

# CRIMINAL LIABILITY OF THE ARTIFICIAL INTELLIGENCE ENTITIES

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## ABSTRACT

*The evolution of information technologies have brought us to a point where we are confronted with the existence of agents – artificial intelligence entities - which are able to act autonomously with little or no human intervention. Contemporary technological inventions are beginning to support or replace human activities with the emergence of artificial intelligence entities ranging from autonomous cars to machines translation software, robots and medical diagnosis software. These inventions tend to venture into some human mental activities such as interpretation, evaluation, and decision-making, which have never been delegated to non-human mind before. However, the behaviour of the artificial intelligence entities can damage individual or collective interests that are protected by criminal law. The rise of artificial intelligence raises questions about liability for crimes an Artificial Intelligence commits, mainly because the AI acts autonomously and with limited control from humans. This paper would attempt to evaluate the criminal liability of Artificial Intelligence entities. The purpose of this thesis is to enquire this liability problem concerning Artificial Intelligence, with focus on the elements of criminal*

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*liability. The analysis aims to define Artificial Intelligence for legal purposes and to analyse whom to hold liable when crime is committed by Artificial Intelligence Entities.*

**Keywords:** *Criminal Liability, Artificial Intelligence, Criminal law.*

## I. INTRODUCTION

Artificial Intelligence has been a dream of mankind since centuries, both as a part of fiction and philosophy. But with exponential technological advancement in recent decades, this has become reality. Today, human dependency on artificial intelligence technology has substantially increased.<sup>1</sup> From automated cars to drones, from computer science to medical science and from artificially intelligent assistant on phones to artificially intelligent attorneys, there is hardly any sphere of everyday life which has remained untouched from it. AI has helped to make human life easier, better and efficient, saving valuable time and energy.<sup>2</sup>

There is no precise definition of Artificial Intelligence.<sup>3</sup> In common parlance, it is “ability to adapt or improvise according to the feedback received in order to solve problems and address situations that go beyond the predefined set of queries and instructions that the AI was programmed with”.<sup>4</sup>

However, like any technology, it has its own share of pros and cons. Let’s take the example of autonomous vehicles. On one hand, it has increased mobility for social units like elderly and disabled, while on the other hand,

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<sup>1</sup> O.E.R adutniy, *Criminal Liability of the Artificial Intelligence*, 138 Probs. Legality 132 (2017).

<sup>2</sup> Matilda Claussen-Karlsson, *Artificial Intelligence and the External Element of the Crime: An Analysis of the Liability Problem* 7 (2017).

<sup>3</sup> K. E. Oraegbunam, *Artificial Intelligence Entities and Criminal Liability: A Nigerian Jurisprudential Diagnosis* (2017).

<sup>4</sup> Dafni Lima, *Could AI agents be held criminally liable: Artificial Intelligence and the Challenges for Criminal Law*, 69 S.C.L. REV. 682 (2018).

the AI technology has been responsible for several deadly accidents. This has given rise to an important legal concern and curiosity as to the liability of the Artificial Intelligence entities under the criminal law for such crimes.

AI technology brings with it several pertinent legal concerns. First of all, if an Artificial Intelligence Entity injures any person or property, who would be criminally liable for such harm? Is it the Artificial Intelligence entity itself (for e.g.-robots), producer/programmer (programmer may also be a third party working for the producer, however for understanding, we would consider them as producer), user i.e. owner/buyer of the Artificial Intelligence entity, or would it be considered an Act of God? Secondly, what elements of crime need to be proved in such a case of crime by Artificial Intelligence Entity. Thirdly, if Artificial Intelligence entity, like robot, itself is found guilty, then what kind of punishments be imposed on such Artificial Intelligence entity. There are a plethora of such legal issues which are yet to be settled.<sup>5</sup>

The available legal jurisprudence on criminal liability of AI entity is very minimal with hardly any legislation or cases on this issue, especially in India. Thus, the present research article would delve into this issue. The objective is not to prescribe any straight-jacket rules or provisions but to highlight broad principles which can aid in coming up with specific laws on the issue in future, at the same time allow flexibility and adaptability for rapidly changing technology. The article endeavours to provide solutions to this legal conundrum of criminal liability of Artificial Intelligence Entity.

## **II. GENERAL ELEMENTS OF CRIMINAL LIABILITY**

To establish criminal liability of any offense, two elements need to be satisfied-the physical element (*actus reus*) and the mental element (*mens rea*). 'Actus reus' signifies the wrongful act or omission, and 'Mens rea' denotes the guilty mind, reflected by motive, intention or knowledge.

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<sup>5</sup> *Id.* at 68o.

Negligence and strict liability are exceptions to this general rule. If any entity, be it human, corporation or Artificial Intelligence Entity, satisfies these two elements, then any such entity could be made liable under criminal law.<sup>6</sup>

### **III. POTENTIAL FEASIBLE OPTIONS FOR ASCRIBING CRIMINAL LIABILITY ASSOCIATED WITH ARTIFICIAL INTELLIGENCE ENTITIES**

#### **1. When AI is acting as an innocent agent**

In the first possible situation, the AI entity is presumed to be an innocent agent working according to the instructions of the user. In such a case, criminal liability can arise because of intentional programming by the producer to commit an offence, or misuse of the AI entity by the user for commission of the crime.<sup>7</sup>

Fictive illustration for the first case- A programmer designs software of a robot. He intentionally places it in front of his enemy's house to torch his empty house at night. The robot committed the offense but the programmer is deemed to be the perpetrator.

Fictive illustration for the second case- The user buys a robot and instructs the robot to assault any third person. Here, the robot does not apply its intelligence and experience, and simply follows the master.

In the first case, only producer would be liable. In the second case, only the end user would be liable because the robot is a mere innocent intermediary.

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<sup>6</sup> P. Freitas, F. Andrade and P. Novais, *Criminal Liability of Autonomous Agents: from the unthinkable to the plausible* (2012).

<sup>7</sup> Gabriel Hallevy, *The Criminal Liability of Artificial Intelligence Entities: From Science Fiction to Legal Social Control*, 4 AKRON INTELL. PROP. J. 179 (2010).

## **2. When AI is acting as semi-innocent agent**

The second possible situation is based on the foreseeability of the producer/programmer or end user as to the potential commission of offences. In this particular situation, the producer and the user work closely with the AI entity though they did not intend the particular offence. In such a case, criminal liability can arise in two ways- First, because of negligence or recklessness of the producer in programming the AI entity and second, natural and probable consequence of the act instructed by the user.<sup>8</sup>

Fictive illustration for the first case –A puts the car on auto-pilot and starts listening to music. The AI misjudges the speed of an opposite car and crashes into it, resulting in loss of human life and property. The misjudgement was because of the faulty programming of the producer.<sup>9</sup>

Fictive illustration for the second case- A buys a particular robot and instructs it to torch a house ‘B’. In an attempt to torch house ‘B’, the robot also torches it’s immediately neighbouring house ‘C’ and there is loss of human life and property therein. Although A did not intend torching house ‘C’ or killing anyone, such results can be said to be natural and probable consequence of his act which he could have reasonably foreseen.

In the first case, the producer would be liable. In the second case, the end user would be held liable. In the second case, A may not be liable for murder but for offence of negligent homicide.

## **3. When AI is acting an independent entity/fully autonomous**

The third situation is futuristic. In future, AI entities may be able to function in a totally independent, fully-autonomous manner, not solely dependent on the algorithms rather learning from their experiences and observations. Such AI entity would have the cognitive capabilities i.e. the ability to choose

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<sup>8</sup> *Id.* at 182.

<sup>9</sup> Weston Kowert, *The Foreseeability of Human- Artificial Intelligence Interactions*, 96 TEX. L. REV. 181 (2017).

between alternate possible solutions to a problem. If such AI entity commits a crime, then such AI entity can be held criminally liable.

#### **IV. GENERAL DEFENCES**

Intoxication, necessity, self-defence are few examples of General defences available to humans under criminal law. Similar defences in slightly modified form may also be made available to AI entities. For example- The kind of influence intoxication can have on humans; a malware or virus can have similar effect on a robot. Thus, with few adjustments, the general defences applicable to humans can also be extended to AI entities.

#### **V. KINDS OF PUNISHMENT**

Death penalty, imprisonment and fine are common punishments under criminal law. Similar punishments with certain modifications can be applied to AI entities. For example- Permanent deletion of the software of the AI entity would have an analogous effect as death penalty to humans. Also, temporary deletion of the software could be equated with imprisonment to the human criminals. Community service can be an analogous punishment for the AI entity.

#### **VI. CONCLUSION**

The growth of Artificial Intelligence and its applications in the coming decades is inevitable. If all the specific requirements of criminal liability applicable to humans can be extended to corporations, there is no reason why they cannot be made applicable to AI entities as well.<sup>10</sup> Having stringent principles of law in order to regulate the criminal liability of AI entities would ensure better social order and easier determination of respective liabilities in case of any offence by AI entity, which would ultimately lead to welfare of the people.

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<sup>10</sup> Mindaugas Naucius, *Should Fully Autonomous Artificial Intelligence Systems Be Granted Legal Capacity*, 17 TEISES APZVALGA L. REV. 113 (2018).