

*Legal Regulation of the Public Entity Liability
for the Use of Smart Devices*

النظام القانوني لمسؤولية المرفق العام عن استخدامات الأجهزة الذكية



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Abstract

Advancements in science and technology have expanded the use of artificial intelligence, particularly robots, due to their ability to significantly reduce human physical effort. However, this progress has introduced legal challenges, especially regarding liability. Current legal norms and rules are inadequate for addressing damages caused by algorithms, neural networks, and other intelligent programs. Traditional liability principles typically assign responsibility to natural persons (employees) or legal entities (public bodies), making it difficult to clearly define liability for AI-induced damages. Accordingly, this research explores the legal challenges and issues arising from the expanding use of artificial intelligence technologies, specifically robots. It points out the difficulty in attributing liability within the traditional legal framework, which typically assigns responsibility to natural persons (employees) or legal entities (public bodies). Consequently, the research aims to propose a theoretical approach for establishing a new legal framework to regulate administrative liability involving robots, with a particular focus on their application in military and medical fields

keywords

Artificial intelligence, robot, vicarious liability, contractual liability, personal liability, objective liability, fault, risks.

الملخص:

لقد ساهمت التطورات النوعية الحاصلة في مجال العلوم والتكنولوجيا إلى توسيع استخدامات تقنيات الذكاء الاصطناعي لاسيما الروبوتات، هذه الظاهرة وإن كانت تتسم بجاذبية كبيرة من حيث المظهر بحكم قدرتها على "إختزال الجهد المادي البشري" على نطاق واسع، إلا أن تطور خصائصها الرئيسية لاسيما

منها ذات المنظور الفني خلق – في المقابل – عدة مشاكل وتحديات قانونية، وهذا بسبب عدم كفاية المعايير والأسس القانونية النازمة للمسؤولية، فالخوارزميات والشبكات العصبية وغيرها من البرامج الذكية قد تكون سببا في إلحاق أضرار مادية بالغير دون إمكانية حصر مسؤوليتها عن تغطية الأضرار، وهذا لأن الأسس التقليدية لهذه المنظومة القانونية عادة ما تفترض المسؤولية المباشرة للشخص الطبيعي (الموظف) أو الشخص المعنوي (المرفق العام) ولكن لا يوجد في ظل النظام القانوني التقليدي ما يحمل الروبوتات المسؤولية الخطئية أو المسؤولية في إطار المخاطر، الأمر الذي فرض على المجمع الفقهي إعادة رسم معادلة المسؤولية الإدارية بشكل جديد يكون فيه حضور ضروري للروبوت في إطار متعدد الأشكال، ونحن من جهتنا نقدم هذا الجهد كمحاولة نظرية لتأسيس البناء القانوني للمسؤولية الناجمة عن إستخدامات الروبوت لاسيما في المجالين العسكري والطبي.

الكلمات المفتاحية: الذكاء الاصطناعي، الروبوت، المسؤولية المرفقية، المسؤولية العقدية، المسؤولية الشخصية، المسؤولية الموضوعية، الخطأ، المخاطر.

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Introduction:

In the realm of administrative law, the term "liability" is relatively new and describes the idea of an individual being responsible for the outcomes of their acts or behaviors. In legal context, it refers to a strategy wherein harm inflicted upon a direct person as a result of natural, biological, psychological, or social laws is transferred to another person who is then considered to be legally responsible for bearing that burden.

The concept of liability, in this broad sense, varies depending on the perspective from which it is viewed. If it involves a violation of a moral duty not explicitly stipulated in the law, it is called moral liability. If it is linked to a breach of a legal obligation, it is referred to as legal liability. The latter derives its source and basis from civil law, according to the principle: 'Every act, regardless of its nature, committed by an individual that causes harm to others, binds the one who caused the harm to provide compensation.' From this concept, various types of liability have emerged, such as criminal liability, constitutional liability, international liability, and administrative liability, which is the main concern of our study.

Administrative liability¹ was first established in France by the end of the 18th century, by virtue of the decision of the French Court of Disputes in 1873 in the

¹ For a long period of time, the public administration was not held responsible for its actions or the errors of its employees. This may be due to two factors: firstly, the prevailing idea at the time that

Blancot case. This coincided with the expansion and diversification of the state's intervention areas, leading to the multiplication of forms of administrative liability based on adapting the source and nature of damages incurred by individuals. Despite this significance, the legislative response, especially in France, to these developments was very slow and did not significantly contribute to establishing the rules of administrative liability except to a very limited extent. At the same time, the administrative judiciary played a crucial role in strengthening and developing these specific rules up to the present day.

In light of the traditional concept of administrative liability, the legal relationship involved only the public entity as a legal entity, the public employee, and finally, the victim, i.e.; the individuals. This composition quickly evolved with the addition of a new element, which is artificial intelligence¹.

This has put a considerable category of administrative law² norms at risk, especially given this phenomenon's peculiarity and tremendous flexibility, which has

the legal entity embodies the character of the king who can do no wrong, and secondly, the concept of sovereignty, considering responsibility as a legal obligation, which contradicts with the traditional concept of sovereignty with its notions of majesty and grandeur.

¹ Artificial intelligence is a relatively new phenomenon, that traces back to the early attempts of the British scientist Alan Turing to create a fictional machine that operates autonomously and is capable of finding appropriate solutions to various problems through the writing and interpretation of symbols. And despite of the stiff opposition that Alan faced at that time, he quickly succeeded in attaining his goal, and it became possible to employ robots to carry out purely technical tasks, which is referred to as artificial intelligence. (For further details see: Afifi, Jihad. (2015). Artificial intelligence and expert systems. Amman, Jordan: Amjad House for Publishing and Distribution. P. 23. Russell, Stuart J.; Norvig, Peter. (2021). Artificial Intelligence: A Modern Approach (4th ed.). Hoboken: Pearson. P. 41.

From a theoretical point of view, several definitions of artificial intelligence have been suggested, namely the one proposed by the scientists Bruce Buchanan and Edward Shortliffe that states: "Artificial Intelligence is a branch of computer science that explores problem-solving using non-algorithmic symbolic processing". Or as defined by the scientist Elaine Ritch: "Artificial Intelligence is the study of how to make computers do things that people are better at." In general, artificial intelligence refers to the study of human mental abilities using computational models to endow computers with some of these capabilities. (See Salem Al-Fakhouri, 'The Psychology of Intelligence,' Academic Book Center, Jordan, 2018, pp. 12 and beyond. Also, Sa'fat Salama, 'Robotics Technology: A Future Vision with Arab Eyes,' Academic Library, Cairo, 2006, pages 27 and beyond. Abdullah Mousa and Ahmed Bilal, 'Artificial Intelligence: Revolution in Age Technologies,' Egyptian Book House, Cairo, 2019, pages 12. And beyond. Poole, David; Mackworth, Alan (2017). Artificial Intelligence: Foundations of Computational Agents (2nd ed.). Cambridge University Press. P 56. Rich, Elaine; Knight, Kevin; Nair, Shivashankar B (2010). Artificial Intelligence (3rd ed.). New Delhi: Tata McGraw Hill India. P 123.

² Al-Najjar, F. (2010). Administrative Information Systems: An Administrative Perspective. Dar Al-Hamid for Publishing and Distribution, Jordan, p. 56.

affected its fast expansion on both the technological and administrative levels. For instance; technology is now intervening in the promulgation of administrative decisions, such as some administrative records, or the implementation of administrative sanctions for violation of laws and administrative orders, or inflicting harm to others. In that case, administrative liability must be invoked, and it gets more complicated in the last case compared to the cases of decisions and sanctions implemented by the robot. And this is due to the impossibility of imposing administrative sanctions on artificial intelligence technology on the one hand, and the difficulty for the administration to evade responsibility for the incurred damages on the other hand, even if it is not directly responsible for them¹.

Research source of difficulty:

The difficulties of this research lie in the considerable flexibility of the topic and its broad dynamics due to its association with a relatively new area of study, namely artificial intelligence. This topic is still investigating its main dimensions, mainly because of the difficulty of assigning administrative liability, whether with or without a fault, when a robot is used in administrative activities. Even if this liability is established, its legal system, which should be applied, will not be uniform in all cases. Instead, it must have different principles and rules, especially concerning police facilities, hospitals, or various regulatory institutions.

The numerous and sometimes contradictory jurisprudence attempts on the same cases issues manifest the clear challenges faced by administrative judges in finding suitable and definitive legal solutions for the reasons of assigning administrative liability for damages resulting from the use of artificial intelligence. This involves developing standards for assessing the amount of compensation to cover the eventual material harm caused to others.

Research significance:

This research paper is a theoretical attempt to shed light on the objective aspects related to administrative liability on the basis of utilizing artificial intelligence. It begins by outlining the scope and boundaries of this responsibility, aiming to distinguish it from similar administrative claims. Then, it seeks to identify methods and means for determining appropriate indemnity to compensate the harm incurred by others, particularly by highlighting the formal, procedural, and objective conditions set forth in the realm of this type of responsibility. This will make the current study a valuable and significant reference whether on the academic level or on the judicial level or even on the level of administrative utility characterized by the

¹ Borges, G. (2020). Liability and New Technologies: Concepts and Addressees of Liability. University of Saarland, p. 46. Twaig, O. Rachum. (2019). Whose Robot Is It Anyway?: Liability for Artificial-Intelligence-Based Robots. University of Illinois Law Review, Vol. 2020(Forthcoming), 29-30.

extensive use of artificial intelligence, especially for utilities of police, health, public works, administrative control, and others.

Research problem:

The main problem of this research revolves around the following question:

Giving that legal and judicial solutions applied in determining direct or indirect administrative liability for damages incurred by individuals necessitates assigning responsibility or distribute it between the public entity (vicarious liability) and the employees working on its behalf and for its account (personal liability). Do the new data imposed by the extensive use of robots in administrative settings, as well as the resulting damages that have affected individuals, whether due to a technical flaw in the robot or its misuse by a public employee, lead us today to seek new criteria and solutions to adapt the components of administrative liability in a way that aligns with the modern developments imposed by technology? Or should we just 'update' the same old criteria and components and adapt them to the non-personal character of robots?

And from this fundamental question, a set of sub-issues arise that can be summarized as follows:

- 1- The concept of administrative liability and its distinction from civil liability.
- 2- Differentiating between administrative liability based on fault and administrative liability with no fault or risk-based liability.
- 3- Criteria and components for distinguishing between entity liability and personal liability in covering damages incurred by individuals.
- 4- The scope of utilizing artificial intelligence in the field of implementing administrative tasks (emphasizing police and hospitals utilities).
- 6- Modern trends in adapting liability related to the use of artificial intelligence.

Research methodology:

The method adopted in this research is a combination of several scientific approaches. We have employed the descriptive method to explain and analyze the nature of administrative liability in general and administrative liability for the use of artificial intelligence in particular. We have also relied on the inductive method as an attempt to deduce and derive some results through an in-depth investigation of the legal solutions adopted by the French administrative judiciary.

Research plan:

1. Personal liability for damages resulting from the use of smart devices.
 - 1.1. Liability of smart devices manufacturer.
 - 1.2. Liability of the public employee for misusing smart devices.
2. Entity liability for the damages resulting from using smart devices.
 - 2.1. Fault-based entity liability in the field of utilizing smart devices.
 - 2.2. Risk-based entity liability in the field of using smart devices.

Personal liability for damages resulting from the use of smart devices

The legal system for administrative liability in the field of smart technology usage is closely related to the element of fault, determining its objective reference and its impact on achieving the result of harm. Consequently, this system largely draws its rules from the theory of fault in civil law. In this investigation, it is scientifically common to associate damages resulting from the use of smart devices with a third party other than public entity, as an independent legal personality. This third party can be the manufacturer of the smart device in case of latent defects in the technology itself. In other cases, the cause of the harm may be attributed to the public official. This leads us to adopt traditional legal solutions applied in administrative law to distinguish between vicarious fault and personal fault of the public official.

And in order to address all these elements we find it necessary to divide the main ideas of this study as follows:

1.1. Liability of smart devices manufacturer

1.2. Liability of the public employee for misusing smart devices.

These ideas will be addressed in the following manner:

First requirement: Liability of smart devices manufacturer

It is worth noting that the introduction of smart devices or robots was originally intended to improve industrial operations, particularly in the framework of capitalist economic theory, which strives to replace human labor with automated machinery in order to boost production efficiency and lower costs¹. However, this phenomenon gradually "crept into" the administrative space due to the urgent need to enhance the performance of the public sector within the fundamental principle in administrative law, which is the principle of "the adaptability of the public sector to continuous change and development.

Artificial intelligence is used in a variety of administrative tasks, including the process of issuing administrative decisions related to granting various permits, licenses, and administrative accreditations. It is also used in electronic administrative contracts, particularly for administrative pre- inspections for the conditions of

¹ According to the annual report from the British magazine "The Manufacturer," 92% of the top executives in manufacturing companies believe that "smart manufacturing" technologies such as artificial intelligence will help increase productivity and enable workers to perform more intelligently. While artificial intelligence will facilitate workers' interaction with and operation of technological devices, it will also lead to the elimination of human services in many manufacturing stages. In fact, pragmatic artificial intelligence – the practical application of artificial intelligence to specific tasks and processes – eliminates the need for human intervention in advanced cases where machines outperform human speed and performance.

participating in public tenders. Furthermore, artificial intelligence techniques are used in the provision of public services, such as the withdrawal of administrative documents and the receipt and management of various administrative requests. Moreover, artificial intelligence is being employed in the imposition of administrative penalties, particularly those relating to administrative control measures in the sectors of security, health, and other areas.

However, despite the advantages offered by artificial intelligence technologies in the performance of administrative tasks in terms of speed and efficiency, this fundamental question is still raised by legal experts about determining the scope and basics of liability arising from the damages caused by the use of robots in administrative work, whether these damages are material or moral¹.

In this regard, it is worth to emphasize that holding the robot or the smart device manufacturer liable for covering damages incurred by others due to the use of these technologies depends on two main cases: The first case is when there is no interference or connection between the employee and the smart device or robot, also known as the Auto operating system². On when a latent defect in the smart device or robot is proven, or when the damage to others is associated with the element of fault attributed to the device.

As for the relationship between the public entity and the robot manufacturer, jurisprudence refers to adapting legal liability in this regard to three different systems derived from the provisions of civil law, as the top of laws. This pertains to contractual liability, tort liability, and objective liability³.

First section: Contractual liability of the manufacturer

If the robot or the smart device does not comply with the provisions of the administrative contract, the public entity has the right to terminate the contract

¹ This is the trend is followed by the Algerian state, which seeks to reinforce the infrastructure and strategies boosting the smart transformation of government entities by implementing smart government plans aligned with the country's strategy to achieve relevant national indicators and provide favorable conditions to reach advanced globally in the field of smart services. This plan encompasses almost all government electronic operations, especially cloud services, application management, electronic portals, development of markets and sectors, and e-commerce. As for policy and program management, it supervises criteria, policies, and future development plans, as well as information security through the computer emergency response team and others. See Kalthoum. Dj.(2022). Challenges and Ethics of the Robot Age: Strategic Studies. Algeria Center for Strategic Studies and Research. Algeria Center, p. 268.

²Fathi, A. (1999). Compensation System for Damages to the Consumer Security and Safety in the Egyptian and Comparative Civil Law. Legal and Economic Research Journal, Issue 25, Cairo: Mansoura University - Faculty of Law, pp. 241-242.

³ Imran, A. (2009). The Sales Contract in Egyptian Civil Law, Al-Fath for Printing and Publishing, Alexandria, p. 137. Al-Atraq, N. (2015). Liability for Defective Products in Light of French Civil Law. Journal of Legal and Sharia Sciences, (6), 96. Al-Zawia University - Faculty of Law, Libya.

unilaterally. In that case, the responsibility is held by the manufacturer regardless of whether the non-conformity of the device causes harm to the public utility user or the public utility itself. This is in accordance with the content of Article 178 of the Algerian Civil Code, which corresponds to Article 341 of the Egyptian Civil Law¹.

It should also be noted that, if the robot or the smart device appears to be defective, which reduces its capacity to perform correctly, the manufacturing company is required to provide warranty for it. This is because the public entity, before determining the price, they have analyzed the benefit from the smart device. Therefore, if there is a flaw that reduces the quality of this benefit, placing the price within the seller's control without a reasonable cause would be unfair².

Second section: Tort liability of the manufacturer

One of its forms lies in the hospital's liability for medical errors. For instance, if a doctor relies on a clinical decision program powered by artificial intelligence to prescribe medication and the program provides an incorrect prescription, which may cause harm to the patient. In that case; the medical technique manufacturer is responsible for covering the resulting damages, not the hospital, even if the applicability of the system of tort liability on artificial intelligence is facing huge challenges.

In case where artificial intelligence makes autonomous decisions, traditional criteria are insufficient to establish legal liability for the damage produced by the robot. By virtue of the tort liability law, proving a breach of duty or an error committed by manufacturers, operators, or users of artificial intelligence, and its relationship with the damage is difficult. This is in accordance with Decree No. 131 of 2016, Article 1242 of the French Civil Code, Which corresponds to Article 124 of the Algerian Civil Code, as well as Article 178 of the Egyptian Civil Code³.

Third section: Objective liability of the manufacturer

In the framework of objective liability, the robot or smart device manufacturer is liable to cover the damages incurred by individuals based on two factors only; the damage and causation. Therefore, the injured party, whether it is a public utility or a public utility user, does not hold any responsibility to prove the existence of any fault attributed to the smart robot or device. And this is called in the technical language “safety degree of the robot”⁴.

¹ Al-Beh, M. (2008). Sale contract. Dar Al-Nahda Al-Arabiya, Cairo, p. 186.

² Mohamed, M. R. (2016). Civil liability for defective products (PhD thesis). Faculty of Law, Ben Aknoun, Algeria, pp. 63-64.

³ Saad, N. (2019). The general theory of obligations: Sources of obligation. Dar Al-Jamea Al-Jadeeda. p. 167.

⁴ Van Rossum, C. (2017). Liability of Robots: Legal Responsibility in Cases of Errors or Malfunctioning. (LLM thesis). Faculty of Law, Ghent University, p. 43.

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Article 6 of European Directive 85/374/EC on product liability states that in the event of a damage caused by a product defect, the liability is on the part of the manufacturer without fault, and if the damage is shared among several companies (manufacturer, supplier, importer), joint liability is established among them all based on the damage and without fault. This technique is also codified in French law, namely in Article 1386/4 of the French Civil Code¹.

Second requirement: Liability of the public employee for misusing smart devices

Quickly adapting the damages resulting from the usage of robots or smart devices, may lead us to say that legal liability is always on the part of the manufacturer, in accordance with the general provisions of the civil law. However; the situation may become more complicated, particularly if these smart devices are not totally autonomous and self-operating. In such cases, their functioning and direction are dependent on the human element, i.e.; the public employee.

This leads us to return to the content of Article (138) of the Algerian Civil Code Which stated: "Whoever is in charge of a thing or of a machine whose supervision requires special care in order to protect others from its damage, is liable for the damage caused by these things or machines except that which cannot be prevented."

In this regard, the liability of the public employee (as a natural person) may overlap with the liability of the public institution they work for (as a legal entity). This may require a legal framework to distinguish between personal and institutional fault, in case where the liability of the robot's manufacturer is not established, due to the fact that the robot is not independent in its work, or in other words, it does not operate autonomously but is directed and controlled by the employee (such as a doctor or a police officer), either fully or partially. In that case, the Council of State in France has reviewed a set of criteria considered the sole legal reference in this regard².

Based on these assumptions, the fault is considered personal under the following two hypotheses:

1- Faults that fall outside the scope of the work setting and have no relationship with it. For example, if an employee commits the fault in his personal life or if an administrative official employs security-oriented technology devices in his personal life and causes harm to others, or if a doctor uses AI-equipped medical devices outside of the hospital setting, such as in his own clinic. In such cases there is no need to investigate the gravity of the fault or whether it was intentional or

¹ Bertolini. (2016). Insurance and Risk Management for Robotic Devices: Identifying the Problems. *Global Jurist*, 16(3), 310-311.

² Mouwafi, Y. (1992). Liability for things in light of jurisprudence and judiciary: A comparative study. Ma'aref Establishment. p. 94.

unintentional. The employee is personally liable for any harm caused to others as a result of the usage of artificial intelligence technology.

1- Faults that occur during or in connection to the work setting and this may happen in the following cases:

A- If the fault is intentional. For example, a doctor intentionally manipulating and directing smart medical equipment to manipulate the results of tests or examinations for specific diseases, especially in the case of long-term sick leaves due to chronic illnesses, whether compensated or uncompensated.

B- Faults that involve serious physical mistakes committed by the employee. For instance a doctor decides to perform a surgical procedure on a patient without ensuring its necessity through the use of precise technological equipment for medical examination.

Vicarious liability for the damages resulting from using smart devices

As opposed to the previously mentioned personal liability, the public entity itself might be held directly liable for the usage of smart devices. Vicarious fault is often described as a violation of the administration's legal duties. It should be emphasized that this violation is not limited to negative acts such as refusing to provide a service; it may also take the shape of positive activities such as delays or inadequate service execution. Because of the generality of this criterion, comparative administrative judiciary tends to apply vicarious liability principles in our field of study, taking into account the scope and limits of vicarious faults that may contribute to causing harm to others through external material means, such as artificial intelligence devices. This is evident in the field of using robots for surgical procedures or their use in police and law enforcement activities, among others.

Therefore, we attempt to address this concept through the following plan:

- 1- Fault-based vicarious liability in the field of Smart Device usage.
- 2- Risk-based vicarious liability in the field of Smart Device usage.

We will discuss those two key points as follows:

First requirement: Fault-based vicarious liability in the field of Smart Devices usage

Contemporary legal jurisprudence deduces that there are specific criteria on which vicarious liability is considered fault-based. In this context, the public entity alone holds the responsibility for covering damages to third parties resulting from the use of smart devices. This is related to the following factors:

First section: The entity providing poor services

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This includes all positive actions undertaken by the administration involving a fault, whether directly or indirectly related to the use of a smart device. The forms of this liability are diverse; damage may arise from an action by an employee poorly performing their duty, for example, incorrectly programming some smart devices in the police or customs sector. The source of the damage may be the inconsistency between the entity's performance and the established rules governing its operations such as the use of smart devices in health inspection, especially in the context of the spread of epidemics and diseases¹.

But in some cases, the rules governing the entity may be comprehensive, which it difficult to match the entity's performance with the liability rules associated with the use of smart devices in administrative tasks. In this case, the fault occurs if the service is not provided as expected. For example, when the paramedical team does not adhere to the sterilization rules for smart medical devices, this may result in patients catching a specific epidemic, such as the case with the COVID-19 pandemic.

Second section: The entity did not provide the service

This is when the administration refuses to provide its various departments with smart technologies and devices to enhance their services. For example, this could include hospitals not adopting smart examination and analysis devices to improve their performance or customs authorities neglecting the use of technologies and smart devices, such as scanners, to inspect containers, which may result in the entry of prohibited goods into the country. Similarly, municipal administrations may neglect the use of specific technologies to examine chemicals in a warehouse, leading to harmful leaks affecting public health and the environment.

Third section: The entity's slow performance in providing its services

The administration is not criticized for its bad performance or refusal to provide its services only, but also for excessive delays in providing such services, which may cause harm to persons. For instance, if the Ministry of Climate Change and Environment delays the delivery of specialized smart equipment to monitor different environmental and animal changes, this may result in the development of illegal hunting in violation of the regulatory provisions. Another example is when the hospital administration delays the provision of vital technical equipment or smart devices for treating certain diseases (such as cancer chemotherapy or renal filtration devices) which may result in the patient's death².

Second requirement: Risk-based vicarious liability in the field of Smart Devices usage

¹ CE, 27 février 2004, **requête numéro 217257, Popin** (Rec. p. 86, concl. Schwartz ; AJDA 2004, p. 423 étude Courtial et p.653, chron. Donnat et Casas, concl. Schwartz ; Dr. adm. 2004, 86, note Lombard ; D. 2004, p. 1922, note Legrand ; LPA n°208, 18 octobre 2004, p.13 note Melleray).

² Mohsen Al-Beh, Op. Cit., pp. 151/152.

The State Council's interest in developing a theory to establish the administration's faultless liability in the field of harms emerging from the use of artificial intelligence¹ was fueled by the world's great technological change. This revolution resulted in the spread of smart devices with autonomous or semi-autonomous programming. Therefore, smart devices made it hard to determine or prove² the fault emanating from the public entity using smart devices, which has put a large number of individuals or public utility users at risk of falling victim to traditional liability rules based on fault. Consequently, the French judiciary has leaned towards establishing administrative liability based on professional risks.

The risk-based liability is established from the idea that as long as the administration's activity is in favor of the community, the damage it incurs should not be borne by the individual alone, it should rather be borne collectively. For example, the state, in line with the principle of equality in the face of public burdens, should not impose the damage resulting from its activities on one person only but on everyone. According to the French State Council, in order to apply the concept of risks, the damage must affect specific individuals in their own rights, and the damage should be extraordinary, i.e.; it cannot be attributed to a fault on the part of the administration. And strict attitude on the part of the Council aims to reduce the cases of claiming compensation from the administration³.

One of the most important cases of risk-based liability recognized by the French State Council is the administration's liability for work-related injuries due to the use of smart technologies. Additionally, the administration is held responsible for damages caused by its dangerous activities, like the case of various law enforcement devices⁴.

Conclusion:

This research has manifested the following results:

1- Some jurisprudence contributions mention the concept of "robot liability" when addressing the topic of our research, but this statement is inappropriate from a legal point of view. And this is repeatedly affirmed by the French administrative judiciary. This is due to the fact that liability is always linked to the principle of legal personality (judicial personality or natural personality), which cannot be generalized

¹ CE Sect., 21 décembre 2007, **requête numéro 305966**, Lipietz et a. (Rec. p. 540 Dr. adm. 2008, 39, note Melleray ; RFDA 2008, p.80, concl. Prada-Bordenave).

² Samani, H. (2016). Cognitive robotics. Boca Raton: CRC Press, Taylor & Francis Group, p. 17.

³ CE Sect., 21 décembre 2007, **requête numéro 305966**, Lipietz et a. (Rec. p. 540 Dr. adm. 2008, 39, note Melleray ; RFDA 2008, p.80, concl. Prada-Bordenave).

⁴ CE, 27 février 2004, **requête numéro 217257**, Popin (Rec. p. 86, concl. Schwartz ; AJDA 2004, p. 423 étude Courtial et p.653, chron. Donnat et Casas, concl. Schwartz ; Dr. adm. 2004, 86, note Lombard ; D. 2004, p. 1922, note Legrand ; LPA n°208, 18 octobre 2004, p.13 note Melleray).

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to a robot lacking legal responsibility, despite numerous jurisprudential attempts advocating for the necessity of adhering to this adaptation.

2- In light of the modernity of administrative law and the incomplete development of its rules, civil law remains a critical reference for it. And given the difficulty of adapting the latest developments resulting from the widespread use of artificial intelligence, particularly in determining liability, in line with the French administrative judiciary's rejection of direct responsibility for robots, the solution lies in applying the derivative responsibility standard. This is based on the civil law idea of the respondent superior and the administrative law notion of direct impact.

3- In determining the party responsible for compensating third-party damages, it is necessary to depart from the absolute emphasis on the robot manufacturer, particularly in cases where it is difficult to identify the personal fault of the public employee using the robot. Instead, the commercial company that provided the robot to the public entity should be held liable, which in many cases differs from the manufacturing company, particularly in situations where the failure to adhere to procedures for the transportation, storage, or regular updating of smart machines and equipment leads to the destruction of this equipment.

In light of these findings, this research has allowed us to formulate a set of recommendations that can be summarized as follows:

We believe that generalizing the application of the same rules of traditional liability to cases where the damage is attributed to the use of artificial intelligence is a practically an easy solution. However, it may raise many legal issues, especially since generalizing the application of fault-based robot liability is an idea that does not comply with classical rules that associate fault with intent. This cannot be achieved at all for robot liability. Therefore, I recommend retaining only the system of faultless liability, or what is known as risk-based liability. This way, the liability system aligns with the specificity of robots in causing harm. On the other hand, it protects those who are not harmed by the robot by facilitating their process of obtaining compensation. In this case, robot liability is established without the need to prove fault, only requiring the proof of damage and causation.

4- In cases where harm occurs to others with a difficulty in determining the source of fault, as is the case, for example, with medical or police liability, where there is no chance for personal liability because the employee is obligated to exercise care rather than achieve a specific result, and there is no possibility for establishing vicarious liability either due to the absence of its main elements, in addition to the absence of the manufacturer liability due to the lack of proof of a technical defect in smart technology, we recommend the necessity of applying one of the latest standards in this field, namely the "misfortune" standard (Mal chance). This standard was first

recognized by the French Council of State in 2020 when considering lawsuits related to deaths caused by the COVID-19 pandemic.

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