Determination of Civil and Criminal liability of Artificial intelligence

Pritam Kumar
National University of Study and Research in Law, Ranchi, Jharkhand, India

Abstract
Artificial intelligence (AI) is rapidly becoming a part of our lives, and with it comes the question of liability for any harm that AI may cause. Current civil laws are not well-equipped to deal with this issue, as they are based on the assumption that only humans can be held liable for their actions. This paper will explore the legal implications of AI-caused harm, and will consider whether current laws need to be amended or new laws created to address this issue. The first part of the paper will provide an overview of AI and its current applications. It will then discuss the different types of harm that AI can cause, and the challenges that this poses for the legal system. The second part of the paper will examine the different ways in which AI liability could be assigned. It will consider the possibility of holding AI developers liable, as well as the possibility of holding users liable for the actions of AI systems that they control. The third part of the paper will discuss the potential consequences of different approaches to AI liability. It will consider the impact on innovation, as well as the potential for unfairness and injustice. The paper concludes by arguing that a new legal framework is needed to deal with AI-caused harm. This framework should be based on the principle of accountability, and should ensure that those who are responsible for harm caused by AI are held liable.

INTRODUCTION

According to a British based Cryptographer, a device can be termed as 'intelligent' if its manifestation in the form of work is not easily distinguishable from that of another person. A very general understanding of AI is related to computer sciences, which operates through automated intellectual procedures or steps through intelligent software. In contemporary times the intelligence of such software is interpreted as the ability to make specific decisions by processing the information in such a way that it resembles the intellect of a human being. In a simpler sense, it is understood as the ability to accurately interpret and process the external data, learn from it to gain experience and then use that experience of learning in accomplishing certain tasks.1,2

1 Karklins J., Artificial Intelligence and Civil Liability, 13 Journal of the University of Latvia Law 1, 164-183 (2020).
2 Karolina Ziemianin, Civil legal personality of artificial intelligence, Future or utopia?, Internet Policy Review (Apr. 7, 2021), www.policyreview.info/articles/analysis/civil-le-
AI has become a part of our lives especially in response to the COVID-19 pandemic in public and private sectors of the economy like industries in manufacturing sector using robots, health markets using medical AI based robots, AI based appliances for cleaning public places and many more.\(^3\)

Due to increasing diffusion of technology of Artificial Intelligence with technologies and machines, it started being applied to different fields of areas which took the level of interaction between machines and humans a step ahead.\(^4\) But like other technological developments a very probable consequence of such escalated application and use of AI is the harm that it would cause. The problem is with respect to the liability for the harm caused by AI. Before the development of AI, any such harm caused by the machine was to be held accountable as per the Civil laws of a country. But currently there has been no formulation of any provision or law which contains the course of legal consequences of a harm caused by AI. For eg. an accident due to driverless cars (based on AI)\(^5\) or wrong advice by a robot-assistant,\(^6\) who operates through AI. This means that the area of legal consequences related to AI remain unregulated\(^7\) or an analysis needs to be whether the current civil laws need to be amended for them to be able to AI but even before that the bone of contention is the imposition of civil liability on AI which is based on its nature of existence in the eyes of law.\(^8\) Thus, in this research paper we will analyse, study and determine the Civil and Criminal liability of AI.

### Civil Liability Of Artificial Intelligence

#### What is Civil Liability?

Generally, it is understood as the liability arising from the violation of a civil right by the tortfeasor or causing any harm to a person, whose safety relied on the duty performed by the tortfeasor. Thus the civil liability is duty to mitigate the loss of the victim or provide compensation arising from non-performance of duty or violation of civil right by the wrongdoer.\(^9\)

#### Legal Status of AI

A legal entity is the one who is a legal person which has its own rights and obligations, participation in legal activities like a company or corporation entering into a legal suit in its name, purchase property in its name. It certainly means that a separate existence is established by the virtue of a law, (Companies Act, 2013) which is also called Judicial Personhood.\(^10\) For e.g. if a company lacks in its performance, then the liability lies on the people acting on behalf of that company which are its Board of Directors. As per European Parliament, AI can have the status of legal entity i.e. an electronic person like a legal person, who acquires legal capacity through laws and statutes. On a similar basis, the AI with explicit legal provisions can have legal capacity with its entry in the suitable register, which unlike a company would though function independently but the liability would be of natural persons as listed against it in the register for they are the legal person for AI.\(^11\)

#### Civil Liability of AI as per European Parliament\(^12\)

A series of proposals has been put forth by European Parliament with respect to AI regime in October 2020 according to which liability has been divided

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into categories namely for 'high-risk' AI and second is for 'other' AI, common to both are:

- Operators cannot have the defense of damage or harm being caused by autonomous activity based on AI
- Liability should be joint and severe in case multiple operators are involved.

High Risks Al

- It includes self-driven vehicles and Robots.
- Under this the operators of AI systems are made strictly liable in such cases.

Other AI

- Fault based liability is made applicable on AI systems where if the operator can prove that due diligence was taken with respect to AI or AI operated without its knowledge, the operator would not be held liable.\(^{14}\)

Legal Nature and Civil Liability of Artificial Intelligence in different countries

- **The US** - It does not consider Artificial Intelligence as a legal entity. There the understanding of AI is that of a system which can perform tasks without human involvement, reciprocate human language, express intelligence and represent automated reasoning.\(^{15}\)

- **Russia** - A proposed legislation places accountability on the company (developer), technicians, or the seller.\(^{16}\)

- **European Commission** - As per the European view, it is unnecessary to grant AI the status of legal personality and the liability arising due to the acts by it should fall on the existing persons only, namely, the developer(s).\(^{17}\)

- **Polish** - The view is that since there is not much clarity about the principles of liability like how should AI bear the responsibility, whether it to be borne by people, should there be a separate fund for compensation arising from the damage caused by it, thus it is not beneficial to grant legal personality to AI. Therefore such liability should fall on its operators, developer(s).\(^{18}\)

Civil liability of Artificial intelligence

There are three types of civil liability:

- International Torts
- Negligence Torts
- Strict liability

Case judgements

*Stanley v. Schiavi Mobile Homes Inc*\(^{19}\)

The objections which arose in this case were that breach of warranty and strict liability were dismissed. There was little evidence of non occurrence and some alleged errors in the jury’s order or instructions.

In this case, Stanley was the complainant and Schiavi was the defendant. The complaint came into being when the plaintiff went to buy a mobile from the shop Schiavi Mobile homes and there a mobile phone of Marlette homes was displayed. While entering the shop which was a little inch higher, she tripped and fell down. As a result, she hurt her leg and shoulder and blamed Schiavi for negligence. There was a third party also involved there who also filed a cross complaint against that shop alleging strict liability. The bench dismissed the strict liability claims against Schiavi resulting in dismissal of warranty claims.

*The judges took references from*

- S.H Nevers Corp vs Husky Hydraulics Inc\(^{20}\)
- Simon vs Town of Kennebunkport\(^{21}\)

The court gave its verdict in favour of Schiavi Mobile Homes and dismissed the complaint. It even said that the plaintiff’s complaint does not stand as firstly, the sale was between Marlette and Schiavi and the plaintiff never complained against Marlette.

So, the appeal got dismissed.


\(^{14}\) Id.


\(^{16}\) Ibid.

\(^{17}\) Karolina, *supra* note 2.

\(^{18}\) Karolina, *supra* note 2.

\(^{19}\) 462 A.2d 1144.

\(^{20}\) 408 A.2d 676.

\(^{21}\) 417 A 2d 982.
Independent School District No. 454 v. Statistical Tabulating Corp

Independent School district was an organisation in Fairmont under Minnesota and Statistical Tabulating Corp was the organisation under Delaware in Chicago State of Illinois. The defendant that is Statistical Tabulating gave some computations to the plaintiff which resulted in damage. He provided inaccurate information to the district school and one of the schools of plaintiff was set on fire. He claimed $238,000 from the defendant for the damages caused with interest. There was a contract with Marshall & Stevens with the plaintiff and they supplied a value of appraisal. The school was inadequately insured.

The court gave the verdict in favour of the defendant that-

■ That the plaintiff was in an action with Marshall and Stevens and it is a Delaware corporation. The action should be dismissed as there is no diversity and no federal jurisdiction as mentioned in Rule 17(a) of the Federal Rules of Civil Procedure.

■ The plaintiff did not have a direct relation or contract with the defendant, it filed a complaint where recovery cannot be granted as this was a non party to a contract. Strict liability cannot be granted.

■ The court also held a legal landmark case related to this judgement i.e., Rozny v. Marnul. The judgement includes a legal doctrine of “loan receipts” which helps in maintaining a complaint against a tortfeasor. It is recognised in all courts.

Joiner v Mitchell County Hospital Authority

In this case, Mrs Joiner who was the plaintiff filed a case against the hospital and physician for negligence and liability. She even said that the doctor overlooked and was negligent enough.

The court gave its verdict that this evidence is not enough to blame the hospital. As the hospital selected a doctor who was licensed as well as in good standing. So, the hospital should not be liable.

Case reference held by the court was-

■ Clary v. Hospital Authority

Gonzalez said that he gave him proper treatment and the reason why her husband was not admitted was because Mr Joiner did not want to be admitted and avoided becoming a patient there. On hearing this, Mrs Joiner crossed him saying that he was never content and the doctor should always perform his duty rather than being moulded.

Thus the court said in favour of the plaintiff and granted the motion of summary judgement to her.

The court hereby held that the hospital was not liable under the doctrine of agent or respondent superior but liable under doctrine of negligence.

Criminal Liability of Artificial Intelligence

In order to prove whether any legal entity can possess Criminal Liability, There are three major elements that need to be proven that are

■ whether an entity can Constitute Actus Reus - acts and omission as defined under Section 33 of IPC.

■ have mens rea- requires knowledge and negligence

■ Strict Liability offenses where mens rea is not necessary

Legal researcher and Renowned lawyer Gabriel Hallevy said that Artificial intelligence can meet all the aforesaid essential requirements. Hallevy Proposed Three legal Models by which offences committed by Artificial Intelligence can be considered:

■ Perpetrator via Another - When the offence is committed by an innocent agent like a child

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22 359 F. Supp. 1095.
23 250 N.E.2d 656.
24 229 Ga. 140.
25 126 S.E.2d 470.
26 33 N.E. 1040.
28 Chaudhary, supra note 22.
of age less than 7, insane who don’t have mental capacity to hold mens rea (including the performance of offences under strict liability where even the mens rea is not required) to commit a crime. And such offences are instigated and abetted by some other person via such innocent agents than AI are said Perpetrator via Another of the Crime. And such persons are criminally liable under Section 38 of IPC. According to this model Artificial Intelligence can be used as an innocent agent. With the Criminal Intention they can be softwared and programmed in a manner that they commit Crime. In Such a situation Artificial Intelligence will be considered as an innocent agent and the person who has programmed will be punished under the perpetrator via another.  

- **Natural Probable Consequence:** In This model the part of AI programmed for good purpose activated inappropriately and committed Criminal Act. In order to Substantiate it Hallevy cited an example Where a Japanese Employee of a motorcycle factory was killed by an Artificial Intelligence where the robot erroneously identified the employee as a threat to its mission which can be eliminated only by pushing in the adjacent operating machine. It did the same, causing the death of that employee and resumed its business. In the Situation where it is hard to demonstrate any perpetrator of crime and crime committed under Natural probable Consequence also then every time an accomplice could be found who aided or encouraged the Artificial knowledge. Such accomplices are legally liable for the commitment of crime as long as they are aware some crime is underway. The person who has programmed such Artificial intelligence might be held liable if he knows that criminal offence is the natural and probable consequence of such crime.  

The Difference between the above two is in first the actions to perform criminal offence is programmed. Whereas in latter one criminal offence is the natural and probable consequence of programming.

- **Direct Liability:** This model makes the artificial Intelligence directly liable for the commission of the crime done by Artificial intelligence independent of how it is programmed. When the AI holds both Actus Reus and Mens Rea for the Crime. It is comparatively easy to demonstrate the actus reus of the AI as that can be drawn out of the action and omission of the act, a person is supposed to do. The Harder is to conclude the mens rea behind the act. For the strict liability it is easier to conclude like if speeding the car will bring Strict Liability into action than if any car is found of more speed than regulated by government then part of AI who is driving the Car will be held Liable.

There is a probable Chance of Defences by the Programmer like the Trojan Defences in US many accused of Cyber Crime defending that their computers were affected by Trojan or Some Virus due to Which its Functions are not much in their Control. It was a Valid defence in the US. As Aforementioned, we have defined the possible models in which criminal Liability can be held but in this model we have considered only two entities: programmer and user and neglected other stakeholders which can also probably constitute crime and can have any role to play in it. Like, hardware manufacturers, maintenance engineers, third parties who may possibly come in contact with such AI entities, and so on. In Such situation Criminal act can be a consequence of the action or negligence of one or more than one Stakeholder which makes it harder to decide who has committed the crime.  

### Possible Punishment for the Crimes Committed by Artificial Intelligence

- **Capital Punishment:** Capital Punishment is seen as one of the most severe punishment given to any Criminal and it’s constitutionality is no consensus among many Countries. Punishment can be awarded to Artificial intelligence which will have the same effect as Capital Punishment on AI is deletion of the AI software controlling the AI entity. Once the deletion sentence is

31 JKC, Supra note 25.
32 JKC, Supra note 26.
carried out, the offending Al entity is incapable of committing any further offenses. The deletion eradicates the independent existence of the Al entity and is tantamount to the death penalty.34

- Incarceration: Incarceration is the most widely used form of punishment for the serious crimes in western Countries. For humans it is the deprivation of Personal liberty, imposing certain restrictions such as on movement, control over personal life, the practical action that can have the same effect as that of incarceration on Al entities is to put AI entities out of use for a definite period of time. During that period no action related to AI freedom will be allowed which will restrict it’s freedom and Liberty.35

- Suspended Sentencing: For human beings suspended Sentencing is the threat to incarceration if any further wrongful act is committed by any person it provides a strong deterrent to the commission of crime as the person will be punished for both the crimes. Such threat and warning can be given to AI entities even if any wrongful act is committed by them.36

- Community Service: As human beings are also punished for Crimes under Community service where they have to provide labour to the society. As we know AI can be used for many purposes similarly they can be deployed in Community service as the punishment.37

Corporations are also considered as a legal person( which is not allowed in Roman Law) in India. Similarly AI is present in every sector of society. Therefore it is very essential to also consider them legal entities and Criminal liabilities must be imposed on them.38

In near future AI will get a popular reach, as artificial intelligence is an independent body free from Political, social, emotional or psychological interest due to which deterrence from committing crime and being prey to punishment under Criminal liability is less. Thus psychologically there is more chance of getting them involved in Criminal activities and tantamount the liabilities of risking their life in violent activities is less as no one needs to be compensated and punished if there death is caused in process of executing any violent and Criminal Activities this will increase the chance of their usage in Criminal Activities ranges from robbery to warfare. As now they are becoming an indispensable part of human civilization and their involvement is increasing day by day therefore it is demanded of the time to have certain laws which can keep a control over the activities of Artificial Intelligence.

**Principles of Artificial intelligence**

- The intelligence community has come up with an AI framework which guides personnel and determines to protect and consume AI for advanced analytics.

- In civil liability, there will be one party who will be accountable and responsible towards another party who has made a mistake or committed any fault.

- In civil liability, the theory of fault has much effect. Jurisprudence foundations are added to the cases there and theoretical and practical foundations are also added.

- A question arises in civil liability is why should someone compensate the other party for the damage caused.

- In criminal liability, a direct liability model has been introduced in artificial intelligence. In an offence of criminal liability, there should be both mens rea and actus reus for fulfilling the requirements. Any act or omission which contains both of them is an offence.

- Therefore, for artificial intelligence, the crime which is committed through a mechanism having actus reus can be prescribed to a human being and thus we can say that it is established.

- The criminal liability of AI had three models-
  - Perpetrator via another
  - Natural probable consequence
  - Direct liability model

**Case References**

**RANSOME v. WISCONSIN ELECTRIC POWER CO**39

This is an example of a product liability case. Here, a strict liability does not make a seller an insurer

34 Hallevy, supra note 24.
35 Hallevy, supra note 29.
36 Hallevy, supra note 29.
37 Hallevy, Supra note 31.
38 Hallevy, Supra note 28.
39 87 Wis.2d 605 275 N.W.2d 641
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and thus we cannot impose absolute liability. The plaintiff complained about the defendant regarding the detective goods. The judge said that the plaintiff should prove that the product was defective and if the product was that particular one which reached the buyer from the seller.

Contributory negligence, misuse and alteration of the product was considered. The court took the reference of Dippel v. Sciano, supra\textsuperscript{40} and remanded for further proceedings.

**Impact of Artificial Intelligence**

If you are not someone who is planning on living distantly and to cut off from the interface of the world then it is for sure that your life will be affected and had already been affected with Artificial Intelligence. Every coin has two sides, similarly everything has its good impacts and some bad impacts. While there will be many learning encounters and difficulties to be looked at as the usage of Artificial Intelligence increases in our society. Here we will be discussing how artificial intelligence has affected us in different ways-

**Pons**

- With the introduction and increase of artificial intelligence in our workplace, the workforce would be reduced and humans will be required more for managing and creative tasks, which would be less tiring and more productive. Artificial intelligence would make dangerous or repetitive tasks easier.
- It would bring rapid growth in the medical sector as well. It will help to give better diagnosis and different opinions on a single issue in a moment, it would also help to save money. McKinsey estimates that expansion of artificial intelligence would save a hundred billion dollar every year in medicines and pharma.\textsuperscript{41} In the previous times, especially during the covid times when people were even scared to go out, a doctor who would be available to us at where ever we are has made our life easier and safer than before which has been possible just due to artificial intelligence.
- Artificial intelligence has reduced the traffic issues, we all use Google Maps, and it has not just saved our time but it also helps us to know where we could get traffic or where the roads are damaged. We are able to get a review of every place and road beforehand which helps us to save time and money which has helped us to improve our productivity.
- Artificial intelligence has also played a major role in upgrading our privacy and safety, with the introduction of face recognition and fingerprint scanner is now common on our phones and we could easily use technology without invading each other’s privacy.
- Artificial intelligence has made our life easier, now a person could connect to different people at different places. AI has increased globalization and has made humans’ lives easier by giving them comfort. For example, in these covid times we saw how effective work from home is, it gives the employee the comfort of place and time to work which results in effective and efficient results. It also helps humans to grow because now they do not have to limit themselves to the work they have learned or they are offered one can learn anything and any change and can apply for jobs faraway.

**Cons**

- Artificial intelligence is ultimately created by humans, so if the basic data which has been put into it is wrong or biased the whole interface would follow the same thing and it may end up hurting people’s sentiment or not fulfilling their desires. This issue is called built in bias and has been faced by Microsoft when during a chat on twitter the AI started to be offensive and racist.\textsuperscript{42}
- Artificial intelligence could also be a threat to privacy because artificial intelligence works upon data collected and if business and government decides to take decisions according to these data this would bring social oppression.
- Due to increasing technology and our dependence on technology people have started

\textsuperscript{40} 37 Wis.2d at 459-60.
to losing on their jobs because the work done by Artificial Intelligence is way more perfect and fast in comparison to human work and technology is a one-time investment while the workforce has to be paid again and again therefore companies prefer to have more technology rather than having workforce. According to PwC, 7 million jobs would be replaced by AI in UK till 2037.43

- Artificial Intelligence could also be one of the major reasons for the increase in crime, with the rise of artificial intelligence hacking data has become easier and in today’s time when even our bank details are saved in our phones and computers, the frauds and crime has increased.
- Artificial intelligence also could be a reason for increase in terrorism, because AI introduced drone, robotics animals etc. this may result in the type of attack for which we are not ready and since these things could enter into any territory it is now difficult to recognise and be safe.

From above we can conclude that Artificial intelligence has surely affected our life, be it in positive manner or negative manner and now we are quite dependent upon it.

**CONCLUSION**

The world has changed and grown with Artificial intelligence; it has affected our lives in every way possible. If we look forward to different jurisdictions, there are no fully specific civil liability laws in relation to Artificial Intelligence. The issues of liability are governed or looked after by the Korean Civil Act which as result gives negligence, fault liability and foreseeability. Supervisor’s liability is also included. The growth of AI can be a threat to humankind as well, as it has been discussed that AI could result in violating a civil right for instance Stanley v. Schiavi Mobile Home Inc.44 and it could even result in being a criminal identity therefore it should be treated as one identity and there should be some strict laws made for it as well. Stephen Hawking said “Success in creating effective AI could be the biggest event in the history of our civilization. Or the worst. So, we cannot know if we will be infinitely helped by AI or ignored by it and sidelined, or conceivably destroyed by it.”45 It is completely in our hands to use AI the right way or wrong way, like everything else it has its positive and negative aspects but with growing times we need to accept AI into our lives and we need to find some solutions for the loopholes because staying away from AI would take us back 20-30 years.

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43 *Supra* note 32.
44 *Supra* note 14.