

2023

## THE CIVIL LIABILITY FOR ARTIFICIAL INTELLIGENCE

Dr. Sarah Zein

Assistant professor in Civil Law, Faculty of law and Political Science-Beirut Arab University-Lebanon,  
S.zein@bau.edu.lb

Follow this and additional works at: <https://digitalcommons.bau.edu.lb/ljournal>

### Recommended Citation

Dr. Sarah Zein, (2023) "THE CIVIL LIABILITY FOR ARTIFICIAL INTELLIGENCE," *BAU Journal - Journal of Legal Studies - مجلة الدراسات القانونية*: Vol. 2022 , Article 14.

DOI: <https://doi.org/10.54729/2958-4884.1110>

This Article is brought to you by the BAU Journals at Digital Commons @ BAU. It has been accepted for inclusion in BAU Journal - Journal of Legal Studies - مجلة الدراسات القانونية by an authorized editor of Digital Commons @ BAU. For more information, please contact [journals@bau.edu.lb](mailto:journals@bau.edu.lb).

---

## THE CIVIL LIABILITY FOR ARTIFICIAL INTELLIGENCE

### Abstract

Artificial intelligence (AI) is rapidly transforming the way we live and work, with applications in fields as diverse as healthcare, finance, and transportation. However, with the increasing use of AI comes new legal and ethical challenges, including the question of civil liability for harm caused by AI systems. In the French legal system, there is a growing need to address these issues and develop a clear framework for defining and attributing responsibility for harm caused by AI. This article will explore the legal and ethical issues surrounding civil liability for AI in France, including the applicable legal norms and principles, and the challenges involved in defining and attributing responsibility. Ultimately, the goal is to provide a comprehensive overview of the legal landscape in France and to highlight the key issues that need to be addressed in order to ensure that AI is used in a responsible and ethical manner.

### Keywords

Artificial Intelligence-Liability-Legal norms-International Organizations- French and Lebanese legal systems

## **1. INTRODUCTION: BRIEF HISTORY OF AI DEVELOPMENT**

The history of artificial intelligence dates back to the mid-20th century, when the first computers were being developed. In 1956, a group of researchers held a conference at Dartmouth College in the United States, where they proposed the idea of developing intelligent machines that could perform tasks that typically required human intelligence. This marked the birth of the field of AI.

During the 1960s and 1970s, AI researchers focused on developing expert systems, which were computer programs that could simulate the decision-making abilities of human experts in a particular domain. However, these systems were limited in their ability to handle uncertainty and complexity, and progress in the field of AI slowed down in the 1980s.

In the 1990s, the development of machine learning algorithms and neural networks reinvigorated the field of AI. Machine learning is a subfield of AI that involves developing algorithms that can learn from data, and neural networks are a type of machine learning algorithm that can simulate the way the human brain works. These advances led to the development of practical applications for AI, such as speech recognition, image classification, and natural language processing.

In the 2000s, the rise of big data and cloud computing provided new opportunities for AI research and development. The availability of large amounts of data and computing power allowed AI researchers to develop more sophisticated algorithms and models, and to train them on massive datasets.

In recent years, AI has become increasingly prevalent in many aspects of our lives, from personal digital assistants and autonomous vehicles to healthcare and finance. Advances in AI have also raised ethical and legal concerns, including issues related to privacy, bias, and accountability. Generally, the development of AI has been a long and complex journey, with many ups and downs along the way. Despite the challenges, AI continues to hold great promise for the future, and its potential applications are virtually limitless.

## **2. MOST COMMON APPLICATIONS OF ARTIFICIAL INTELLIGENCE TOP OF FORM**

Artificial Intelligence, is a branch of computer science that focuses on developing algorithms and systems that can perform tasks that typically require human intelligence, such as reasoning, learning, problem-solving, and perception. AI is based on the idea that machines can be programmed to simulate the cognitive processes of human beings and other living organisms.

Some of the most common applications of AI include, Natural Language Processing that involves developing algorithms and systems that can understand, interpret, and generate human language, and is used in applications such as chat bots, voice assistants, and language translation tools. Also, Computer Vision That includes developing algorithms and systems that can process visual information, such as images and videos, and is used in applications such as facial recognition, object detection, and autonomous vehicles. Furthermore, Machine Learning is a technique focusing on developing algorithms and systems that can learn from data and improve their performance over time, and is used in applications such as recommendation systems, fraud detection, and credit scoring. In addition, Robotics field consisting on improving robots tasks autonomously, such as assembling products, exploring space, and assisting in healthcare. Finally, Expert Systems and Virtually Assistance, the latter concerns developing computer programs that can simulate the decision-making abilities of human experts in a particular domain, such as medicine, law, or finance and Gaming and the former involves developing digital assistants that can perform tasks and provide information to users, such as scheduling appointments, ordering groceries, and finding directions.

Overall, AI has a wide range of applications in many different industries and domains, and its potential uses are only limited by our imagination and the availability of data and computing power. Therefore, The discussion of civil liability of AI is an important topic because it tackles many essential aspects of our life. Firstly concerning legal liabilities, AI is increasingly integrated into various fields such as healthcare, finance, and transportation, there is a need to determine who should be held legally responsible in case of damages caused by AI systems. Civil liability helps

to establish the legal responsibility of those involved in the development and deployment of AI systems, and provides a framework for compensating victims of any damages caused. Secondly, the use of AI has ethical implications, particularly with regard to issues such as privacy, transparency, bias, and fairness. The discussion of civil liability of AI can help to ensure that these ethical considerations are taken into account in the development and deployment of AI systems. Thirdly, the discussion of civil liability of AI can help to build public trust in the technology. The ability to hold those responsible for any damages caused by AI systems can help to reassure the public that the technology is being used in a responsible and safe manner. Finally, AI can also promote innovation. By establishing a legal framework for the responsible use of AI, companies and individuals can be incentivized to develop and deploy AI systems in a way that is both safe and innovative.

### **3. THE ROLE OF INTERNATIONAL ORGANIZATIONS IN SHAPING AI REGULATION**

Artificial intelligence is rapidly transforming various aspects of our lives, including the economy, healthcare, and education. As AI technology continues to advance, concerns have been raised about its potential impact on society and the need for regulation to ensure its responsible development and use. International organizations are playing a critical role in shaping AI regulation globally. The role of international organizations in shaping AI regulation can be viewed from two perspectives: normative and instrumental.

From a normative perspective, international organizations provide a framework for understanding and developing ethical principles that can guide the development and use of AI. For example, the United Nations Educational, Scientific and Cultural Organization (UNESCO) have developed a set of guidelines for the development of AI that is aligned with human rights, social justice, and sustainable development. Similarly, the OECD has developed a set of principles for responsible AI that emphasizes transparency, accountability, and inclusiveness.

From an instrumental perspective, International Organizations have a role in developing and enforcing regulatory frameworks for AI. For example, the European Union (EU) has developed a comprehensive legal framework for AI, including regulations on the development and use of AI in the region. Similarly, the International Organization for Standardization (ISO) has developed a series of standards for the development and use of AI that can guide industry and governments in the responsible development and use of AI.

International Organizations also play a critical role in facilitating global collaboration and coordination on AI regulation. For example, the Global Partnership on Artificial intelligence was established in 2020 as an international forum for the development and implementation of responsible AI principles and practices. The GPAI brings together governments, industry civil society, and academic experts from around the world to collaborate on AI regulation.

In conclusion, the role of international organizations in shaping AI regulation is critical in ensuring that AI technology is developed and used in a responsible and ethical manner. International organizations provide a framework for ethical principles, develop regulatory frameworks, and facilitate global collaboration and coordination on AI regulation.

### **4. THE LEGAL FRAMEWORK FOR CIVIL LIABILITY OF AI**

The legal framework for civil liability can vary by country and jurisdiction, but here are some general principles that can be applicable:

1. **Strict liability:** Under the principle of strict liability, the person or entity responsible for deploying the AI system is held strictly liable for any harm caused by the system, regardless of whether or not they were at fault. This approach is commonly used in product liability cases, and can provide a means of compensation for victims without having to prove fault or negligence on the part of the defendant.
2. **Negligence:** Under the principle of negligence, the person or entity responsible for deploying the AI system can be held liable for damages caused by the system if they were negligent in

their development or deployment of the system. Negligence can be established if the defendant breached a duty of care owed to the victim, and this breach of duty caused the harm.

3. Joint and several liability: In some cases, more than one person or entity may be responsible for deploying the AI system. In these cases, joint and several liability may apply, which means that each defendant can be held responsible for the full amount of damages, regardless of their degree of fault.
4. Apportionment of liability: In some cases, the court may apportion liability among the different parties responsible for deploying the AI system based on their degree of fault.
5. Statutory frameworks: Some countries have established statutory frameworks to govern the liability of AI systems. For example, the European Union's General Data Protection Regulation (GDPR) includes provisions for AI systems that process personal data, and provides for significant fines in cases of non-compliance.

#### **4.1 In the French Legal System:**

In France, civil liability for AI is governed by the Civil Code that includes Tort Law. Here are some key provisions in it. The article 1240 of the Civil Code states that "any person who causes damage to another by his fault is obliged to repair it". This means that a person or entity that deploys an AI system that causes harm may be held liable for the damages caused, if the harm is a result of their fault. Strict liability is also applied in certain cases such as when a person or entity is responsible for an animal or artificial object cause harm (article 1241 of the Civil Code). This article has been interpreted by some courts to apply to AI systems as well. Liability can also be proven in cases of fault, negligence, or intentional wrongdoing. This means that if a person or entity deploys an AI system that causes harm due to their fault or negligence, they may be held liable for damages as cited in the article 1382. The Tort Law (Article 1384-3) provides for strict liability in cases where a person or entity is responsible for a dangerous activity that causes harm. This article has also been interpreted by some courts to apply to AI systems.

In addition, there are some specific laws and regulations that may apply to the liability of AI systems in certain sectors, such as healthcare (e.g. the French Public Health Code) and transportation (e.g. the French Road Traffic Act). It is important to note that the legal framework for the liability of AI systems is still evolving in France and other countries. As AI technology continues to develop and become more prevalent, it is likely that the legal framework will continue to evolve as well.

#### **4.2 In the Lebanese legal system**

In the Lebanese legal system, the Code of Obligations and Contracts (COC) provides the framework for civil liability. The COC sets out the general principles of civil liability, including the requirement for a causal link between the harm and the fault or negligence of the liable party. However, the COC does not specifically address the liability of AI systems. Therefore, the liability of AI systems would be determined by applying the general principles of civil liability to the specific circumstances of each case. Several provisions of the COC could potentially be applied to cases involving AI related harm. For instance, article 122 of the COC provides that any act whatever of man that causes damage to another obliges him by whose fault it occurred to repair it. This provision could be used to hold a party liable for harm caused by an AI system if it can be shown that the harm resulted from their fault or negligence. Also article 125 of the COC states that a person is responsible not only for the damage caused by the act of persons for whom is responsible, or by things which are under his custody. This provision could be applied to cases where an AI system causes harm while under the custody of a party, such as an owner or operator of the system. In addition, Article 123 of the COC states that he who causes damage to another by his fault or negligence is bound to make reparation for it. This article could be used to hold a party liable for harm caused by an AI system if it can be shown that the harm resulted from their fault or negligence in the use, design or operation of the system. Finally, Article 131 of the COC stipulates that " the custodian of movable or immovable property shall be responsible for any damages

caused by such property, even when it is not under their actual management or supervision, such as a car while being driven, an airplane while flight, or elevator while in use. This legal consequence does not disappear unless the custodian provides evidence of a compelling force or fault of the affected party. It is not enough for the custodian to prove that they did not commit a mistake, and the existence of a previous contract between the custodian and the affected party does not prevent the imposition of liability for things, unless the law stipulates otherwise.

The civil liability of artificial intelligence refers to the legal responsibility of AI systems and their owners for any harm caused to individuals or property. In general, the question of liability for AI-related harm is complex and often depends on the specific circumstances of each case. Also, the liability could be attributed to various parties, including the owner or operator of the system, the manufacturer or designer of the system and the determination of liability would depend on factors such as the level of control exerted by each party over the AI system and the degree of foreseeable risk of harm

### **4.3 In England and USA**

In the United States, there is currently no comprehensive federal law governing the civil liability of AI. However, several States have enacted laws that address specific aspects of AI liability. For example, California has enacted a law that makes manufacturers of autonomous vehicles strictly liable for any accidents that are caused by defects in vehicle's software. Similarly, some states have enacted laws that address the liability of employers for harm caused by their employee's use of AI.

In addition to State laws, there are also common law principles that may apply to AI liability in the United States. For example, the doctrine of product liability may apply to individuals or entities that use or operate AI systems. One challenge in applying traditional legal principles to AI liability is that AI systems can operate in ways that are difficult to predict or understand. This can make it challenging to determine who should be held liable for harm caused by an AI system. To address this challenge, some legal experts have proposed a "hybrid" approach that would assign liability to both the manufacturer of the AI system and the user or operator of the system.

In England, the law governing the civil liability of AI is also evolving. In 2020, the UK government commissioned a review of the legal and regulatory framework for AI, which recommended the creation of a new legal framework for AI liability.

Under the current legal framework in England, liability for harm caused by AI systems may be governed by a variety of legal principles, including law of negligence, product liability and the law of contract. However, as with the United States, the application of these legal principles to AI can be complex and challenging.

To address these challenges, The UK government has proposed the creation of a new legal framework that would establish clear rules for AI liability. The proposed framework would be based on a "fault-based" approach, which would hold individuals and entities liable for harm caused by AI systems if they were at fault in some way (e.g., if they were negligent or breached a duty of care).

In conclusion, the civil liability of AI is an important issue that is still evolving in both the United States and England. While there is currently no comprehensive legal framework governing AI liability in either country, there are a variety of legal principles that may apply. As AI technology continues to advance, it will be important for lawmakers and legal experts to continue to develop and refine legal framework for AI liability.

## **5. CHALLENGES IN ATTRIBUTING RESPONSIBILITIES:**

There are several challenges in defining and attributing responsibility for harm caused by AI systems. Some of the key challenges include: complex decision-making, attribution of responsibility, lack of transparency and cultural and ethical norms. As for Complex decision-making, the AI systems often make decisions that are complex and opaque, making it difficult to determine how a particular decision was made and who is responsible for that decision. This can be particularly challenging when the AI system has been designed to learn and adapt over time, as the decision-making process may be constantly evolving. Concerning the Attribution of responsibility, It can be difficult to attribute responsibility for harm caused by AI systems, as there may be multiple parties involved in the design, development, and deployment of the system. In some cases, it may be difficult to determine who is ultimately responsible for the harm, as different parties may have contributed to the problem in different ways. As for the Lack of transparency, many AI systems are not transparent about how they make decisions or what data they use to inform those decisions. This lack of transparency can make it difficult to understand how the system is functioning and who is responsible for the decisions that are made. Finally, AI systems may be designed and deployed in ways that are inconsistent with cultural and ethical norms, making it difficult to determine who is responsible for the harm caused by the system. For example, an AI system that is designed to make hiring decisions may inadvertently perpetuate biases or discrimination, making it difficult to attribute responsibility for the harm caused.

As the use of AI becomes more widespread, it will be important to develop legal frameworks and ethical guidelines that can help to address these challenges and ensure that parties are held accountable for harm caused by AI systems.

## **6. CONCLUSION**

To conclude, the issue of civil liability in AI presents complex legal and ethical challenges that are continuously evolving. As AI advances and becomes more pervasive, it is essential to address the potential consequences and responsibilities associated with its use.

AI systems possess the ability to make autonomous decisions, provide recommendations, and perform tasks, introducing risks and raising accountability questions when negative outcomes occur. However, determining who should be held liable is challenging due to the unique characteristics of AI systems, including their complexity, lack of transparency, and involvement of multiple stakeholders.

One approach to tackling civil liability in AI is to adapt existing legal principles and establish clear guidelines for AI developers, users, and manufacturers. This may involve defining specific standards for AI safety and reliability, establishing regulatory bodies, and mandating transparency and accountability measures in AI development and deployment.

Another perspective is to shift the responsibility of liability to the entities responsible for designing, training, and implementing AI systems. This view considers AI as a product or service, thereby making the manufacturer or developer liable for any harm caused by their AI systems.

Additionally, comprehensive insurance mechanisms tailored to AI-related risks could provide financial protection and facilitate compensation for damages resulting from AI systems.

It is crucial to foster interdisciplinary collaboration among legal experts, policymakers, technologists, and ethicists to comprehensively address the challenges associated with civil liability in AI. Ongoing dialogue and cooperation can lead to the development of appropriate legal frameworks, ethical guidelines, and responsible practices that promote the benefits of AI while mitigating potential harm.

In conclusion, civil liability in AI is a multifaceted issue that necessitates careful consideration. By proactively addressing these concerns, we can promote the responsible development and deployment of AI technologies, ensuring their positive contribution to our lives and communities while minimizing potential harm.

## REFERENCES

- Russell, S. J., & Norvig, P. (2010). *Artificial Intelligence: A Modern Approach*. Prentice Hall.
- Goodfellow, I., Bengio, Y., & Courville, A. (2016). *Deep Learning*. MIT Press.
- McCarthy, J., Minsky, M. L., Rochester, N., & Shannon, C. E. (1955). A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence. *AI Magazine*, 27(4), 12-14.
- Kelleher, J. D., & Tierney, B. (2018). *Data Science: An Introduction*. CRC Press.
- Chui, M., Manyika, J., & Bughin, J. (2018). *Notes from the AI Frontier: Insights from hundreds of use cases*. McKinsey Global Institute.
- UNESCO (2021). *Ethics Guidelines for Trustworthy AI*. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000375729>
- OECD (2019). *OECD Principles on Artificial Intelligence*. Retrieved from <https://www.oecd.org/going-digital/ai/principles/>
- European Commission (2021). *Proposal for a Regulation on a European Approach for Artificial Intelligence*. Retrieved from [https://ec.europa.eu/info/sites/default/files/1\\_en\\_act\\_part1\\_v6.pdf](https://ec.europa.eu/info/sites/default/files/1_en_act_part1_v6.pdf)
- International Organization for Standardization (2020). *ISO/IEC 23894-1:2020 Artificial intelligence — Overview and vocabulary — Part 1: General considerations*. Retrieved from <https://www.iso.org/standard/75389.html>
- Global Partnership on Artificial Intelligence (2020). *The Global Partnership on Artificial Intelligence (GPAI) — Founding Document*. Retrieved from <https://gpai.ai/founding-document/>
- AI Now Institute (2021). *The State of AI Governance 2021*. Retrieved from [https://ainowinstitute.org/AI\\_Now\\_2021\\_Report.pdf](https://ainowinstitute.org/AI_Now_2021_Report.pdf)
- CFI.co (2021). *The Role of International Organizations in Shaping AI Regulation*. Retrieved from <https://cfi.co/technology/2021/06/the-role-of-international-organizations-in-shaping-ai-regulation/>
- California Legislative Information. (2016). Chapter 10.8. Autonomous Vehicles. Retrieved from [https://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?lawcode=VEH&sectionNum=38750](https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawcode=VEH&sectionNum=38750)
- Harris, R. J. (2019). Artificial Intelligence and Product Liability: A New Framework. *Stanford Technology Law Review*, 22(2), 249-295. <https://journals.law.stanford.edu/stanford-technology-law-review/online/artificial-intelligence-and0product-liability-new-framework>
- Schwartz, P. M. (2019). Tort Liability for Harm Caused by Artificial Intelligence. *UCLA Law Review*, 66(2), 294-342. <https://www.uclalawreview.org/tort-liability-for-harm-caused-by-artificial-intelligence/>
- UK Government. (2020). *The UK's AI Roadmap*. Retrieved from <https://www.gov.uk/government/publications/ai-roadmap>
- Birkett, H. (2019). A Legal Framework for Liability and Accountability for Artificial Intelligence. *Legal Studies*, 39(4), 557-579. <https://doi.org/10.1017/1st.2019.24>
- Kemp, M. (2020). How can English law adapt to cope with the challenges of AI? *Artificial Intelligence and Law*, 28(3), 309-324 . <https://doi.org/10.1007/s10506-020-09262-6>