

The Impact of Artificial Intelligence Technologies on the General Theory of Contract

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Abstract:

Artificial intelligence is one of the most prominent manifestations of technological development in the modern era, as it has become a fundamental pillar in various aspects of economic and social life, thanks to its ability to make decisions and self-implement. The use of these technologies has extended to the legal field, especially in the field of concluding contracts, which has led to the emergence of what is known as smart contracts that are concluded and implemented through advanced technical systems without direct human intervention. These contracts posed a real challenge to the traditional model of contracting, as they created new mechanisms that were unfamiliar within the general theory of contracts. Despite their advantages, such as accuracy, speed, and reduced risk, these contracts also raise multiple legal issues, particularly with regard to the suitability of traditional civil legislation and its ability to accommodate this emerging type of contractual relationship.

Key words: artificial intelligence, traditional contract, smart contract, smart systems, automated execution.

الملخص:

يشكل الذكاء الاصطناعي أحد أبرز مظاهر التطور التكنولوجي في العصر الحديث، حيث أصبح ركيزة أساسية في مختلف مناحي الحياة الاقتصادية والاجتماعية، بفضل قدرته على اتخاذ القرار والتنفيذ الذاتي، وقد امتد استخدام هذه التقنيات إلى المجال القانوني لاسيما في مجال إبرام العقود مما أدى إلى ظهور ما يعرف بالعقود الذكية التي تبرم وتنفذ عبر أنظمة تقنية متقدمة دون تدخل بشري مباشر، وقد شكلت هذه العقود تحدياً حقيقياً للنموذج التقليدي للتعاقد إذ أوجدت آليات جديدة لم تكن مألوفة في نطاق النظرية العامة للعقد، ورغم ما تتميز به هذه العقود من مزايا كالدقة والسرعة وتقليص المخاطر، فإنها تثير في المقابل إشكالات قانونية متعددة، خاصة فيما يتعلق بمدى ملاءمة التشريعات المدنية التقليدية وقدرتها على استيعاب هذا النمط المستحدث من العلاقات التعاقدية.

الكلمات المفتاحية: الذكاء الاصطناعي، العقد التقليدي، العقد الذكي، الأنظمة الذكية، التنفيذ الآلي.

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1-Introduction:

The contract is one of the most prominent sources of obligation in civil law. It is essentially based on the principle of the authority of will, which entitles individuals to establish their contractual relationships and determine their content within the limits established by law. The Algerian legislator has regulated the provisions of the contract within the Civil Code¹, particularly in Articles 54 to 119, specifying its basic pillars of consent, place, and cause, in addition to the conditions for the validity of these pillars, most notably capacity.

However, the rapid digital transformation that the world is witnessing, and the accompanying remarkable development in artificial intelligence technologies and smart systems, has created a new contractual reality in which humans are no longer the only party involved in the contractual process. Advanced technical applications have emerged, including smart contracts that are based on programming obligations and implementing them automatically when pre-determined conditions are met, which has given the contractual relationship a different character from the traditional model.

This shift raises a delicate legal problem related to the extent to which the general theory of contract in Algerian civil law is able to accommodate these technical developments, and the extent to which traditional rules are sufficient to control contractual relations in which the contract is implemented without direct voluntary intervention during the implementation phase.

The importance of this topic lies in its status as a modern topic that continues to raise numerous legal questions, especially in the absence of explicit legislative texts regulating smart contracts and the reliance of civil law on traditional concepts that do not take into account rapid technological development. This highlights the need to reinterpret or develop some legal principles in line with these transformations.

Based on this, this research aims to study the extent to which traditional rules are able to accommodate the transformations brought about by the use of artificial intelligence technologies in the contract formation and implementation stages.

Hence, the following problem arises: To what extent can the general theory of contract in Algerian civil law accommodate the transformations resulting from the use of artificial intelligence technologies in concluding contracts? What are the most prominent legal challenges that this new reality poses to the pillars and effects of the contract?

To answer this problem, the descriptive analytical approach was adopted by analyzing the relevant legal texts in Algerian civil law, using jurisprudential interpretations. We divided this study into two sections. The first section was devoted to studying the impact of artificial intelligence on contract formation, while the second section addressed the impact of artificial intelligence on contract effects

¹ Ordinance No. 75-58 of 26 September 1975 on the Civil Code, as amended and supplemented, JORA No. 818 of 30 September 1975

2- The impact of AI on contract formation :

The rapid development of artificial intelligence technologies has led to fundamental transformations in the field of legal transactions, especially in the stage of contract formation, which is the basic stage in which the existence of the contractual relationship is determined. Artificial intelligence has begun to intervene in the expression of will, the formulation of contractual terms, and even in the conclusion and implementation of the contract, which requires a reconsideration of the extent to which this new reality is consistent with the traditional rules of the general theory of the contract. This intervention raises multiple legal issues, primarily related to the element of consent as the essence of the contract, as well as the elements of subject matter and cause. Accordingly, we will address the element of consent in light of the interaction between human will and intelligent systems. This is in the first requirement, while in the second requirement we will address the subject matter and cause in the digital contractual environment.

1.2- the satisfaction pillar in light of the interaction between human will and intelligent systems :

Consent is the essential element of a contract. A valid contract can only be concluded by the agreement of two free wills that aim to produce a specific legal effect. However, the introduction of intelligent systems into the contracting process raises questions about the concept of will, the limits of its expression, and the extent to which it can be attributed to the contracting party in light of the increasing reliance on automated algorithms. Accordingly, through this requirement, we will address the existence of consent and the effect of artificial intelligence on it in the first section. Then to the condition of its validity in the second section.

1.1.2- The impact of AI on the existence of consen :

A contract, as it is known, is the agreement of two or more wills to create a specific legal effect, whether this effect represents the creation, transfer, modification or termination of the obligation².

Consent is the essential element of the contract, and the foundation of consent is the will, as it is considered an essential element in consent. It is a matter hidden in the soul and is serious when it comes from a person qualified to contract and who has the intention of arranging a legal effect. a Consent is not achieved except by the coincidence of two wills to create a specific legal effect.³

However, the intervention of artificial intelligence technologies in the contract conclusion stage raises a fundamental question about the extent to which this consent is achieved, especially when the will or direction is expressed through intelligent systems capable of proposing or making decisions automatically, and also whether this intervention touches on the essence of the consent element or remains merely a technical means.

² زكريا سرايش، الوجيز في مصادر الالتزام، العقد والإرادة المنفردة، ط 02، دارهومة، الجزائر، 2014، ص 20.

³ زبيدة البلوشي، مصادر الالتزام في القانون المدني. عمان: دار الأجيال 2020، ص72

The impact of AI on contract formation is evident through smart contracts based on blockchain technology, as well as automated contract creation tools. As for smart contracts, they contain programmed conditions that are automatically implemented when they are achieved, which reduces reliance on traditional intermediaries. As for automated contract creation tools, they rely on artificial intelligence algorithms to formulate, review and create contracts. Despite the speed, transparency and efficiency that these technologies provide, they raise legal problems, the most important of which are the validity and enforceability of contracts, and the extent of the intention to establish a legal relationship in the absence of direct human intervention⁴.

A fundamental legal concern is ensuring the validity and enforceability of contracts concluded with AI participation, as traditional contract law principles may not seamlessly align with the nuances of smart contracts. The lack of a human intermediary raises questions about the intention to establish legal relationships, which is an essential element in the formation of contracts.⁵

In an AI contract, the intelligent agent is the one who formally expresses the will of the contractor. AI is a tool designed to express the will of its user. Although "deep learning" techniques allow AI to choose contract terms more independently, the way these devices choose them is determined in advance by the designers. This indicates that concluding a contract, as an intellectual process, stems from the work of the artificial brain. Which must reflect the will of its user⁶.

The offer and acceptance in smart contracts express the will and satisfaction of the parties. However, this will is not disclosed in a traditional form, but is stored in a protocol using special software and formulated in a peer-to-peer format. That is, if the conditions set by the two parties and all events match and are consistent, the software implements the contract itself, which results in direct effects.⁷

However, the use of artificial intelligence systems in the contract formation stage does not lead to the cancellation of the offer or acceptance in their legal meaning, but only changes the means of expressing them. Artificial intelligence works according to algorithms and standards that are determined by humans in advance, which makes it a technical tool for implementing a previous human will, and not an independent source of legal will. Accordingly, the offer and acceptance issued through an intelligent system is legally attributed to the person who created or operated this system.⁸

⁴ Meenu, The Impact of Artificial Intelligence on Contract Law : Challenges and Opportunities, Indian journal of Law, Vol 2, N 1, Jan-Feb 2024, p 26.

⁵ Meenu, The Impact of Artificial Intelligence on Contract Law : Challenges and Opportunities, Indian journal of Law, Vol 2, N 1, 2024

⁶ عاصم سامي خميس حامد الزياد، التعبير عن الإرادة في العقود المبرمة بواسطة الذكاء الاصطناعي، مجلة الحقوق للبحوث القانونية والاقتصادية، كلية الحقوق، جامعة الإسكندرية، مجلد 02، العدد 01، جويلية 2025، ص 31.

⁷ د. عبد الستار أبو غدة، العقود الذكية والبنوك الرقمية والبلوك تشين، مقدم لندوة البركة 39، 2019 م.

⁸ Meenu, op cit p 26..

Some comparative jurisprudence believe that artificial intelligence, no matter how advanced it is, does not have a personal legal will, but rather remains subject to the will of the human user. This means that contracting through intelligent systems does not go beyond the scope of the general theory of contracting, as long as the final contractual decision is up to the human, whether this is done directly or through prior preparation of contractual standards⁹.

2.1.2- The impact of AI on the conditions for the validity of consent :

The existence of a mutual consent between the contracting parties alone is not sufficient to produce its effect. Rather, this mutual consent must be valid. For a mutual consent to be valid, the traditional rules of contracts require that it be issued by a qualified person.

Eligibility is defined as a person's ability to engage in legal actions that would earn him a right or impose obligations on him in a manner recognized by law. The basis of eligibility is discrimination ,¹⁰ Whoever lacks discrimination due to his young age, dementia, or insanity is not qualified to exercise his civil rights.¹¹

In the context of contracting using AI, a problem arises related to the extent to which the parties are actually able to understand and control automated decision-making mechanisms, which raises questions about the validity of the contracting party's satisfaction through an intelligent system without a real awareness of the impact of algorithms in determining the content of the contract, which may open the way for challenging the validity of the agreement.¹²

Contracting through smart systems also poses an additional problem related to the legal age, as it is difficult to verify because even in the presence of a monitoring program, the age of the contractor cannot be confirmed, as this can be circumvented by many programs that are used Therefore, it is difficult to verify the availability of capacity on both sides of the artificial intelligence contract, which raises many problems, such as concluding a contract that lacks capacity and lack of behavior, and the extent to which the offer and acceptance are valid and free of defects of will, and that they are issued by a legally valid will¹³ Expressing will through a smart application or digital platform alone is not enough to legitimize a mutual

⁹ Rithanya M, The Impact of AI in Contract Formation and Enforcement, 4 International Journal of Law Management & Humanities, vol 7, n 4, 2024, p

¹⁰ محمد صبري السعدي، الواضح في شرح القانون المدني، النظرية العامة للالتزامات دراسة مقارنة في القوانين العربية، طبعة مزينة ومنقحة، دار الهدى، الجزائر، 2012، ص 153.

¹¹ Article 42 of the Algerian Civil Code.

¹² Michel Martin, "Nullité cintractuelle par intelligence artificielle : les nouvelles zones grise juridique en 2025", juridique service, disponible en ligne : <https://www.juridiqueservice.fr/nullite-contractuelle-par-intelligence-artificielle-les-nouvelles-zones-grises-juridiques-en-2025/> consulté le 16 janvier 2026.

¹³ محمد إبراهيم عبد المنعم مرسى، مدى ملائمة عقود الذكاء الاصطناعي المبرمة عبر تقنية البلوك تشين لقانون العقود، مجلة البحوث الفقهية والقانونية، العدد 42، يوليو 2023، ص 944، 945.

consent if it is issued by a person who has not reached the legal age for contracting. This problem becomes more acute in automated contracting, where the smart system does not distinguish between minors and adults, which exposes the contract to the risk of invalidation due to lack of capacity, despite the achievement of affirmation and acceptance¹⁴.

2.2- the subject and the reason for AI contracts :

The impact of AI is not limited to the satisfaction aspect, but extends to the remaining aspects of the contract, namely the subject and the reason, as they play a fundamental role in determining the content of the obligation and ensuring its legitimacy. Accordingly, we will address, through this requirement, the subject aspect in contracts based on smart systems, then the reason aspect

1.2.2- The problem of determining the place of obligation in contracts based on smart systems :

The place is the second pillar of the contract, and it is the thing that obligates the debtor to give it, or to do it, or to refrain from doing it. The place must be possible, not impossible, and must be specific or assignable, and it is also required that the place be legitimate and not contrary to public order¹⁵.

Contracting using artificial intelligence faces a legal challenge related to the issue of obligation. Contracts based on artificial intelligence, especially smart contracts, pose a problem related to determining the subject of the obligation, as implementation is carried out using information programs that rely on pre-programmed algorithms, without direct human intervention in the implementation phase.

In this context, some jurisprudence holds that a smart contract is not a contract in the strict legal sense, but rather an information program used to conclude and implement contractual obligations¹⁶, It follows that the subject of the obligation cannot be derived from the code alone, but rather the content of the original agreement between the parties must be referred to to determine the nature of the performance subject to the obligation and the extent of its compliance with the legal conditions.

As for the cash price as an element of the subject in compensation contracts, the Algerian legislator has stipulated that it be specific, and if the subject of the obligation is money, the debtor is obligated, to the extent of its number mentioned in the contract, to meet the payment deadline¹⁷, Here a special problem arises in contracts based on AI when the price is determined by digital currencies regarding the legitimacy of this performance, as

¹⁴Le Consentement des mineurs dans les contrats numériques, Village de la justice, disponible en ligne : <https://www.village-justice.com/articles/consentement-mineurs-contrats-numeriques,40112.html> consulté le 17 janvier 2026.

¹⁵محمد صبري السعدي، المرجع السابق، ص 204.205.

¹⁶ Christoph Muller, Les Smart Contracts en droit des obligations suisse. Neuchâtel, Université de Neuchâtel, p 19.

¹⁷ Article 95 of the Algerian Civil Code

relying on means of payment that are not recognized by legislation may be reflected in the validity of the obligation. In this context, we find that Algerian legislation has prohibited dealing in digital currencies such as Bitcoin, USDT, or other virtual assets, pursuant to Article 6 of the Anti-Money Laundering Law.¹⁸

2.2.2- The reason and impact of algorithmic analysis on the contractual purpose :

According to the general rules, the reason means the goal that the contracting party seeks to achieve behind his pledge to abide by it. The validity of the reason must be legitimate, otherwise the contract will be invalid. Therefore, the reason may not be contrary to public order or morals¹⁹.

However, as for the reason, in addition to the fact that it must exist and be legitimate, i.e. not contrary to public order or public morals, and in addition to the fact that the reason for the obligation in blockchain contracts is the commitment of the other party, considering that these contracts are considered binding contracts for both sides, the problem revolves around the reason for the contract in its entirety in the case of contracts concluded via the blockchain platform, where transactions are carried out under pseudonyms²⁰.

3- The impact of AI on the effects of the contract :

The impact of AI is not limited to the contract formation stage, but extends to include the post-contract stage, which is the stage of arranging the legal effects resulting from it. The impact of the contract is not limited to creating mutual obligations between the parties, but also includes how to implement them, the limits of the binding force of the contract, and the responsibility that results from breaching them.

The increasing reliance on intelligent systems in contract execution has created a new reality that requires a reconsideration of some of the traditional concepts on which the general theory of contracts is based, especially the principle of binding force, good faith in execution, and the civil liability system. Based on this, we will shed light through this research on the impact of artificial intelligence on contract execution and then identify the civil liability arising from breach of it in a contractual environment that relies on intelligent systems.

1.3- Implementing the contract based on smart systems :

The basic principle of the contract, according to the general rules, is that it is the law of the contracting parties. Whenever it is valid and fulfills all its pillars and conditions of validity, it becomes binding on its parties and therefore must be implemented according to what it includes and in good faith. However, the introduction of smart systems in the contract

¹⁸ Law No. 25-10 of Muharram 28, 1447, corresponding to July 24, 2025, amending and supplementing Law No. 05/01 of Dhu al-Hijjah 27, 1425, corresponding to February 6, 2005, relating to the prevention and combating of money laundering and the financing of terrorism

¹⁹ زبيدة البلوشي، المرجع السابق، ص78.

²⁰ Melanie Labban, From Reality to Virtuality: The General Theory of Contracts in the Face of the Artificial Intelligence Challenge, *Revue juridique l USEK*, n special, 2025, p11 .

implementation phase has added a new character to this process, as implementation has become automated in some cases without direct human intervention. This reality raises legal issues related to the extent to which self-execution is consistent with the principle of binding force of the contract and the limits of its respect for the requirements of justice.

1.1.3- Self-execution of the contract and the principle of binding force :

Once the terms of the contract are agreed upon and formulated in encrypted digital form, they are implemented automatically without human intervention, and its effects result automatically once it is included in information applications and does not require its parties to take specific actions.²¹

The automatic contract execution function based on artificial intelligence and blockchain technologies makes it easy to manage contractual or legal terms, reducing the risk of human error in contract execution and disputes related to proof of execution²², thus avoiding the risk of causing contract termination. Therefore, the parties resort to automated contract execution, as it contributes to reducing expenses and accurately defining obligations, which achieves safe contract execution without delving into legal disputes related to non-performance of obligations. This is when the clauses in the main contract are specified by both parties. However, if it comes to obligations outside the terms of the contract, automated contract execution may not achieve these advantages²³.

Given the difficulties associated with amending and implementing these contracts, it must be emphasized that these new tools do not allow for amendments due to their immutable nature.²⁴

However, despite the technical binding force that this type of implementation provides, it remains limited from a legal standpoint, as these contracts lack flexibility and do not allow for amendment, correction or termination, and do not accommodate the general legal principles on which contract theory is based. On top of this is the principle of good faith contained in Article 107 of the Civil Code or the emergency circumstances and force majeure stipulated in Article 176 because it operates according to a purely automated logic based on implementing pre-determined conditions without taking into account the intention of the parties or unexpected developments²⁵.

²¹ محمد إبراهيم عبد المنعم مرسى، المرجع السابق، ص 939.

²² MESSAOUD-BOUREGHDA Narimene, Smart Contracts as a challenge to contract law, Journal of legal and political thought Volume 09 N° 01 University of Laghouat, (2025), P1176.

²³ إبراهيم محمد يوسف عبيدات، سليم سمير سليم خصاونة، العقد الذكي وانعكاساته على النظرية العامة للعقد، دراسة تحليلية، مجلة الحقوق والعلوم السياسية، الجامعة اللبنانية، كلية الحقوق والعلوم السياسية والإدارية، العدد 39، 2023، ص09.

²⁴ ZERROUK Imene Fatima Zohra, Analyse juridique du smart contract, Journal OF LEGAL STUDIES, e Laboratory of Sovereignty and Globalization - Yahia FARES University of MEDEA, Vol 09, n 2, 2023, P 796

²⁵ MESSAOUD-BOUREGHDA Narimene, Ibid , p 1176

2.1.3- Force Majeure and Limits of Implementation in Contracts Based on AI:

Relying on intelligent systems to execute contracts, especially through self-execution mechanisms based on algorithms and blockchain technologies, raises legal problems related to the application of the theory of force majeure and the limits of binding execution. The intelligent system, by its technical nature, executes obligations as soon as their conditions are met, without the ability to assess emergency or unexpected facts. However, this poses real difficulties when facing exceptional circumstances such as force majeure. Because the automated system does not have discretionary mechanisms to deal with these legal emergencies²⁶

Despite the efficiency and speed of implementation achieved by these contracts, they contradict the traditional philosophy of obligation theory, which is based on flexibility and the possibility of a judge intervening to restore contractual balance in the event of unexpected events. The inability of the smart contract to be modified or suspended makes the application of force majeure or emergency circumstances a complex issue, and limits the effectiveness of the general rules established to protect the debtor²⁷.

Therefore, there is a need to integrate legal or technical mechanisms that allow automatic implementation to be stopped or modified when compelling circumstances arise, to ensure the achievement of contractual justice.

2.3- civil liability in light of AI intervention :

AI is purely a tool whose existence only manifests itself through its designers, users, or contractors. The AI is therefore neither a holder of rights nor of legal obligations: in other words, it cannot respond to potential mistakes, errors, negligence, and discrimination it causes. Responsibility must therefore be sought among the people who design, deploy, use or order the use of AI. It is advisable to carry out a work of identification of the actor who exerted a determining influence on the decision or on the decision-making process that caused the fault or discrimination operated by the AI.

1.2.3- Determining Liability for Error Resulting from AI:

The liability resulting from errors in various advanced AI technologies in the field of concluding and implementing smart contracts can be divided into:

Product liability for AI damages: According to the text of article 140, paragraph 1, of the Civil Code, the producer is responsible for compensating the victim for the damage caused by their products defective, whether or not there is a contractual relationship between

²⁶ L'intelligence artificielle dans les contrat : quelles implications juridiques pour les entreprises, Le Mag Juridique, 02 janvier 2025, en ligne <https://www.lemag-juridique.com/categories/societes-15581/articles/lintelligence-artificielle-dans-les-contrat-quelle-implications-juridiques-pour-les-entreprises-8444.htm> consulté le 15 janvier 2026

²⁷ La force majeure en droit : critères d'acceptation et jurisprudence, juridique pratique , en ligne <https://www.juridiquepratique.fr/la-forse-majeure-en-droit-criteres-dacceptation-et-jurisprudence/> consulté le 15 janvier 2026.

them²⁸.

If the conditions of the producer's civil liability, as prescribed by law, are fulfilled, the victim is entitled to compensation. This is assessed depending on the damage suffered in order to ensure adequate compensation for the damages, it is recognized that harm constitutes the central element of civil tort⁴, this one based on the victim's right to obtain fair compensation for the total damage suffered, When addressing the issue of compensation, it is essential to focus on its main object, namely the damage. Therefore, it will be appropriate, from this perspective, to examine the damage that can be subject to repair as part of the responsibility of the producer. ²⁹.

The civil liability of the "operators": More specifically, it would target on the one hand the 'front-end operator', a natural or legal person who exercises some control over a risk associated with the operation and functioning of the AI system and benefits from its operation; on the other hand, the upstream operator, natural or legal person who, on a continuous basis, defines the characteristics of the technology and provides data as well as an essential upstream support service and therefore also exercises some control over the risk related to the operation and functioning of the AI system, The operator is therefore not the user of the AI, even if a person can combine both qualities. More generally, the front-end operator is the one who globally decides how to use the system while the upstream operator has a higher level of control over operational risks. As a result, the lawyer or wealth manager who relies on AI to propose a strategy will generally not be an operator and therefore can only incur responsibility if they participate through their own fault in the harmful event. Data brokers who are not involved in the development of the algorithm will also not be operators³⁰.

- **Responsibility of the system guardian in AI:** Applying the system of responsibility for doing things to artificial intelligence systems raises a fundamental problem related to identifying the guard, given that this system assumes the presence of a person who has use, control, and direction. However, AI systems, due to their ability to be autonomous and self-evolving, weaken the element of actual control on which the traditional idea of guarding is based and that AI may be partially or completely freed from the authority of the person supposed to be the guard, which makes the concept of control unclear, and leads to the difficulty of assigning responsibility according to the classical model of guarding To confront this difficulty, distinguish between: Structure keeper: Often the manufacturer or designer,

²⁸Ordinance No. 75-58 of 26 September 1975 on the Civil Code, as amended and supplemented, JORA No. 818 of 30 September 1975.

²⁹BOUHAMLA Salah Eddine La réparation résultant de la responsabilité civile du producteur : étude effectuée conformément aux articles 140 bis et 140 ter du Code civil algérien, Revue Critique de Droit et Sciences Politique Faculté de Droit et Sciences Politique Université Tizi-Ouzou; Volume 20 Numéro 01 Année 2025, P 150.

³⁰Céline Mangematin , Droit de la responsabilité civile et l'intelligence artificielle , Les Presses de l'Université Toulouse Capitole, 2022, p 450.

responsible for technical defects in the system and Behavior guard: The user, responsible for how the system is operated and used³¹.

However, this theory, although flexible, does not provide a definitive solution in the case of artificial intelligence, because the system may make decisions or act in a way that cannot be predicted or prevented even by the factory.

Therefore, adapting the traditional custody system to AI systems remains inadequate, and identifying the AI system's custodian remains an open legal issue. This prompts the search for alternative or complementary legal frameworks, such as a liability system for defective products or special legislative intervention.

- **Shared responsibility:** In some cases, responsibility may be borne jointly by the different parties. In contracts concluded using artificial intelligence, there may be an entity that uses the system (such as a company), and another entity that develops or manages the system (such as a developer or provider). If an error occurs, liability may be distributed between the parties based on each party's role in concluding the contract. This model may be realistic given the complexity of the process and the multiplicity of parties involved in decision-making. For example, a user may be responsible for entering inaccurate or incomplete data, while a developer may be responsible for programming a system that contains defects or vulnerabilities³²

2.2.3- Deficiencies in civil liability rules and the need for legislative development :

Recent experience shows that civil liability rules face significant challenges when applied to damages caused by AI systems, due to their technical characteristics such as autonomy and self-learning.

Intelligent systems pose real risks due to their technical nature, the ambiguity of their operation, the difficulty of interpreting their decisions, and the multiplicity of parties involved in their design and operation. This makes assigning responsibility a complex issue³³, as the affected party finds himself unable to determine who is truly responsible.

AI-based applications also demonstrate the limitations of traditional civil liability rules, particularly those based on the standard of demonstrable human error. AI systems are highly autonomous and complex, and their modus operandi is not always understandable or traceable, making it difficult to identify human negligence that can be attributed to a specific person. This creates a risk that damages resulting from these systems will remain irreparable

³¹Alexandre Vial, La responsabilité civile du fait des systèmes d'intelligence artificielle, thèse de doctorat en droit privé, Université Paris-Saclay, 2022, p. 90.

³² هند السالمية، "المسؤولية المشتركة في العقود المبرمة بواسطة الذكاء الاصطناعي"، دار المعرفة القانونية، الدوحة، 2022، ص109.

³³Conseil de l'Europe, Comité ad hoc sur l'intelligence artificielle, Intelligence artificielle et droit de l'homme, démocratie et Etat de droit : un guide (Strasbourg : Conseil de l'Europe, 2021) p 15.

Despite the fact that the damage has been proven, this situation also leads to a paradox in that the consequences of liability vary depending on the source of the harmful act. The same error leads to liability if it is committed by a human being, while it does not entail any obligation to compensate if it is attributed to an intelligent system. This clearly reveals the inadequacy of traditional liability logic to confront the risks of AI.³⁴

Addressing liability issues therefore requires reevaluating existing legal frameworks to accommodate the unique characteristics of AI. Legal systems must clarify the distribution of liability among various stakeholders, including developers, users, and AI systems themselves. Achieving a balance between holding entities accountable for AI-related decisions and avoiding unjustified restrictions on technological innovation requires a careful approach.³⁵

Hence, we see the need to reconsider liability rules, either by adapting them to the specific nature of smart systems, or by adopting new accountability and compensation mechanisms that ensure effective protection for those affected. This requires the establishment of a special legislative framework regulating liability for damages resulting from artificial intelligence, achieving a balance between encouraging innovation and protecting contractors.

4-Conclusion:

At the conclusion of this study, it became clear to us that artificial intelligence is no longer just a neutral technical tool, but has become an effective element that affects the various stages of the contractual relationship, whether at the level of contract formation or at the level of its effects, which forced a re-reading of the traditional rules of the contract in light of developments in artificial intelligence.

The most important findings we reached can be summarized as follows:

The intervention of artificial intelligence in the contractual field does not abolish the traditional rules of general contract theory, but it reveals the limitations of its application to contracts based on intelligent systems.

The principle of consent and the authority of will remain the basis of contractual obligation, but their integrity may be affected by the nature of automated decisions and the absence of direct voluntary expression.

Automated contract execution raises legal issues related to the limits of the binding force of the contract and the applicability of the theories of force majeure and emergency circumstances.

Traditional rules of civil liability face serious difficulties in determining who is responsible for damages resulting from artificial intelligence, especially in terms of proving fault.

³⁴ Baris Soyer and Andrew Tettenborn, Artificial intelligence and civil liability_ do we need a new regime I nternational journal of Law and Information Technology, n 4, 2023,p 03.

³⁵ Meenu, op cit, P 28.

The provisions of the Algerian Civil Code, despite their flexibility, are not sufficient on their own to confront all the new problems imposed by the intervention of artificial intelligence in the contractual field.

Based on these results, this study recommends the following:

The need to develop the Algerian legislative framework to keep pace with the use of artificial intelligence in the contractual field, whether by enacting special texts or introducing amendments to general rules.

Reconsidering the rules of civil liability to allow them to be adapted to the nature of damages resulting from artificial intelligence, taking into account those involved in the design and operation of these systems

Encouraging judicial and jurisprudential jurisprudence to develop flexible interpretive solutions that preserve the principles of the general theory of the contract, while at the same time responding to the requirements of technological development.

5-References:

Articles:

- BOUHAMLA Salah Eddine La réparation résultant de la responsabilité civile du producteur : étude effectuée conformément aux articles 140 bis et 140 ter du Code civil algérien, Revue Critique de Droit et Sciences Politique Faculté de Droit et Sciences Politique Université Tizi-Ouzou; Volume 20 Numéro 01 Année 2025
- Baris Soyer and Andrew Tettenborn, Artificial intelligence and civil liability_ do we need a new regime I nternational journal of Law and Information Technology, n 4, 2023
- Céline Mangematin , Droit de la responsabilité civile et l'intelligence artificielle , Les Presses de l'Université Toulouse Capitole,2022
- Meenu, The Impact of Artificial Intelligence on Contract Law : Challenges and Opportunities, Indian journal of Law, Vol 2, N 1, 2024
- MESSAOUD-BOUREGHDA Narimene, Smart Contracts as a challenge to contract law, Journal of legal and political thought Volume 09 N° 01University of Laghouat, (2025).
- Rithanya M, The Impact of AI in Contract Formation and Enforcement, 4 International Journal of Law Management & Humanities, vol 7, n 4, 2024
- ZERROUK Imene Fatima Zohra, Analyse juridique du smart contract, Journal OF LEGAL STUDIES, e Laboratory of Sovereignty and Globalization - Yahia FARES University of MEDEA, Vol 09, n 2, 2023
- Melanie Labban, From Reality to Virtuality: The General Theory of Contracts in the Face of the Artificial Intelligence Challenge, Revue juridique l USEK, n special, 2025.
- Alexandre Vial, La responsabilité civile du fait des systèmes d'intelligence artificielle, thèse de doctorat en droit privé, Université Paris-Saclay, 2022-.
- Conseil de l'Europe, Comité ad hoc sur l'intelligence artificielle, Intelligence artificielle et droit de l'homme, démocratie et Etat de droit : un guide, Strasbourg : Conseil de l'Europe, 2021.

- Michel Martin, "Nullité cintractuelle par intelligence artificielle : les nouvelles zones grise juridique en 2025", juridique service, disponible en ligne : <https://www.juridiqueservice.fr/nullite-contractuelle-par-intelligence-artificielle-les-nouvelles-zones-grises-juridiques-en-2025/> consulté le 16 janvier 2026
- Le Consentement des mineurs dans les contrats numériques, Village de la justice, disponible en ligne : <https://www.village-justice.com/articles/consentement-mineurs-contrats-numeriques,40112.html> consulté le 17 janvier 2026.
- L'intelligence artificielle dans les contrat : quelles implications juridiques pour les entreprises, Le Mag Juridique, 02 janvier 2025, en ligne <https://www.lemag-juridique.com/categories/societes-15581/articles/lintelligence-artificielle-dans-les-contrat-quelle-implications-juridiques-pour-les-entreprises-8444.htm> consulté le 15 janvier 2026
- La force majeure en droit : critères d'acceptation et jurisprudence, juridique pratique , en ligne <https://www.juridiquepratique.fr/la-forse-majeure-en-droit-criteres-dacceptation-et-jurisprudence/> consulté le 15 janvier 2026.
- Ordonance No. 75-58 of 26 September 1975 on the Civil Code, as amended and supplemented, JORA No. 818 of 30 September 1975.
- Law No. 25-10 of Muharram 28, 1447, corresponding to July 24, 2025, amending and supplementing Law No. 05/01 of Dhu al-Hijjah 27, 1425, corresponding to February 6, 2005, relating to the prevention and combating of money laundering and the financing of terrorism.

المراجع باللغة العربية:

الكتب:

- زكريا سرايش، الوجيز في مصادر الالتزام، العقد والإرادة المنفردة، ط 02، دار هومة، الجزائر، 2014.
- زبيدة البلوشي، مصادر الالتزام في القانون المدني. عمان: دار الأجيال 2020
- محمد صبري السعدي، الواضح في شرح القانون المدني، النظرية العامة للالتزامات دراسة مقارنة في القوانين العربية، طبعة مزيّدة ومنقحة، دار الهدى، الجزائر، 2012.
- هند السالمية، المسؤولية المشتركة في العقود المبرمة بواسطة الذكاء الاصطناعي، دار المعرفة القانونية، الدوحة، 2022.

المقالات:

- إبراهيم محمد يوسف عبيدات، سليم سمير سليم خصاونة، العقد الذكي وانعكاساته على النظرية العامة للعقد، دراسة تحليلية، مجلة الحقوق والعلوم السياسية، الجامعة اللبنانية، كلية الحقوق والعلوم السياسية والإدارية، العدد 39، 2023.
- عاصم سامي خميس حامد الزيّات، التعبير عن الإرادة في العقود المبرمة بواسطة الذكاء الاصطناعي، مجلة الحقوق للبحوث القانونية والاقتصادية، كلية الحقوق، جامعة الإسكندرية، مجلد 02، العدد 01، جويلية 2025.
- محمد إبراهيم عبد المنعم مرسى، مدى ملائمة عقود الذكاء الاصطناعي المبرمة عبر تقنية البلوك تشين لقانون العقود، مجلة البحوث الفقهية والقانونية، العدد 42 ، يوليو 2023.
- د.عبد الستار أبو غدة، العقود الذكية والبنوك الرقمية والبلوك تشين، مقدم لندوة البركة 39، 2019.