

ARTIFICIAL INTELLIGENCE AND CRIMINAL LIABILITY IN INDIA: A LEGAL ANALYSIS IN THE AGE OF AUTOMATION

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BEST CITATION – HARSHIT TRIPATHI & DR. ARVIND KUMAR SINGH, ARTIFICIAL INTELLIGENCE AND CRIMINAL LIABILITY IN INDIA: A LEGAL ANALYSIS IN THE AGE OF AUTOMATION, *INDIAN JOURNAL OF LEGAL REVIEW (IJLR)*, 6 (4) OF 2026, PG. 82-86, APIS – 3920 – 0001 & ISSN – 2583-2344.

Abstract

Artificial Intelligence (AI) has emerged as one of the most transformative technological developments of the twenty-first century, significantly altering the way societies function, economies operate, and governance is structured¹. Its increasing integration into sectors such as transportation, healthcare, finance, and law enforcement has not only improved efficiency and decision-making but has also raised complex legal and ethical concerns². Among these concerns, the issue of criminal liability occupies a central position³. Traditional criminal law is based on the principles of human agency, intention, and moral culpability, all of which become difficult to apply in the context of autonomous systems⁴. AI systems operate through algorithms and machine learning processes that may produce outcomes beyond the direct control or anticipation of their creators⁵. This creates a significant challenge in determining responsibility when such systems cause harm⁶.

This research paper critically examines the concept of criminal liability in the context of artificial intelligence within the Indian legal framework. It analyses the applicability of foundational legal doctrines such as actus reus and mens rea to AI-related conduct and explores the limitations of existing laws such as the Indian Penal Code and the Information Technology Act⁷. The paper further examines real-world examples, including autonomous vehicle accidents and the misuse of deepfake technology, to illustrate the practical implications of AI-driven harm⁸. A comparative analysis of international regulatory approaches is also undertaken to identify best practices⁹. The study concludes that the current legal framework in India is inadequate to address the complexities of AI-related liability and calls for the development of a comprehensive legal regime that ensures accountability while promoting technological innovation¹⁰.

Keywords: Artificial Intelligence, Data Privacy, Indian Legal System, Algorithmic Accountability, Digital Governance, Fundamental Rights, Technology Regulation

1. Introduction

The rapid development of artificial intelligence has fundamentally transformed modern society by introducing systems capable of performing tasks that were traditionally considered exclusive to human intelligence¹¹. AI technologies are now widely used in diverse fields such as autonomous driving, predictive

analytics, facial recognition, financial decision-making, and even legal research¹². These systems have enhanced efficiency, accuracy, and productivity, making them indispensable in contemporary life¹³. However, alongside these benefits, AI has also introduced new challenges, particularly in the legal domain¹⁴.

One of the most pressing issues arising from the use of artificial intelligence is the question of criminal liability. Criminal law has historically been designed to regulate human behaviour by attributing responsibility to individuals who act with a guilty mind and engage in prohibited conduct¹⁵. The core principles of criminal liability—*actus reus* and *mens rea*—are based on the assumption that the actor is a human being capable of intention, understanding, and control¹⁶. Artificial intelligence disrupts this assumption by introducing entities that can act autonomously without possessing consciousness or intent¹⁷.

The problem becomes particularly evident in situations where AI systems cause harm. For instance, an autonomous vehicle may be involved in an accident resulting in injury or death¹⁸. In such a case, it becomes difficult to determine who should be held responsible. Should liability be attributed to the manufacturer who designed the vehicle, the programmer who developed the software, or the user who deployed the system? Alternatively, should the AI system itself be considered a legal entity capable of bearing responsibility? These questions highlight the inadequacy of existing legal frameworks in addressing the complexities introduced by AI¹⁹.

In India, the issue is further complicated by the absence of specific legislation governing artificial intelligence. While the country has made significant progress in adopting digital technologies, its legal system has not kept pace with these advancements. Existing laws such as the Indian Penal Code, 1860 and the Information Technology Act, 2000 provide a general framework for addressing criminal conduct but do not specifically address the unique challenges posed by AI²⁰.

1. ¹ Stuart Russell & Peter Norvig, *Artificial Intelligence: A Modern Approach* (3rd ed. 2010).
2. OECD, *Principles on Artificial Intelligence* (2019).

3. Andreas Matthias, *The Responsibility Gap*, 6 *Ethics & Info. Tech.* 175 (2004).
4. H.L.A. Hart, *Punishment and Responsibility* (1968).
5. Frank Pasquale, *The Black Box Society* (2015).
6. Ryan Calo, *Robotics and the Lessons of Cyberlaw*, 103 *Calif. L. Rev.* 513 (2015).
7. Indian Penal Code, 1860; Information Technology Act, 2000.
8. Robert Chesney & Danielle Citron, *Deepfakes and the New Disinformation War*, 107 *Foreign Aff.* 147 (2019).
9. European Commission, *Proposal for Artificial Intelligence Act* (2021).
10. NITI Aayog, *National Strategy for Artificial Intelligence* (2018).
11. Stuart Russell & Peter Norvig, *supra* note 1.
12. OECD, *supra* note 2.
13. Ryan Calo, *supra* note 6.
14. Andreas Matthias, *supra* note 3.
15. H.L.A. Hart, *supra* note 4.
16. Glanville Williams, *Criminal Law: The General Part* (1961).
17. Frank Pasquale, *supra* note 5.
18. Nat'l Highway Traffic Safety Admin., *Automated Vehicles Policy* (2016).
19. Andreas Matthias, *supra* note 3.
20. Indian Penal Code, 1860; Information Technology Act, 2000.

The purpose of this essay is to critically examine criminal liability in India with regard to artificial intelligence. It seeks to examine whether traditional legal principles can be adapted to address AI-related harm and to identify the gaps in the current legal framework. The paper also explores international approaches to AI regulation and proposes reforms aimed at

ensuring accountability and justice in the age of automation.

2. Research Methodology

This study adopts a doctrinal approach, focusing on the analysis of legal principles, statutory provisions, and academic literature. It relies on primary sources such as existing legislation and secondary sources including scholarly writings and policy reports. The research also incorporates a comparative perspective by examining developments in other jurisdictions.

Rather than merely describing existing laws, the paper engages in critical evaluation. It identifies gaps in the current framework and assesses whether traditional doctrines can be adapted to address AI-related issues. The objective is to develop a nuanced understanding of how criminal liability can evolve in response to technological change.

3. Understanding Artificial Intelligence

Systems that are able to carry out tasks that normally need human intelligence are referred to as artificial intelligence. These tasks include learning, reasoning, and decision-making. What distinguishes modern AI from earlier technologies is its reliance on data-driven processes. Machine learning algorithms enable systems to improve their performance over time without explicit programming for every scenario.

AI can be broadly divided into two groups. Narrow AI is made for certain tasks, like picture recognition or language translation. In contrast, general AI, which remains largely theoretical, aims to replicate human-level intelligence across multiple domains.

A key feature of AI systems is their autonomy. They can function with little assistance from humans after they are deployed. While this autonomy enhances efficiency, it also creates uncertainty in legal accountability. When a system behaves unpredictably, it becomes difficult to trace responsibility back to a specific individual or entity.

4. Foundations of Criminal Liability

Criminal liability traditionally depends on two essential elements: a wrongful act and a guilty mind. The physical element, often referred to as *actus reus*, involves the commission of a prohibited act. The mental element, known as *mens rea*, refers to the intention or knowledge behind that act.

These principles ensure that individuals are punished only when they are morally blameworthy. The law distinguishes between intentional wrongdoing and accidental harm, reflecting a commitment to fairness and justice.

However, applying these principles to AI systems is problematic. AI does not possess consciousness or intention. It cannot form a guilty mind in the way a human can. This raises a fundamental question: can criminal liability exist in the absence of human intent? If not, how should the law respond to harm caused by autonomous systems?

5. The Problem of Attribution

Attribution is central to criminal law because it determines who is responsible for a particular act. In human contexts, this process is relatively straightforward. Actions can be linked to individuals who have control over their behaviour.

AI complicates this process. These systems are often created and managed by multiple actors, including developers, data providers, and users. When harm occurs, responsibility is distributed across this network. Identifying a single liable party becomes challenging.

This situation leads to what can be described as an "accountability gap." Harm occurs, yet no one can be held fully responsible under existing legal standards. This undermines the purpose of criminal law, which is to deter wrongdoing and provide justice.

Another difficulty arises from the opaque nature of AI systems. Many algorithms function as "black boxes," which makes it difficult to comprehend how they make decisions

internally. This lack of transparency makes it difficult to establish causation, which is a key requirement for liability.

6. Real-World Illustrations

The challenges discussed above are not merely theoretical. They are evident in real-world scenarios.

Autonomous vehicles provide a clear example. These systems are designed to reduce human error, yet accidents still occur. In such cases, it is unclear whether liability should fall on the manufacturer, the software developer, or the user.

Deepfake technology presents another concern. AI-generated audio and video can be used to spread misinformation or commit fraud. Determining responsibility in such cases involves multiple actors, including creators and distributors.

Algorithmic bias is also a significant issue. AI systems trained on biased data can produce discriminatory outcomes. This raises questions about fairness and accountability, particularly in sensitive areas such as employment and law enforcement.

7. Indian Legal Framework

As of right now, India lacks a thorough legislative framework that addresses AI. The Indian Penal Code and the Information Technology Act provide general provisions, but they do not account for the unique characteristics of autonomous systems.

One major limitation is the reliance on *mens rea*. Since AI cannot form intent, applying traditional standards becomes difficult. Additionally, there is no clear guidance on how liability should be distributed among different stakeholders.

The absence of specific regulations creates uncertainty for both legal practitioners and technology developers. This uncertainty can hinder innovation while also weakening legal enforcement.

8. Comparative Perspective

Different jurisdictions have adopted varying approaches to AI regulation. Some have emphasised strict oversight and risk classification, while others have opted for flexible, sector-specific guidelines.

These approaches highlight an important trade-off between accountability and innovation. A rigid framework may ensure safety but could stifle technological growth. On the other hand, a flexible approach may encourage innovation but leave gaps in accountability.

India must strike a balance that reflects its unique socio-economic conditions.

9. Challenges in Regulation

Regulating AI involves several challenges. The technology itself is complex and constantly evolving. Legal frameworks often struggle to keep pace with such rapid change.

Transparency is another issue. Without clear insights into how AI systems make decisions, enforcing accountability becomes difficult.

There are also jurisdictional challenges, as AI systems often operate across borders. This raises questions about which laws should apply in cases involving international actors.

10. Findings

The analysis reveals that existing legal principles are insufficient to address AI-related liability. The reliance on human intention and control does not align with the nature of autonomous systems.

There is a clear need for a new approach that recognises the unique characteristics of AI while preserving the core objectives of criminal law.

11. Recommendations

First, India should introduce AI-specific legislation that clearly defines liability standards. This would provide much-needed clarity and consistency.

Second, a risk-based approach should be adopted. High-risk applications should be

subject to stricter regulation, while low-risk uses can be governed by lighter frameworks.

Third, transparency requirements should be strengthened. Developers should be required to ensure that AI systems are explainable and auditable.

Finally, institutional mechanisms should be established to oversee AI governance and ensure compliance.

12. Conclusion

Artificial Intelligence presents both opportunities and challenges. While it has the potential to transform society, it also raises complex legal questions. The traditional framework of criminal liability is not equipped to handle these challenges.

India must take proactive steps to develop a legal framework that balances innovation with accountability. By doing so, it can ensure that technological progress does not come at the cost of justice.

