
AN ANALYSIS OF THE LIABILITY OF ARTIFICIAL INTELLIGENCE AND ITS LEGISLATIONS

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Introduction

"AI is computer code that learns and adapts," explains Google CEO Sundar Pichai. Artificial intelligence (AI) is the research and development (or theory) of computer systems that can accomplish activities that would typically need human intellect. A robot or artificial person, not a natural or legal person, is AI. People often associate artificial intelligence with humanoid robots, although the term encompasses a considerably more comprehensive range of capabilities. Machine learning, bots, and self-driving vehicles are examples of other forms of AI. Machines using AI can function without the need for human involvement. Reasoning, knowledge, planning, communication, and perception are all examples of these traits. These traits enable them to aid people by simplifying ordinary activities. Several thought leaders have expressed their reservations about AI's deployment and the potential harm to humanity. AI's usage, manufacture, behavior, and responsibility cannot be regulated by present artificial intelligence regulations. Although laws are necessary, determining how and to what degree AI should be governed is challenging because of its rapid growth. Hence it is very vital to arbitrate a balance between protection and innovation.

This is a global problem, and we need a new universal law to handle the evolution of AI legislation on a worldwide scale. It may require adjustments to other statutes and changes to common law concepts as it develops. To overcome technological challenges, legal experts must incorporate AI developers in the writing process. We cannot dismiss the worries expressed by thought leaders such as Elon Musk and Bill Gates. Given how AI is portrayed in Hollywood films, it's debatable if AI will bring about the end of the planet.

The usage of artificial intelligence (AI) has exploded. In 2019, the AI market had total revenues \$27.3 billion, and by 2026, it is expected to be worth \$266.92 billion¹. AI applications that are

¹ Shanhong Liu, Artificial intelligence software market revenue worldwide 2018-2025, Sep 10, 2021

² Ryan E Long, Artificial intelligence liability: the rules are changing, LSE business review, Aug 2021.

related to it have also risen in popularity. For instance, the market for face recognition technology, which heavily relies on AI, was worth \$3.72 billion in 2020 and is expected to reach \$11.62 billion by 2026. At the very same time, AI has been reported to misidentify faces when utilized in facial recognition technologies, among other things².

In the face of technological threats, the appropriateness and completeness of liability regimes are critical for society. Though the system is insufficient, defective, or lacking in dealing with losses produced by evolving digital technology, victims may go uncompensated entirely or partly, even if an overall fair analysis supports indemnification. The societal consequences of a probable deficiency in present legal frameworks in addressing new hazards posed by evolving digital technology might jeopardize the anticipated advantages. Certain circumstances, such as the growing presence of developing digital technologies in all sectors of social life and the multiplying impact of automation, might compound the harm caused by these technologies. In a highly linked culture, damages may easily become viral and spread quickly.

The approach taken by me in this paper is qualitative research since it's questioning the legal identity of artificial intelligence in regard to liability issues. So there is no scope of quantitative research per se in this paper.

Qualitative research is written down. It's utilised to comprehend ideas, thoughts, and experiences. This form of study allows you to learn more about issues that aren't well-understood. Hence this paper focuses on analysing the international legislatures which have been implemented to regulate AI and also questioning whether artificial intelligence is or not given a legal status or identity, if not whether it should be given or not. So doing qualitative research in this aspect is more suitable. Whether AI can be considered as a legal entity and held liable or are the developers, designers, etc. of AI held liable.

Personhood of AI

The first issue that emerges is whether AI is a legal person. Legal personhood is defined in Article 21 of the Indian Constitution² as a quality of individual autonomy. In India, despite the fact that legal personality is not restricted to individuals, it has not been granted to a piece of technology. Furthermore, the Companies Act, which affords businesses the status of a distinct

² Article 21 of Constitution of India: Protection of Life and Personal Liberty. Article 21 states that "No person shall be deprived of his life or personal liberty except according to a procedure established by law."

⁴ *Robert Whymant*, Robot kills factory worker, From the Guardian archive, Dec 2014.

legal body, provides a precedent for providing AI legal personality. The difference between AI and companies is that, although firms are autonomous, their stakeholders keep them accountable, while AI is really autonomous.

A robot sent to execute specialized industrial operations murdered Kenji Urada, an engineer at the Kawasaki heavy industries company. This was the first documented fatality caused by a robot in the world. The robot was not switched off or disconnected from power source while Kenji was fixing it, and the automated machines programme recognized Kenji as a barrier, according to reports. It then used its massive hydraulic arm to forcibly drive Kenji into a neighboring machine, killing him immediately. No criminal legislation in the globe is clear about how to respond with cases when robots are involved in the commission of a specific crime or in the harm to a person.⁴ Because a person's or entity's legal position is inextricably related to their autonomy, this status is bestowed not just on persons, but also on cooperatives, businesses, and organisations.

However, no legal system has yet recognised artificial intelligence as a legal entity, with the exception of Saudi Arabia, where a robot named Sophia, which is the state, has recognised a noble person living

inside the state, an artificially intelligent humanoid as a citizen of the nation with rights and obligations equivalent to those of human beings. The topic of providing legal entities to artificial intelligence robots or software hinges on whether they may be entrusted with specific rights and responsibilities that would normally be assigned to a live human³.

Sophie, an artificially intelligent humanoid, has been awarded citizenship in Saudi Arabia⁴, with the same rights and responsibilities as all other citizens. However, since AI is still in its infancy in India, it has no legal standing. The capacity to determine an AI entity's civil and criminal culpability is contingent on whether or not it is accorded legal personhood. While moral and legal consequences may exist, practical and financial considerations may become more significant in the future when awarding legal personality to AI systems.

According to Kelsen's research on personality, legal personhood is just a "technical personification" for the purpose of asserting claims to responsibilities, rights, and liabilities.

³ Gyandeep Chaudhary, ARTIFICIAL INTELLIGENCE: THE LIABILITY PARADOX, *ILI Law Review*, Summer Issue 2020.

⁴ Gali Katznelson, AI Citizen Sophia and Legal Status, *petrieflom Harvard law blog*, Nov 2017.

Legal personality is a means of structuring an entity's rights and responsibilities. According to the Hohfeldian study of rights, every right has a matching obligation as its jural correlative. Studying these conceptions from a jurisprudential perspective sheds insight on the question of whether granting legal personality to robots is an appropriate way to assert their rights and obligations. Those participating in the creation, development, or operation of the AI system may have their criminal liability lowered as a result of the award of legal personality. According to others, giving legal personhood to an AI entity for the purpose of establishing responsibility may not be necessary at this point in time, when technology is still being developed and tested in new industries. It may be important in the near future to give AI systems personality so that they may be held accountable for their actions, given the increasing reliance on AI systems. However, the human psyche has shown certain 'black box'⁵ capabilities in which acts performed by such a person could not be validated for any reason. In the past, court also held humans accountable in similar circumstances based on fault-based responsibility. Nonetheless, it is reasonable to argue that such punishments can only be imposed on a legal organization.

Legal liability of artificial intelligence

The regime of artificial intelligence gives rise to ethical and moral issues since there is a lack of legal and legislative framework as well as a better policy structure. As a result, identifying the nature of AI systems as an entity might help to address the need for policy guidelines for firms (creators, developers, manufacturers, and software programmers of AI systems) and the government to fulfil different ethical and legal requirements⁶. As a result, the burden of proof may or may not be transferred from the designers to the AI system that has some self-control⁷.

Although we the people are the developers and programmers of artificial intelligence, it is still completely automated its still capable in evolving on its own given new variables, data and circumstances which may cause malfunction or override its own programming data, which leads to commission of offences or violate the law even though the developer of the AI did not intend to so.

Under any country's state law, the criminal responsibility of artificially intelligent robots is unclear. As a result, only court declarations serve as the major source of judgement in situations

⁵ <https://www.thinkautomation.com/bots-and-ai/the-ai-black-box-problem>

⁶ Gyandeep Chaudhary, ARTIFICIAL INTELLIGENCE: THE LIABILITY PARADOX, ILI Law Review, Summer Issue 2020.

⁷ Priyanka Majumdar, Bindu Ronald et.al., "Artificial Intelligence, Legal Personhood and Determination of Criminal Liability"⁶ Journal of Critical Reviews 323 (2019).

where artificial intelligence is accountable for committing a particular crime (including or omitting the creator's orders that produced such artificial intelligence robot software or algorithms).

1. CRIMINAL LIABILITY

According to Gabriel Hallevy, a renowned legal scholar and lawyer, some AI systems may fulfil the key elements of criminal culpability, constituting actus reus, or an act or omission. Furthermore, men's rea, which requires information and knowledge, and strict liability offences, which do not need men's rea, are two types of crimes.

Hallevy proposes a three-part approach to investigate AI system crimes⁸:

- a) AI liability when another is responsible for the crime.

An innocent agent is an underage, Intellectually disabled person, or a creature who perpetrate an offence because they lack the intellectual capacity to assert men's rea under criminal responsibility. In the situation of strict responsibility, the same is true. However, if they are utilized as a tool by a criminal to carry out their illicit acts, the person who gave the instruction will be held legally accountable. As a result, under this concept, the AI system is considered an innocent actor, while the human providing it instructions is considered the criminal.

- b) The liability of AI's natural likely outcome

As a consequence of their activities, a reasonable programmer or user would have recognised the crime as a logical and expected outcome and taken the necessary precautions to prevent it. The Artificial Intelligence when it expressly commits any damages due to negligent act or programming, it may not may not be held liable, but it may be held accountable if it acts independently or against its programming. So, in the scenario of the Ahmedabad doctor who conducted telerobotic surgery on a patient 32 kilometers distant, the robot would be held accountable for any injury it caused if it began operating in a way that its software did not recommend⁹.

⁸ Hallevy, Prof. Gabriel, The Basic Models of Criminal Liability of AI Systems and Outer Circles, June 11.

⁹ Yueh-Hsuan Weng, Chien-Hsun Chen, and Chuen-Tsai Sun. "Toward The Human-Robot Co-Existence Society: On Safety Intelligence For Next Generation Robots" , *International Journal of Social Robotics*, 1(4), pp.267-282, 2009

c) Artificial intelligence's direct responsibility

This paradigm encompasses all of an AI's actions that are independent of the developer or the user. The AI will be entirely liable in circumstances of strict responsibility when men's rea is not necessary to be established. For instance, The car which is powered by artificial intelligence to perform on its as in self-drive, if it crosses the prescribes limit of speed and results in overspeeding then under strict liability, the autonomous car would be held liable.

2. CIVIL LIABILITY

When the software is defective or a person incurs damages as a consequence of using it, the legal actions usually charge carelessness rather than criminal culpability¹⁰.

When there is a matter of accused's duty of care, Gerstner brings out that the software or system vendor plainly owes the customer a reasonable obligation; yet, quantifying the amount of standard care required is problematic¹¹. If the system in issue is a "expert system," the level of care should be at the very least professional, if not expert.

Finally, whether AI systems may cause or be assumed that the breach causes damaged to the plaintiff is disputed. However, the important matter in Artificial Intelligence is whether the AI programmes, similar to professional systems, guides a solution in a given circumstance or if the AI programme, such as an automated automobile, rationalizes a particular alternative and acts accordingly.

As a consequence, even though the earlier scenario involves at least one foreign aparty, making causality more difficult to establish, the later scenario does not. As a result, causation is relatively easy to establish.

Legal regulation on artificial intelligence

1. International law

The law has taken a long time to govern AI. In *Jones v. W + M Automation, Inc.*¹², for example, the Appellate Division of New York rejected the plaintiff's product defect action against a

¹⁰ Tuthill G.S, Legal Liabilities and Expert Systems, AI Expert 1991

¹¹ Gyandeep Chaudhary, ARTIFICIAL INTELLIGENCE: THE LIABILITY PARADOX, ILI Law Review, Summer Issue 2020.

¹² *Jones v. W + M Automation, Inc* 31 A.D.3d 1099 (2006).

robotic loading system manufacturer and programmer. The defendants were not held liable for the plaintiff's damages at the GM facility where he was employed, according to the court, since they demonstrated that they "produced only non-defective component components." As long as the robot – and accompanying software – was "reasonably safe when programmed and installed.", the defendants were not responsible for plaintiff's losses

However, GM, the end user, may still be held accountable if the hardware or software was inappropriately modified. The inference is that AI software or hardware designers aren't accountable for any harm as long as the goods were free of defects when they were created. However, both the licensor and the licensee may be liable for damages caused by defectively manufactured AI or AI that has been changed by a licensee. Whether AI is defectively produced will be determined by current industry standards, as with other product liability instances.

The Federal Trade Commission has issued rules for the regulation of artificial intelligence. On April 8, 2020, the Commission published a blog post titled "Using Artificial Intelligence and Algorithms," essentially proposing that companies that use or licence AI in a way that impacts consumer well-being do so in a "transparent" manner – especially when it comes to credit decisions. As a result, many choices on AI's usage and implementation in the consumer context may be governed by Section (5)(a) of the FTC Act¹³, which states that "unfair or deceptive acts or practises in or affecting commerce... are... deemed illegal."

The EU has also established rules on AI liability. Artificial Intelligence liability and Other Emerging Technologies was launched in 2019. According to the paper, certain AI applications will be subject to severe liability, such as those that operate "AI-driven robots in public spaces." Manufacturers of items that contain developing digital technology, such as AI, should be held "liable for harm caused by faults in their products." as they are for other products. "Even if the fault was created by alterations made to the product [while it was still] within the producer's control," the manufacturer may be held accountable¹⁴.

More recently, the EU published a white paper on artificial intelligence, stating that "high-risk AI applications" such as healthcare, transportation, and energy will be subject to extra

¹³ <https://www.ftc.gov/enforcement/statutes/federal-trade-commission-act>

¹⁴ Directorate-General for Justice and Consumers (European Commission), Liability for artificial intelligence and other emerging digital technologies, 2019.

compliance standards. These extra criteria include, among other things, keeping track of the AI algorithm in use.

The European Union has recommended laws to regulate use of artificial intelligence, which could become the de facto global policies on to regulate the advanced technologies. The new legislation are required because they would be applicable to any automated intelligent machine whose judgments have an effect on EU nationals, whether they are customers or employees. Most large global corporations can't afford to ignore a 450 million-strong market and labour. Although it is typically impossible to maintain distinct systems for different locations, A.I. algorithms are often more accurate when given additional data and training. The new legislation might have a similar impact as the EU's data privacy policy, the General Data Protection Regulation (GDPR)¹⁵, which took effect in May 2018 and soon became the de facto privacy standard for many of the world's largest corporations.

The White Paper sets out policy options for accomplishing the dual aim of boosting AI use while also minimising the risks associated with particular AI applications. This proposal tries to accomplish the second aim for the construction of a trust ecosystem by establishing a legal foundation for trustworthy AI.

2.Indian law

One may argue that the current regulatory framework for AI systems at the national and international levels is insufficient to meet the myriad ethical and legal challenges that it raises. The ad hoc legislation that persists in India in the view of determining the liability and rights of AI systems is discussed below:

The Information Technology Act of 2000¹⁶ (IT Act) attempts to regulate all aspects of modern day technology by attempting to define computer and related terms such as software, but The IT Act does not cover the cyberspace of Things, data and analytics, or AI, nor do the obligations that may be incurred by people utilising these IT media. The Indian government did not put a high value on the scope of power conferred by AI statutes and countermeasures, given that the Act's primary purpose was to provide legal validity to electronic signatures and electronic documents.

¹⁵ <https://gdpr-info.eu/>

¹⁶ <https://www.meity.gov.in/content/information-technology-act-2000>

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Furthermore, the Companies Act, which affords businesses the status of a distinct legal body, provides a precedent for providing AI legal personality. The difference between AI and companies is that, although firms are autonomous, their stakeholders keep them accountable, while AI is really autonomous.

The patentability of AI, (true and first owner), rightful owner, and accountability for AI's actions and omissions are some of the major solcitudes conveyed under this Act. Although it is often known or inferred, Section 6 read with Section 2(1)(y) of the Act does not expressly state that a 'person' must be a natural person. AI does not yet have legal personality, hence it is not covered by the law. This law governs the handling of Indian residents' personal data by governmental and commercial organisations both inside and beyond India. It places a strong emphasis on 'permission' for data fiduciaries to handle such data, with certain exceptions. Data gathered from many internet sources by AI software in order to monitor consumer behaviour, such as transaction, internet content, and financial transactions, might be dramatically altered if this plan is passed into law.

A complaint may sue a manufacturer, service provider, or seller of a product for any injury caused to him as a result of a faulty product under Section 83 of the Consumer Protection Act of 2019¹⁷. This creates a manufacturer's/accountability seller's for any damage caused by an AI entity. The concepts of vicarious and strict responsibility apply in determining culpability for AI's harmful actions or omissions.

Since a computer programme is not considered an agent under *Harish Chandra*, there is no in direct responsibility under criminal law for an individual's illicit actions.²⁰

¹⁷ Under Section 83 of CPA 2019, a complainant can bring in a product liability action for any harm caused to him on account of the defective product. Such an action can be brought against a product manufacturer, or a product service provider or a product seller.

²⁰ AIR 1945 ALL 90 *Harish Chandra Bagla v. Emperor*

Conclusion

Today, AI is not given recognition as a legal entity under both national and international legislations, which portrays that it cannot be held liable for any instances where in harm is inflicted. As a result, the principle enshrined in Article 12 under the New York convention¹⁸, which states that for whom the system was programmed should eventually be held liable for any act done or message generated by that system, may be applied to AI liability.

The direct responsibility model proposed by Hallevy may be employed in light of the preceding reasoning, which says that a stringent liability criterion may constrain the AI system's behaviour while allowing other actors untouched. Strict liability from Hallevy's Direct Liability model may be applied to an independent third party (natural or legal person) who designed and developed the AI machine, regardless of whether such action by an AI system was designed or envisioned. This new notion of AI as a Tool can be derived.

When an AI system is considered as an AI-as-Tool, strict or vicarious culpability for damages caused by the AI system may be simply imposed. However, establishing the burden of evidence adequately would be difficult due to how an AI system functions and its basic principles, such as autonomous decision making. We can't tell the difference between damage implicated by a product defect and injuries incurred by an AI action since AI is an automated evolving system. That is why a liability model like this is only useful if legislators have a clear idea of how to modify existing laws or establish new ones to handle the issue of AI systems' accountability as their impact on human lives grows.

Recent research¹⁹ demonstrate that, at this point of development, more advanced phases of development may reach the construction of explainable models of AI systems, as we are transitioning between "Artificial Narrow Intelligence" (ANI) or weak AI and "Artificial General Intelligence" (AGI) or strong AI. Furthermore, such models may greatly aid in the understanding and resolution of issues. Specific responsibility rules created for AI systems in conformity with the rule of law must restore vicarious liability, product liability and strict

¹⁸ United Nations Convention on the Use of Electronic Communications in International Contracts (New York, 2005)

¹⁹ Rudin, C., & Radin, J. (2019). Why Are We Using Black Box Models in AI When We Don't Need To? A Lesson From An Explainable AI Competition. *Harvard Data Science Review*, 1(2). <https://doi.org/10.1162/99608f92.5a8a3a3d>

liability postulates. As a result, developing such systems will only be conceivable if AI systems have been granted legal personhood and a legislative framework in which to operate.