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Civil Liability for the Damages of Artificial Intelligence in Jordanian Legislation

Hammam Al Afeef [1]

Abstract

This study examined the civil liability for the damages of Artificial Intelligence in Jordanian legislation. It specifically aimed to reveal the nature of this type of civil liability. Besides, it ventured to highlight the legal problems raised by the subject of civil liability for damages of Artificial Intelligence. The descriptive comparative approach was used to describe the phenomenon and compare Arabic legal systems and the European position towards the legal issues raised by this study. The findings revealed that the Jordanian legislator emphasized the conditions for achieving civil liability for mechanical machines. The study recommends applying the rules of civil liability to these systems that resemble humans in their behavior, intelligence, and awareness of matters.

Keywords: Civil, liability, damages, artificial intelligence, legislation, jordan.

Introduction

The unprecedented technological development has introduced Artificial Intelligence as the most advanced human technology. This new technology has obviously entered different aspects of human life. Due to its newness, the world has not realized all the damages that artificial intelligence may cause. In this respect, our unawareness of the extent to which AI technology can affect our life makes us vulnerable to the damage it may cause. The damage it causes may affect our personal, social, or economical life. Therefore, AI has raised many questions regarding civil liability for damages of artificial intelligence machines.

Liability is an obligation incurred by a person to guarantee his actions (Alshurman & Albnian, 2024, p722). In this respect, scholars differentiate between two types of liability; contractual liability and tort liability (Abdulameer, 2024, p327). This is also evident through the efforts of other scholars (Čerka, et al., 2015, p376; Ziemianin, 2021, p2; Yas, et al., 2023, p433; Marchisio, 2021, p54).

The existing research on civil liability has not examined civil liability for the damages of artificial intelligence.This increases the need for carrying out a research on the said topic. Therefore, this study aimed to investigate the civil liability for the damages of Artificial Intelligence in Jordanian legislation. It specifically aimed to reveal the nature of this type of civil liability. Besides, it

[1] Arab and International Police Administration Interpol, Department of International Prosecution. Hammamalafeef8@gmail.com, ORCID https://orcid.org/0009-0009-5587-493X

ventured to highlight the legal problems raised by the subject of civil liability for damages of Artificial Intelligence.

Thus, the problem of this study is represented in civil liability for the damages of Artificial Intelligence. This issue prompted legislators to seek solutions, given the risks that the world faces from the technologies of Artificial Intelligence, especially that it is not possible to predict what it may do .The study mainly identifies the extent to which civil liability for damages of artificial intelligence is dealt with in the Jordanian legislation. It also presents the definition of artificial intelligence according to the Jordanian legislation. Furthermore, it investigates whether the Jordanian legislation refers to forms of liability for the damage caused by artificial intelligence. Besides, it ventures to know whether the Jordanian legislation refers to the conditions and rules for achieving civil liability for mechanical machines.

Literature Review

The American computer scientist John McCarthy is the first to coin the term 'Artificial Intelligence' on June 18, 1956 (Zaraté, 2021, p 06). He defined it as "The science and engineering of creating intelligent machines, especially intelligent computer programs, or the branch of computer science that aims to create intelligent machines.

The development taking place in the field of Artificial Intelligence systems has imposed an ethical and legislative development to establish certain laws and legislations. Such laws should keep pace with the development taking place in the field of Artificial Intelligence systems. This has necessitated the development of legislation that regulates the work of Artificial Intelligence systems. In this respect, the ethical aspect as well as the legislative aspect became more important to face the harm caused by Artificial Intelligence systems to humans (Al-Khatib, 2018, p 21).

The need to develop laws that keep pace with the unprecedented technological advancement is realized by scholars from different countries. In this respect, Jaremko, et al. (2019, p 107) realized the damages that artificial intelligence may cause when it is used in Radiology department. Noting the legal issues arising from the Canadian Association of Radiologists' application of artificial intelligence, the researchers emphasized the need to manage the the legal and ethical issues associated with the use of artificial intelligence.

Furthermore, Jarota (2023, p 1) examined the proposed European Union Regulations on Artificial Intelligence from an occupational health and Safety. The study concluded that the proposed model for regulating AI by the EU legislator is insufficient. Other studies emphasize AI liability as a necessity to be regulated by

legislations (Barbereau & Bodó, 2023; Buiten, et al., 2023; Cancela-Outeda, 2024; Ludvigsen & Nagaraja, 2022; Montagnani, 2024; Nizioł, 2021; Rompaey, et al., 2022; Vellinga, 2023).

The legal basis for the civil liability for the custody of dangerous objects and machinery is evident in Article (291) of the Jordanian Civil Code and Article (1242L) of the French Civil Code. The later stipulates that "everyone who has objects that require special care to prevent damage to them, or mechanical machinery, at his disposal, is responsible for the damage caused by these things, except for what cannot be avoided..." (Article (1242L) of the French Civil Code). Part of jurisprudence sees the possibility of establishing the liability of the robot for the damages that occur because of it. This is based on the liability of the subordinate for the actions of the dominant. The basis of this liability is Paragraph (B) of the text of Article (288) of the Jordanian Civil Code and Article (B-313) of the UAE Civil Transactions Law. The researcher believes that in order for the dominant to be liable for the actions of his subordinate, the legislator requires that there be a subordination relationship between the subordinate and the dominant. This is achieved if the dominant has actual authority over the subordinate in monitoring and directing (Al-Maadawi, 2012, p 340).

The European legislator introduced the theory of liability for defective products in accordance with Directive No. (85/374) issued on July 25, 1985. The aim was to frame the issues of civil liability for robots in the laws of member states of the European Union (Filali, 2018, p 130). In this respect, the French legislator has regulated liability for defective products in Article (1245) and what follows under Decree No. (131-2016) issued on 2/10/2016. Besides, some Arab legislations have done the same to regulate this liability. This is confirmed by Article (1-1245) of the French Civil Code: "The producer is responsible for the damage resulting from the defect in the product, even if there was no contractual relationship between him and the affected party." By extrapolating the aforementioned texts and analyzing them, it becomes clear that the basis for establishing this liability is the defect in the product, regardless of the producer's fault or not. It is a basis that is consistent with the scope of damages that result from defective products. In this respect, it obliges the producer to bear the consequences of these damages in accordance with the theory of bearing responsibility. That is, he bears the consequences of his activity. Since he gains profit, he must also be fined. For example, the French legislator has adopted the broad concept of defect in the sense that he made the producer legally responsible for the product that does not provide the safety and security that the consumer expects (Al-Maadawi, 2012, p 96).

Contrastingly, some jurisprudence believes that the system of civil liability due to the damages of smart robots finds its basis in the theory of liability for defective products. According to this theory, the producer bears responsibility for his defective products as a result of the failure to achieve safety and security in his products (Al-Naimat, 2020, p 51). From this standpoint, the theory that considers the robot as a product recognizes that the burden of compensation for the damages it causes must be placed on its custodians, owners, or users.

Research Questions

This study will answer the following main question:

- To what extent is civil liability for damages of artificial intelligence dealt with in the Jordanian legislation?

It will also answer the following sub-questions:

1. What is artificial intelligence according to the Jordanian legislation?
2. Does the Jordanian legislation refer to forms of liability for the damage caused by artificial intelligence?
3. Does the Jordanian legislation refer to the conditions for achieving civil liability for mechanical machines?
4. Does the Jordanian legislation refer to the general rule in establishing criminal liability for damages caused by artificial intelligence?

Research Objectives

This study will achieve the following main objective:

- To know the extent to which civil liability for damages of artificial intelligence is dealt with in the Jordanian legislation.

It will also achieve the following sub-objectives;

1. To know artificial intelligence according to the Jordanian legislation.
2. To find out whether the Jordanian legislation refers to forms of liability for the damage caused by artificial intelligence.
3. To know whether the Jordanian legislation refers to the conditions for achieving civil liability for mechanical machines.
4. To know whether the Jordanian legislation refers to the general rule in establishing criminal liability for damages caused by artificial intelligence.

Research Methods

This qualitative research seeks to know the civil liability for the damages of Artificial Intelligence in the Jordanian legislation.Being a legal investigation, it uses the descriptive analytical approach to describe the phenomenon and analyze

the related legal texts. In this respect, the study is applied to the Jordanian legislation. Moreover, it uses the comparative origins approach between Arab legal systems and the European position towards the legal issues raised by this study. But it doesn't neglect the importance of analyzing and discussing legal texts which determine the extent of the authority of the general rules in Jordanian law and compared to the damages of Artificial Intelligence, and the various and different judicial positions to reach the objectives of the study. The Jordanian Civil Code and the French Civil Code are analyzed. The analysis focuses on the civil liability arising from the damages caused by Artificial Intelligence.

Results and Discussion

The Jordanian legislator did not regulate liability for defective products as a basis for holding smart robots accountable in civil law. To avoid this legislative deficiency, it was necessary to resort to Consumer Protection Law No. (7) of 2017. This is due to the interference of technology and modern technologies in all areas of industry and production. This result is consistent with (Al-khatib, 2018, p 21; Jaremko, et al., 2019, p 107; Jarota, 2023, p 1; Barbereau & Bodó, 2023; Buiten, et al., 2023). It is also due to the emergence of accidents and damages that negatively affect the health and safety of people and property (Cancela-Outeda, 2024; Ludvigsen & Nagaraja, 2022; Montagnani, 2024; Nizioł, 2021; Rompaey, et al., 2022; Vellinga, 2023; Al-Maadawi, 2012, p 340; Filali, 2018, p 130; Al-Naimat, 2020, p 51); Al-Majali, 2020, p 228). Therefore, it was necessary to clarify the extent of its application and comprehension of the damages resulting from smart robots. In this respect, Article (19) of the same law regarding product liability stipulates that “The supplier shall be responsible for the damage resulting from the defective good or service, except in any of the following two cases: if he does not put the good or service into circulation, or if the damage occurred due to the fault of the affected person or for a reason that has nothing to do with the supplier." Moreover, "The supplier shall be responsible for any violation of the provisions of this law is committed by any person whom he represents legally, who works for him, or deals with consumers on his behalf.” (Article (18) of the Jordanian Consumer Protection Law No. 7 of 2017). “Liability shall be joint and several among the suppliers that caused or knew of the existence of a defect in a good or service that was sold to the consumer.” (Article (20) of the Jordanian Consumer Protection Law No. 7 of 2017). Furthermore, Article (2) from the same law defined the producer to whom liability may be attributed for the defective product supplied as “a natural or legal person from the public or private sector who carries out an activity consisting of distributing, trading, manufacturing, leasing, or providing services to the consumer, whether in his name or for the

account of others, including any person who places his name, trademark, or any other distinguishing mark he owns on the good or service." Furthermore, Article (3) of the Jordanian Standards and Metrology Law No. (38) of (2015) stipulates that "the provisions of this law shall apply to every natural or legal person who carries out any commercial activity, including distribution, manufacturing, or modification to the product that affects its safety." By extrapolating the previous texts, it is clear that the legislator has expanded the circle of persons responsible for compensating the affected person for the damage resulting from the defective product. This is consistent with (Cancela-Outeda, 2024; Ludvigsen & Nagaraja, 2022; Montagnani, 2024; Nizioł, 2021; Rompaey, et al., 2022; Vellinga, 2023; Al-Maadawi, 2012, p 340; Filali, 2018, p 130; Al-Naimat, 2020, p 51).The product within the meaning of this article includes material and non-material products. Only those that are explicitly excluded in the text of the article above are excluded from it.

The researcher believes that delving into the extent of the possibility of applying these conditions to the case of damage caused by smart robots to others, and relying on the rules of liability for defective products regarding compensation for those damages, requires a certain degree of analysis. This is because the issue of assigning the affected party to prove the existence of a defect in the programs themselves, or their physical applications, is surrounded by technical complexities. Such complexities make it difficult for the affected party to familiarize themselves with. In some cases, these programs or their applications may not be defective. This indicates the exclusion of the application of the provisions of this liability. The justification for the above is that liability for defective products, even when implemented in some damages of a technical nature in order to alleviate the burden of the affected person, may be problematic if the affected party is required to prove the defect in the product. Besides, the matter might get worse, threatening to negate the purpose of that responsibility, and nullifying its effect in the event of multiple persons involved in the manufacture, programming, and development of smart robots. This makes it impossible for the affected party to rely on it to obtain compensation due to the ease with which the producer exempts himself of responsibility in accordance with Article (19) of the Jordanian Consumer Protection Law. This law enumerates cases in which the producer is not responsible for damage to his defective product, if proven that the product was not released for circulation in the markets, or that the damage occurred due to the fault of the affected party, or due to an outside cause that the supplier is not responsible for, or that the defect appeared in the product despite compliance with all legislative and regulatory rules (Fath al-Bab, 2021, p 88).Moreover, the implementation of the provisions of liability for defective products constitutes a

real obstacle to scientific, technological, and cognitive progress (Al-Fatlawy, Al-Mashhadi, 2022, p 62).

Some jurists believe that the provisions of agency can be applied to the issue of damages caused by Artificial Intelligence technologies, given that the robot based on Artificial Intelligence is the agent of the principal. This point aligns with (Al-khatib, 2018, p 21; Jaremko, et al., 2019, p 107; Jarota, 2023, p 1; Barbereau & Bodó, 2023; Buiten, et al., 2023). Besides, the latter has implicitly become his agent as soon as it is put to use. The Jordanian legislator defined agency in Article (833) of the Civil Code as "a contract according to which the principal appoints another person in his place in a known permissible act." The Egyptian legislator defined it in Article (699) of the Civil Code as: "a contract according to which the agent is obligated to carry out legal work on behalf of the principal." Thus, there are characteristics for the agency contract. It is distinguished by the fact that it is one of the consensual contracts that does not require a specific condition for its conclusion. Rather, it is sufficient for there to be an offer and acceptance (Zakri, 2013, p 5). So, it can be concluded explicitly or implicitly, and the purpose in this case is for the principal to authorize the agent to act in his name and for the effects of this action to refer back to him rather than the agent (Article (87) of the Jordanian Civil Law No. 43 of 1976). Besides, the validity of the agency requires that the principal be competent to conclude the contract because the agent derives custody in the contract from him. Thus, everything that is valid and permissible to be done by the principal, and is among the dispositions that accept representation, can be delegated to someone else (Article (834) of the Jordanian Civil Law No. 43 of 1976). The necessary condition, as we see, is the principal's possession to do what he delegates to others. Therefore, what he does not own for himself is that he does not have the right to delegate. For this reason, it is neither valid for an insane person, nor from an indiscernible child, to delegate. Since the agent expresses his own will, not the will of the principal, in accordance with the general rules in the theory of agency, it is sufficient for him to discriminate, even if he is a minor, for his actions to be considered valid (Dariman, 2017, p 141).

In general, the person according to the law are the natural person and the legal person. The legislator has granted each of them a legal status consistent with its nature and privacy. The natural person deals with the concept of the tangible and the material person represented by a human being in his real or expected physical existence. Contrastingly, the legal person is represented by the intangible, moral person whose existence is assumed to achieve certain purposes by the law (Al-Khatib, 2018, p 104). On this basis, the researcher believes that it is extremely difficult to apply the agency's provisions to the relationship existing between the

robot based on Artificial Intelligence and the user who may be the custodian or the one who has actual control. This can be attributed to the fact that not all Western and Arab laws have granted the robot an independent legal personality so that rights are granted to it and obligations are imposed on it. Given its lack of this personality, it does not have the legal will required to be able to conclude an agency contract. Accordingly, the lack of legal will of the robot leads to a lack of acceptance on the part of the agent as a basic pillar of the agency contract. This point agrees with (Cancela-Outeda, 2024; Ludvigsen & Nagaraja, 2022; Montagnani, 2024; Nizioł, 2021; Rompaey, et al., 2022; Vellinga, 2023; Al-Maadawi, 2012, p 340; Filali, 2018, p 130; Al-Naimat, 2020, p 51). This results in the invalidity of the agency contract, in addition to the fact that the robot does not have the necessary legal capacity required by the Jordanian legislator.

Part of the jurisprudence holds that the Jordanian and Kuwaiti legislators accepted the idea of prosecution by force of law when it explicitly stipulated that the minor's guardian represents him in assuming responsibility by law. Article (18, 256) of the Jordanian Civil Code and Article (5) of the Kuwaiti Civil Information System Law No. 32 of 1982). These Articles give the theory of the human representative in responsibility for the robot a logical support as it is the closest thing to the representation of the guardian over the minor as a result of the similarity in the lack of capacity of the minor with the absence of a legal personality for the machine at the present time.

Conclusion

Artificial intelligence is a physical or digital system, or both, that aims to mimic intelligent human behavior. In this respect, the Jordanian Civil Code referred to forms of responsibility, which included responsibility for guarding animals in Article 289, as well as for building guards in Article 290. The third of these forms of responsibility was specified, responsibility for things and machines. Moreover, the Jordanian legislator emphasized the conditions that achieve civil liability for mechanical machines. These conditions are summarized in the occurrence of damage, and this damage is caused by a machine, which requires that that machine intervene positively in causing the damage, and that that machine must also be in the defendant's custody, or subject to his disposal. It adopted the general rule in establishing criminal liability, which is that the person who commits the crime has freedom of will and choice, and if these two elements are not available, criminal liability does not exist against him.

Recommendations

This study recommends the following:

- The legislator should now adopt the idea of preparing a draft law that regulates Artificial Intelligence technologies and how to use them to benefit the state and citizens alike.
- It is necessary to reach a concept that allows the application of the rules of criminal responsibility to these systems that resemble humans in their behavior, intelligence, and awareness of matters.
- Determining the responsibility of the producer, the user, and those involved in Artificial Intelligence crimes, so that these situations are codified in a way that allows each of them to be held accountable.
- Reconsidering the penal and criminal systems to suit this new type of crime.

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