intelligent robots "Comparative Analytical Study", journal of university for law and Political Science, 2023 March- 1 Issue- 13 Volume, p. 793

² - Law n 18-05 of May 10, 2018 relating to electronic commerce, Law No. 28 of May 16, 2018.

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First section: Supporting the recognition of the legal personality of artificial intelligence

Many invitations have appeared¹ which supports granting legal personality to artificial intelligence, whether implicitly or explicitly, and then it has the ability to acquire rights and bear obligations. These calls assume that artificial intelligence systems approximate human characteristics in a way that gives them the right to similar recognition before the law.

Those who advocate the necessity of granting artificial intelligence legal personality have relied on several grounds, including:

- Analogy to the legal personality of legal persons. If we view the legal person as a subject of the law without a physical presence, then artificial intelligence systems (robots) will become like companies, provided that each robot is registered in a register equivalent to the commercial register of companies, and obtains legal personality from the time of registration. . Although companies have a legal personality, they do not exercise rights directly, but rather through their legal representative, and this role can undoubtedly be assigned to the robot's representative during registration.
- Based on the recommendation of the European Parliament, the European Parliament issued a decision on 02/16/2017² In which he requests the European Commission in Brussels to submit a proposal regarding civil law rules related to robots, with the aim of creating a special legal framework to regulate civil liability for autonomous intelligent robotic systems. He called on the Commission to recognize a special legal personality for robots, so that the most advanced autonomous robots can be treated as responsible electronic persons. Granting this electronic personality is limited to a robot that is capable of making an independent decision and that can interact independently with others.
- Based on the characteristics of artificial intelligence, as artificial intelligence systems are characterized by some characteristics that are close to human characteristics, in a way that gives them the right to direct recognition before the law. There is no doubt that the characteristics and attributes that characterize artificial intelligence systems include self-learning, the ability to store

¹ - Ahmed Mustafa Al-Dabousi Al-Sayed, the extent to which artificial intelligence can be granted a patent for its innovations. Can artificial intelligence be an inventor? In accordance with the provisions of UAE law, Dubai Judicial Institute Journal, Issue 13, April, 2021, p. 98.

² - Referenced in: Mahmoud Hassan Al-Sahli, The Basis of Civil Accountability for Autonomous Artificial Intelligence, Traditional Templates or a New Vision?, Law Journal for Legal and Economic Research, Faculty of Law, Alexandria University, 2022, p. 137.

information and data, independence in decision-making, adaptation to the surrounding environment, and the ability to create and innovate. All these qualities and characteristics were the motivation behind the trust on the part of the European legislator to grant it legal personality.

- Given the practical necessities and implications of granting legal personality, the necessity of granting artificial intelligence systems and recognizing them as persons before the law is the necessity of having someone bear responsibility for errors arising from the use of artificial intelligence, and this is what works to fill the legal gaps related to liability. Created by artificial intelligence systems. On the other hand, the recognition of the legal personality of these systems is to ensure that there is a person who is granted rights related to the things that he creates, such as intellectual property rights that artificial intelligence systems create. Artificial intelligence, for example, may be granted a patent right if it makes a specific invention, so it becomes Artificial intelligence is an inventor.

The Second section: Challenges of recognizing the legal personality of artificial intelligence

It seems that recognizing artificial intelligence systems as having legal personality is not an easy matter, but this idea faces many challenges and legal problems raised by those who reject this idea, and they base this on the following:

- The lack of full will and independence for artificial intelligence, as the robot remains not legally responsible for its actions but remains under the responsibility of a human, and therefore there is no independent legal personality for artificial intelligence yet. Although he has a degree of independence, all his actions still have a human origin and his actions are the result of this external will.

Likewise, saying that granting artificial intelligence legal personality requires that it have a will, which is something that artificial intelligence has not achieved, as it has not developed to the point of self-programming without human intervention, and therefore it cannot bear full responsibility for its actions.

- It is difficult to imagine some rights and obligations on artificial intelligence, as the issue of granting legal personality to artificial intelligence systems raises many legal problems and questions related to liability and intellectual property, for example. In addition, recognizing artificial intelligence systems as a legal personality requires granting them some rights that are difficult to recognize,

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such as eligibility, financial liability, and other rights. It is also difficult to impose obligations on them far from their programmer, such as the obligation to give something or refrain from doing something.

Therefore, legal personality is no longer limited to natural persons, but rather is enjoyed by other persons who carry out legal activity and enjoy an entity independent of the personality of the individuals who make up it. Accordingly, it can be said that the legislator recognizes and grants legal personality to any entity, even if it is not a human being, whenever necessary. This is what prompts us to say that it is possible for the legislator to recognize the legal personality of artificial intelligence as well.

Therefore, the matter requires the need to recognize its legal personality, due to several considerations, the most important of which is the necessity of having someone bear responsibility for the errors that result from the use of artificial intelligence applications, in addition to ensuring that there is a person who is granted rights related to the things that he creates, and in particular to protect him under property rights. Intellectual, such as granting him a patent if the artificial intelligence makes a certain invention, then he becomes an inventor.

There is no doubt that the recognition and legal personality of artificial intelligence aims to meet practical requirements, especially since we are in an important transitional phase, where it will no longer remain subject to the will of its human owner due to its ability to self-learn, think, and adapt to the environment and surroundings, and then make independent decisions.

The second requirement: effects of personalization of artificial intelligence

There are two important things to discuss if we talk about the legal personality of artificial intelligence. The first is the extent to which artificial intelligence can have intellectual property rights. The second matter, given that the personalization of artificial intelligence is possible and possible, perhaps the most important of which is independence and freedom to make decisions away from the will of the user, calls us to think about who bears responsibility from the legal side.

First section: The extent to which artificial intelligence can be granted intellectual property rights

If artificial intelligence is truly capable of creativity and innovation independently of humans, then it is necessary to consider granting it intellectual

property rights, and this undoubtedly cannot be achieved except by granting it the legal personality that qualifies it to acquire these rights.

Firstly: The extent to which artificial intelligence can be considered an author

The development taking place in artificial intelligence systems and robots in the field of intellectual creativity without absolute human intervention raises the question about the extent to which completed works can be considered intellectual works in the sense of copyright law, and the extent to which artificial intelligence can be considered an author, and then what are its privileges and rights if it is Who owns the copyright?¹

Jurists have differed in answering these questions. The first trend calls for granting artificial intelligence legal personality and considering it as an author, given the development of artificial intelligence techniques and its ability to simulate humans, as it has begun to perform creative works that rise to the rank of innovation, as the scales have turned and the need has arisen. Recognizing artificial intelligence as a legal personality so that it can enjoy the status of author, and thus be covered by the protection established under intellectual property laws. Since only authors of creative works can enjoy the legal protection stipulated in intellectual property law, some jurists called for² The term “author” must be redefined to include both human and non-human authors. There is no doubt that assigning copyright to non-human creators encourages the growth and development of creative and innovative works created by artificial intelligence systems.

So some saw³ A solution to the problem of the absence of a natural author is to recognize the legal personality of artificial intelligence, so that its creations enjoy the legal protection stipulated under the Copyright Law, in order to avoid them falling into the public domain and losing their value. As long as a robot or artificial intelligence can create independently of a human, it can create its own works, and therefore there is nothing preventing it from being recognized as a legal person, granting it the status of author and ownership of its rights.

¹ - Fawzia Amroush, Copyright in the Shadow of Artificial Intelligence, First Forum, Artificial Intelligence: A New Challenge for Law, Annals of the University of Algiers, special issue, November 2018, p. 165.

² - kalin Hristov, Artificial intelligence and the copy right dilemma, The journalof the Fraklin Pierce centre for intellectual property, volume 57, number 3, 2017, p. 441.

³ - Fawzia Amroush, previous reference, pp. 175, 176.

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In contrast, some did not welcome the idea of recognizing the legal personality of artificial intelligence and considering it creative independently of humans, as it always needs human intervention in one way or another, such as providing it with data, making the necessary updates, etc., and this is what makes creativity always linked to humans, even if he does not interfere in any way. Directly into the creative process.

Also, recognizing the legal personality of artificial intelligence, such as that granted to a legal person, does not make it an author, because the legal person is not considered an author except as an exception under copyright law¹ This exception aims to protect the interests of the person for whom the work was completed.

Artificial intelligence systems also need an incentive to be creative, as they lack awareness, not to mention that they have no way to reap the economic benefits derived from the copyright protection that imposed that protection in the first place. Intellectual property rights also require the necessary awareness and awareness to entitle them, protect them, and bear responsibility for them. These rights are only granted to humans and no one else.

Secondly: The extent to which artificial intelligence can be considered an invention

In the current era, robots and artificial intelligence systems can create inventions similar to those created by humans. Then the question arises: Can artificial intelligence systems have the right to patent the works that are produced by these systems?

Some see² Traditional patent law has become outdated, unworkable, and irrelevant with regard to inventions created by AI systems. The legislator must rethink the current patent law and replace it with tools that are more applicable in the new era of advanced and independent artificial intelligence systems on inventions that are created without the help of humans.

There is no doubt that artificial intelligence technologies benefit from the legal rights established under the patent, which requires legislative intervention and the amendment of legal texts that limit the granting of patents to humans only, as artificial intelligence has the enormous ability to create, innovate, and invent without human intervention. Therefore, the concept of invention is not necessarily linked to the human element, but instead, it is linked

¹ - Article 13 of Order . 03/05 of July 19, 2003 relating to copyright and related rights.

² - W. Michael Schuster, Artificial intelligence and patent ownership. Washington and Lee law review, Volume 75, issue 4, article 5, 2019, p.1947.

to the functional goal of allowing the possibility of obtaining a patent for any new creative idea.

In the other direction, those who refuse to recognize artificial intelligence systems as having legal personality believe that the rules for registering patents require that the innovation or invention be the work of a natural person, i.e. a human, which prevents the artificial intelligence from being able to enjoy the status of an inventor, and also prevents it from acquiring its creativity. The quality of the creative work to be protected. Artificial intelligence, no matter how independent it is, cannot have human imagination, feeling, and awareness that make it creative and think.

Also, even if artificial intelligence contributes significantly to innovative science, it does not necessarily play a fundamental role in the conception of invention. Rather, artificial intelligence systems and robots need input from humans to generate creative outputs, especially if it controls the innovative process by giving appropriate instructions. Artificial intelligence is human-made and cannot be considered anything more than a software program.

Extrapolating the above opinions, as long as artificial intelligence has become in its advanced form characterized by independence and self-learning, and the ability to create and innovate independently of humans, that is, without the intervention of the human element, then it cannot be viewed as a mere machine in the hands of humans, but rather He becomes human and acquires the description of an inventor. All that is needed is legislative intervention in order for the legal rules to keep pace with this tremendous development in the modern era, including intellectual property rights, the most important of which is the patent.

The second section: Civil liability for damages to artificial intelligence

It is known that civil liability is the focus of civil law, and is considered one of the most important topics due to its connection to most of the rights that people deal with. Civil liability for damage to artificial intelligence is divided into: contractual liability, which is liability based on the contract, and tort liability if damage occurs from artificial intelligence outside the contractual relationship.

Firstly: Contractual responsibility in the field of artificial intelligence

According to the correct law, when parties breach their contracts, or when they conclude invalid contracts, the other party has the right to be released from its obligation, in addition to its right to demand compensation as a result of

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the other party's failure to implement its obligation. Breach of contract in the field of artificial intelligence has many forms:

- The seller's failure to deliver the sold item in accordance with the terms and specifications of the contract. Here, contractual liability arises when the robot does not perform the performance agreed upon in the contract, even if this does not result in damage or injury¹.
- If a defect appears in the sold item that reduces its value or is not suitable for what it was prepared for and contracted for, the seller must guarantee this. For a defect that requires a warranty when purchasing an artificial intelligence system, this defect must be unknown to the buyer and not apparent, and that it be present in the item sold before the sale. Accordingly, contractual liability in the field of artificial intelligence is based on the theory of guaranteeing hidden defects, or the obligation to deliver a conforming product.

Secondly: Tort liability in the field of artificial intelligence

It is known that tort liability is based on the breach of an obligation originating in the law, and there is usually no contractual relationship between the creditor and the debtor or between the injured person and the one who caused the damage, and the basis of liability here is error. This responsibility can be applied to those responsible for damages resulting from the use of artificial intelligence, and it is based on three pillars: error, damage, and the causal relationship between them.

The truth is that applying the rules of tort liability to an artificial intelligence system may face many difficulties and challenges, the most important of which are:

- The existence of identifying the legal or natural person responsible for the damage resulting from the actions of artificial intelligence. In fact, this matter may seem difficult, if not impossible, in some cases, due to the increasing independence of artificial intelligence, which makes it difficult to determine the basis of that responsibility.
- In cases where artificial intelligence makes independent decisions, traditional rules are not sufficient here to establish legal responsibility for the damage of this system, because it is difficult to determine the party or person who caused the damage, and thus it is difficult to establish a causal relationship between the error and the damage.

¹ - Marwa Salah El-Din Muhammad, The Legal System for E-Commerce Contracts, Arab Knowledge Bureau, Cairo, 2021, p. 17.

Third: Applications of objective responsibility to artificial intelligence

Applying the rules of objective liability to artificial intelligence requires investigating the validity of considering it a thing to which the rules of responsibility for guarding things apply, or a product to which the rules of liability resulting from defective products apply.

A)- Artificial intelligence and the responsibility to guard things:

The responsibility to guard things is an objective responsibility that the thing causes harm to others without requiring a mistake, and that the responsible person has the capacity of guard. It is the authority to use, manage and control.

It is difficult to apply the idea of the responsibility of guarding things to guarding a robot due to the self-learning of the machine, the inability to control it whether on or off, it does not know what is going on inside the smart program, and it is not possible to predict the harmful actions of smart devices. Also, the idea of guarding is not compatible with the smart system, and the producer, designer, and owner do not have the status of guard, because he does not have the authority to use, direct, and monitor the smart system¹.

B)- Artificial intelligence and liability on products sold:

This liability is based on the concept of defect, which is the inability of the product to provide safety (safety). In objective liability, it is sufficient to prove the defect in the product or the failure to meet safety and security specifications, and it is a liability that exists regardless of the existence of a contract. Although the rules of liability for defective products are the most widely used in artificial intelligence cases, they address, despite the shortcomings of the material aspect of this intelligence represented by the physical carrier of the intelligence as a product, while the moral aspect of this intelligence represented by the software and algorithms is still outside the framework Legal.

Applying product liability to artificial intelligence faces major challenges because it cannot be controlled because the element of risk is embedded in its function, and these are the reasons that make artificial intelligence a source of public risk. The difficulty of applying objective product liability is also due to the fact that it is difficult for the plaintiff to prove that

¹ - Humam Al-Qusi, The Problem of the Person Responsible for operating the robot (the impact of the human Representative Theory on the Feasibility of Law in the Future) - A prospective analytical study into the rules of European civil law related to robots, Jill Magazine, Jill Journal of In-depth Legal Research, Issue 25, May 2018, p. 85.

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there is a defect in artificial intelligence products and that he can learn from his experience and make independent decisions, and this requires reconsidering the rules of product liability to suit the specificity of artificial intelligence.

C)- Consumer protection in light of artificial intelligence applications:

The consumer is the natural or legal person who purchases a good or service with the intention of benefiting from it¹.

Consumer protection laws aim to define general rules that are keen to protect the consumer as the weak party in the contractual bond, such as the obligation to conform goods and services to the required specifications. Scientific development has resulted in products, goods and services that are predominantly complex, changing their nature and the nature of the damage they cause to the consumer. The latter finds himself in a contractual relationship that lacks balance, so an urgent need for consumer protection has emerged in light of the increasing use and use of artificial intelligence systems.

Consumer laws have stipulated the duties of the professional towards the consumer, in order to provide the greatest possible protection. The most important of these obligations is to provide the consumer with basic information about assessing the risks associated with the use of the service or commodity, and to indicate the appropriate way to use these goods and services, as well as warning of the dangers of improper use. Therefore, smart application producers must issue accurate and detailed warnings about the precautions that the user must take. Taken, in particular regarding the risks and capabilities that allow AI systems to develop new behaviours.

With the entry of artificial intelligence systems into various fields, and the damage or crimes they can cause, artificial intelligence systems must be developed in a way that prevents them from causing damage or committing crimes, or at least reduces them, as well as updating comparative legislation and addressing it by regulating these matters. The legal phenomenon, which has invaded economic, social and even political life, to determine who bears responsibility when artificial intelligence systems commit an act that causes harm or a crime, as humanity has produced, during the past three decades, more information than it has produced throughout its previous history. This also adds to the danger of Artificial intelligence systems are now able to predict what will happen in the future.

¹ - Muhammad Hussein Abdel-Al, The Concept of the Weak Party in the Contractual Bond, A Comparative Study, Dar Al-Nahda Al-Arabiya, Cairo, Egypt, 2007

Conclusion :

At the conclusion of this study on the legal regulation of artificial intelligence, we reached a set of findings and recommendations, the most important of which are as follows:

Firstly: results

-Artificial intelligence, with its various applications and uses, is the backbone of daily life in the modern era. It has become a tangible and indispensable reality in light of the tremendous technical development that the entire world is witnessing now.

-Artificial intelligence aims to understand the nature of human intelligence through the work of computer programs capable of simulating human behavior characterized by intelligence.

- Legal personality is not linked to human capacity, but rather is granted by the legislator to any entity, whenever necessities and practical requirements so require.

-Practical necessities require that artificial intelligence be granted legal personality, due to the characteristics it possesses that are close to human characteristics, the most important of which is acting independently from humans, the ability to make decisions, self-learning, the ability to interact with others, and adapt to the environment surrounding it.

-The necessity of granting artificial intelligence systems legal personality is due to at least two important reasons. The first is the necessity of having someone bear responsibility for errors arising from the use of artificial intelligence. The second reason: is to ensure that there is a person who is rewarded and granted rights related to the things he creates, such as intellectual property rights created by artificial intelligence systems.

Secondly: recommendations

- The necessity of the legislator recognizing and granting legal personality to independent artificial intelligence.

-Granting and recognizing legal personality to artificial intelligence systems requires completely modifying the legal structure in order to accommodate the full rights of an independent, intelligent person.

-The legislator must establish the legal framework regulating the work of artificial intelligence and control the behavior of companies that manufacture and use robots.

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List of sources and references:

Firstly: Legal texts

- 1- Order No. 03-05 of July 19, 2003 containing copyright and related rights, Official Gazette of July 23, 2003, No. 44.
- 2- Law No. 05-10 of June 20, 2005 amending and supplementing Order No. 75-58 containing the Algerian Civil Code, Official Gazette No. 44.
- 3- Order No. 05-02 of February 27, 2005 containing the Algerian Family Code.
- 4- Law No. 18-05 of May 10, 2018 relating to electronic commerce, Law No. 28 of May 16, 2018.

Secondly: articles

- 1-Marwa Salah El-Din Muhammad, The Legal System for E-Commerce Contracts, Arab Knowledge Bureau, Cairo, 2021.
- 2-Muhammad Hussein Abdel-Al, The Concept of the Weak Party in the Contractual Bond, A Comparative Study, Dar Al-Nahda Al-Arabiya, Cairo, Egypt, 2007.
- 3-Ahmed Mustafa Al-Dabousi Al-Sayed, the extent to which artificial intelligence can be granted a patent for its innovations. Can artificial intelligence be an inventor? In accordance with the provisions of UAE law, Dubai Judicial Institute Magazine, Issue 13, April, 2021.
- 4- Asmaa Belilita, Legal and Regulatory Enshrinement for Artificial Intelligence in Algeria, International Journal of Artificial Intelligence in Education and Training, University of Algiers 1, 2022.
- 5- Mustafa Abu Mandour Musa Issa, The adequacy of the general rules of civil liability in compensating for artificial intelligence damages, a comparative analytical study, Journal of the Faculty of Law, Damietta University for Legal and Economic Studies, Issue 5, January, 2022.
- 6- Fawzia Amroush, Copyright in the Shadow of Artificial Intelligence, First Forum, Artificial Intelligence: A New Challenge for Law, Annals of the University of Algiers, special issue, November 2018.
- 7- Mahmoud Hassan Al-Sahli, The basis of civil accountability for autonomous artificial intelligence, traditional templates or a new vision?, Law Journal for Legal and Economic Research, Faculty of Law, Alexandria University, 2022.
- 8- Humam Al-Qusi, The Problem of the Person Responsible for Operating the Robot (The Impact of the Human Representative Theory on the Feasibility of the Law in the Future) - A prospective analytical study in the rules of European civil law related to robots, Jallet Jill, Jel Journal of In-depth Legal Research, Issue 25, May 2018.

9- Humam Al-Qusi, The theory of the virtual personality of the robot according to the humanistic approach - a fundamental, analytical, forward-looking study in Kuwaiti and European civil law, Generation of In-depth Legal Research Journal, Volume Four, Issue 35, September 2019.

10- Omar M. AL- Muhammedi, The basis of civil liability arising from damages of intelligent robots "Comparative Analytical Study", journal of university for law and Political Science, 2023 March- 1 Issue- 13 Volume

11- kalin Hristov, Artificial intelligence and the copy right dilemma, The journal of the Fraklin Pierce centre for intellectual property, volume 57, number 3, 2017.

12-W. Michael Schuster, Artificial intelligence and patent ownership. Washington and Lee law review, Volume 75, issue 4, article 5, 2019.