

Legal Personality of Artificial Intelligence (AI): A Study with Special Reference to the Penal Laws of Bangladesh

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Abstract

In an era where Artificial Intelligence (AI) is no longer confined to the realms of science fiction but has permeated various facets of daily life, the legal system faces unprecedented challenges. This article investigates into the intricate dance between emerging AI technologies and the established penal laws of Bangladesh, spotlighting the urgent need for legal frameworks to evolve in tandem with technological advancements. Through a meticulous examination of the Penal Code, 1860, and The Cyber Security Act, 2023, the study unveils significant legal lacunae that hinder the effective governance of AI entities as well as AI legal personality. The AI legal personality lies in its ability to create a legal distinction between the entity and its members or creators, thus enabling an organized and systematic approach to legal accountability and responsibility. By weaving through international legal developments and theoretical debates on AI legal personality, the article proposes a pioneering approach towards integrating AI into the legal lexicon of Bangladesh. It calls for a harmonization of legal amendments, the establishment of AI-specific legislation, and a robust ethical framework to navigate the uncharted waters of AI regulation. This study not only illuminates the path for legal scholars and policymakers in Bangladesh but also contributes to the global conversation on the legal implications of AI, emphasizing the imperative for a proactive, informed, and collaborative approach to legal reform in the age of artificial intelligence.

Keywords: Artificial Intelligence, Legal Personality, Penal Laws, Bangladesh, Legal Framework

Introduction

In recent years, the rapid advancement and integration of Artificial Intelligence (AI) into various aspects of human life has posed novel and complex challenges for legal systems worldwide. From autonomous vehicles to algorithmic decision-making in finance, healthcare, and criminal justice, the capabilities and applications of AI are expanding at an unprecedented pace. As governance in AI develops worldwide to mitigate AI's potential risks, patterns in regulatory approaches are emerging (Negrine & Liptak, 2023). This technological evolution prompts a critical examination of existing legal frameworks, especially in terms of accountability, liability, and the notion of legal personality.

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2. Background Information

Artificial Intelligence, broadly defined as the capability of a machine to imitate intelligent human behavior, raises profound questions about the nature of agency, autonomy, and rights within legal constructs. The traditional legal system, with its human-centric approach, faces significant hurdles in accommodating entities that can learn, adapt, and make decisions independently of human input. This dilemma becomes particularly acute in the context of penal laws, where the attribution of liability and responsibility forms the cornerstone of justice and societal order.

Artificial Intelligence (AI) represents a groundbreaking shift in technological advancement, with its integration into various sectors such as healthcare, finance, and transportation, significantly altering the societal landscape. As AI systems become increasingly autonomous and integrated into daily activities, their actions and decisions begin to intersect with legal norms and principles, raising complex questions about liability, ethics, and governance (Scherer, 2016 (Revised 2024)). This integration of AI challenges traditional legal frameworks which are predominantly centered around human actors and conventional entities.

3. Problem Statement

Bangladesh, like many other countries, is grappling with the legal implications of AI's expanding role. The Penal Code of 1860, along with subsequent legal enactments such as the Cyber Security Act of 2023, provides the legal basis for addressing crimes and misconduct. However, these laws do not explicitly recognize AI entities or contemplate the unique challenges they pose. This gap in the legal framework raises pressing questions about how to attribute liability for actions taken by or with the assistance of AI, especially when such actions result in harm or constitute criminal offenses.

Despite the pervasive integration of AI across multiple sectors, the legal system in Bangladesh, like many others worldwide, has not fully adapted to address the unique challenges posed by AI entities. Specifically, the penal laws of Bangladesh, which include The Penal Code, 1860, and The Cyber Security Act, 2023, lack explicit recognition and provisions for AI entities. This oversight presents a significant gap in addressing liability and accountability when AI systems are involved in activities that could potentially lead to legal disputes or crimes (The Cyber Security Act, 2023; The Penal Code, 1860).

4. Objective

The primary objective of this study is to critically examine the concept of legal personality for AI within the framework of Bangladeshi penal laws. This involves exploring the potential for recognizing AI entities as bearers of rights and duties, the feasibility of such recognition under the current legal system, and the implications of this recognition for the attribution of criminal liability. The study aims to provide a foundation for future legal reforms and contribute to the global discourse on the legal status of AI.

It seeks to explore whether existing legal frameworks can accommodate AI entities and to what extent AI can be integrated into the legal system as a distinct legal personality. Additionally, the study aims to identify potential legal reforms and considerations necessary for the effective governance of AI technologies, ensuring they align with societal values and ethical standards.

5. Methodology

This research adopts a qualitative methodology, drawing upon a wide array of sources including legal texts, scholarly articles, case studies, and international legal precedents. Through this approach, the study aims to critically assess the current legal landscape concerning AI, identify gaps and challenges, and draw on international precedents and scholarly debates to propose viable legal amendments or frameworks for Bangladesh. The study begins with a comprehensive review of the literature on legal personality and its application to AI, followed by an analysis of relevant sections of the Penal Code, 1860 and the Cyber Security Act, 2023. Comparative analysis with other jurisdictions that have commenced to address this issue provides additional insights. The study also incorporates hypothetical scenarios to illustrate the practical implications of current legal gaps.

6. Legal Personality: An Overview

6.1 Definition and Importance

Legal personality is a cornerstone concept in law, denoting the capacity of a being to possess rights and duties and to be subject to legal relations. It is what allows entities, whether human or corporate, to partake in legal transactions, own property, sue, and be sued (Allen & Robin, 1996). The importance of legal personality lies in its ability to create a legal distinction between the entity and its members or creators, thus enabling an organized and systematic approach to legal accountability and responsibility.

6.2 Historical Context

The concept of legal personality has evolved significantly over time, expanding from natural persons (humans) to include various non-human entities such as corporations, states, and even certain natural entities like rivers in some jurisdictions. This evolution reflects the legal system's adaptability in recognizing entities that perform roles within society, necessitating a legal framework to govern their actions (Naffine, 2009). The historical expansion of legal personality serves as a precedent for considering new forms of entities, such as AI, within the legal domain.

6.3 Theoretical Perspectives

The debate on extending legal personality to AI entities intersects with several theoretical perspectives. One key argument is rooted in the functionalist perspective, which suggests that if an entity performs functions similar to those of existing legal persons, it warrants similar legal recognition (Kurki, 2019). This perspective emphasizes the roles and actions of the entity rather than its intrinsic nature. Another perspective considers the moral agency of AI, arguing that entities capable of making decisions that have moral implications should be recognized legally to ensure accountability (Solum, 1992).

These theoretical discussions are not purely academic; they have practical implications for how societies and legal systems adapt to technological advancements. The integration of AI into various sectors raises questions about liability, rights, and responsibilities that challenge existing legal frameworks. As AI systems become more autonomous and capable of decision-making, the argument for recognizing their legal personality becomes increasingly pertinent.

7. AI and Legal Personality: Global Perspectives

7.1 International Developments

Globally, there has been a burgeoning interest in addressing the legal challenges associated with AI. Some jurisdictions have taken pioneering steps toward recognizing the legal status of AI systems. For instance, the European Parliament adopted a resolution in 2017, calling for comprehensive legal frameworks to address the rights and obligations of robots and AI systems, suggesting the possibility of creating a specific legal status for robots as "electronic persons" (European Parliament, 2017). The European Union, through the European Parliament's resolution on civil law rules on robotics (2017), has been at the forefront, suggesting the potential creation of a "legal status for robots" as electronic persons capable of being responsible for making good any damage they may cause (European Parliament, 2017).

Similarly, in 2020, Saudi Arabia granted citizenship to Sophia, a humanoid robot, in a symbolic gesture that highlights the potential for AI entities to be recognized under national legal systems (Vincent, 2017).

In contrast, the city of Dubai launched the Dubai AI and Robotics for Good Award, encouraging the use of AI and robotics for social and humanitarian benefits, reflecting a more application-oriented approach without directly addressing legal personality (Dubai Future Foundation, 2015).

7.2 Comparative Analysis

The approach to AI legal personality varies significantly across jurisdictions. In the United States, the debate focuses on adapting existing legal frameworks to address AI, with discussions centering around liability, copyright, and patent laws rather than granting AI entities legal personhood (U.S. Copyright Office, 2023). Meanwhile, countries like Japan and South Korea are emphasizing the development of AI ethics guidelines and regulatory frameworks that address the use of AI in specific sectors without directly tackling the issue of legal personality (Habuka, 2023).

However, the comparative analysis of the legal frameworks pertaining to Artificial Intelligence (AI) across different jurisdictions reveals a spectrum of approaches toward the integration, regulation, and recognition of AI within the legal system. This detailed examination juxtaposes the strategies adopted by various countries, shedding light on the diverse methodologies and their underlying principles in addressing the legal challenges posed by AI. By dissecting these varied approaches, we can distill insights and principles that could inform more nuanced legal reforms and policies, particularly for jurisdictions like Bangladesh that are navigating the complexities of AI integration into their legal frameworks.

7.2.1 United States: Sector-Specific Regulation and Innovation Emphasis

In the United States, the approach to AI and its legal implications has been characterized by an emphasis on innovation and sector-specific regulation. The U.S. has not pursued the establishment of a broad legal personality for AI. Instead, it focuses on adapting existing laws and introducing new regulations tailored to specific applications of AI, such as autonomous vehicles and drones. For instance, the Federal Aviation Administration (FAA) has developed regulations for drones, while the National Highway Traffic Safety Administration (NHTSA) has issued guidelines for autonomous vehicles. This approach reflects a pragmatic stance towards fostering innovation while ensuring public safety and ethical standards (United States Department of Transportation, 2024).

7.2.2 European Union: Ethical Frameworks and Legal Status Exploration

The European Union has taken a more proactive stance in exploring the legal implications of AI, emphasizing ethical considerations and the potential for establishing legal status for sophisticated AI systems. The European Parliament's resolution on civil law rules on robotics suggests the creation of a "legal status for robots," highlighting concerns about liability, autonomy, and the social impact of AI (European Parliament, 2017). The EU's approach is notable for its forward-looking exploration of legal personhood for AI, balanced with a strong emphasis on ethical frameworks and human rights considerations.

7.2.3 Japan: Ethical Guidelines and Strategic AI Development

Japan's approach to AI in the legal realm is characterized by the development of strategic policies aimed at leveraging AI for economic growth while ensuring ethical guidelines are in place. The Japanese government's AI Strategy emphasizes innovation, the creation of ecosystems for AI development, and the establishment of guidelines for ethical AI use. Japan's focus on ethics and strategic development, rather than on the legal personality of AI, underscores a vision of AI as a tool for societal advancement within predefined ethical bounds (Cabinet Office, Government of Japan, 2022).

7.2.4 Singapore: Smart Nation Initiative and Regulatory Sandbox

Singapore has adopted a holistic approach to AI, encapsulated in its Smart Nation initiative, which aims to integrate AI across various sectors of public life and governance. Singapore's approach to AI regulation is notable for its use of regulatory sandboxes, which allow for the testing of AI technologies in controlled environments to assess their implications before full-scale implementation. This method facilitates innovation while closely monitoring societal impacts and ethical considerations, allowing for adaptive regulatory responses (Negrine & Liptak, 2023).

7.3 Implications for Legal Systems

The international discourse on AI and legal personality underscores a fundamental challenge: how to balance innovation and regulation. Granting legal personality to AI could facilitate accountability and transparency in AI operations, but it also raises complex questions about rights, responsibilities, and the moral agency of non-human entities (Teubner, 2018). Legal systems worldwide are grappling with these questions, exploring a range of options from specific legal statuses for AI to more traditional approaches that adapt existing legal categories to cover AI activities.

The global dialogue on AI legal personality has profound implications for legal systems worldwide. The notion of granting legal personality to AI challenges

traditional legal concepts of personhood, liability, and accountability. For instance, the allocation of responsibility for AI actions—a central concern in legal debates—questions the adequacy of existing legal doctrines to address harm or damages caused by autonomous systems. Furthermore, the variability in international approaches underscores the need for a harmonized, albeit flexible, framework to address the global nature of AI technologies and their cross-border impacts (Miazi, 2023).

8. Lessons for Bangladesh

For Bangladesh, the global landscape offers valuable lessons. The diversity of approaches underscores the importance of a nuanced and context-specific legal framework that can accommodate the unique challenges posed by AI. Bangladesh could consider developing specific guidelines or legal provisions that address the use of AI in critical sectors, drawing on international best practices and ethical considerations. Furthermore, engaging in international dialogues and collaborations could help Bangladesh navigate the complex legal and ethical terrain surrounding AI and legal personality.

For Bangladesh, international developments and comparative analyses offer several lessons. First, the need for a proactive and informed approach to AI regulation is clear. Bangladesh could benefit from establishing a multidisciplinary task force to assess the implications of AI technologies and propose specific legal reforms. Drawing from the European Parliament's recommendations, Bangladesh might explore the feasibility of creating legal statuses for AI entities that reflect their functional capabilities and potential societal impacts (European Parliament, 2017).

Moreover, adopting sector-specific guidelines and ethical frameworks, akin to the approaches taken by the United States and Japan, could provide immediate safeguards for AI applications in critical areas such as healthcare, transportation, and finance. Such measures could serve as interim steps while comprehensive legal reforms are considered. The emphasis on ethical guidelines and societal benefits seen in Dubai's initiative suggests that Bangladesh could also focus on harnessing AI for social good, aligning AI development with national development goals and ethical standards. This approach not only mitigates risks but also leverages AI technologies to address societal challenges, promoting inclusive and sustainable development.

The comparative analysis underscores several key lessons for Bangladesh. Firstly, the importance of sector-specific regulations, as seen in the U.S., suggests that Bangladesh could benefit from tailored laws that address specific AI applica

tions, balancing innovation with ethical and safety considerations. Secondly, the European and Japanese emphasis on ethical frameworks highlights the need for Bangladesh to develop its ethical guidelines for AI, ensuring that AI development aligns with societal values and human rights.

Furthermore, the exploration of legal status for AI in the EU presents a forward-looking model that Bangladesh might consider in the long term, especially as AI technologies become more autonomous and integrated into society. Lastly, Singapore's use of regulatory sandboxes offers a pragmatic model for testing AI applications within a controlled environment, providing valuable insights for policy development and regulatory adjustments.

9. Penal Laws of Bangladesh: An Examination

The examination of the penal laws of Bangladesh in relation to Artificial Intelligence (AI) is pivotal for understanding the current legal framework's capacity to address the emerging challenges posed by AI technologies. This section searches into the specific provisions of the Penal Code, 1860, and the Cyber Security Act, 2023, analyzing their applicability to AI-related incidents or activities. Furthermore, it highlights the limitations and challenges within these laws in grappling with the nuances of AI actions and proposes areas for legal adaptation and reform.

9.1 The Penal Code, 1860

The Penal Code, 1860, serves as the cornerstone of the criminal justice system in Bangladesh, outlining offenses and prescribing penalties for a wide range of criminal activities. However, given its enactment long before the advent of digital technology and AI, the Code does not explicitly address crimes involving or committed by AI systems (The Penal Code, 1860). Notwithstanding, certain sections, such as those related to fraud (Section 420), forgery (Section 467), and criminal conspiracy (Section 120B), could potentially be applied to AI-driven activities, albeit with interpretative challenges. The application of these provisions to AI entities presupposes an ability to attribute intent or mens rea, a concept traditionally reserved for human actors.

However, its provisions predate the advent of AI and, as such, do not directly address the complexities associated with AI entities. Nevertheless, several sections could indirectly apply to offenses involving AI:

- o Section 420 (Cheating and dishonestly inducing delivery of property): This section could apply to scenarios where AI is used to commit fraud or deceit, highlighting the need for interpretations that can accommodate non-human actors (Government of the People's Republic of Bangladesh, The Penal Code,

1860).

- o Section 304A (Causing death by negligence): In the context of autonomous vehicles or medical AI leading to fatal accidents, this section's applicability raises questions about accountability when direct human involvement is minimal (Government of the People's Republic of Bangladesh, The Penal Code, 1860).
- o Section 499 (Defamation): With AI systems capable of generating content, the issue of defamation could arise, necessitating a discussion on liability for AI-generated statements (Government of the People's Republic of Bangladesh, The Penal Code, 1860).

9.2 The Cyber Security Act, 2023

The Cyber Security Act, 2023, represents Bangladesh's effort to address the complexities of cybercrime and digital security in the internet age. While the Act includes provisions related to digital fraud, identity theft, and unauthorized access to digital devices and information (The Cyber Security Act, 2023), its application to AI systems is not straightforward. The Act does not explicitly mention AI, leaving uncertain how its provisions might apply to AI-generated content or actions, such as the creation and dissemination of deepfakes or autonomous cyberattacks.

However, the Cyber Security Act, 2023, represents a more contemporary approach to addressing the challenges posed by digital technologies, including AI. Specific provisions within this Act that are pertinent to AI include:

- o Section 17 (Publishing information that is attacking or intimidating or which can deteriorate law and order): This could encompass AI-generated content that disrupts public order or incites violence, emphasizing the need for clear guidelines on AI-generated content (Government of the People's Republic of Bangladesh, The Cyber Security Act, 2023).
- o Section 26 (Unauthorized use of identity information): AI systems involved in the unauthorized use or manipulation of identity information highlight the act's relevance to protecting digital identities (Government of the People's Republic of Bangladesh, The Cyber Security Act, 2023).
- o Section 31 (Destruction of computer data with malicious intent): This section is significant in cases where AI is used in cyber-attacks, underscoring the importance of securing AI against misuse (Government of the People's Republic of Bangladesh, The Cyber Security Act, 2023).

10. Challenges and Limitations

One of the primary challenges in applying existing penal laws to AI-related activities is the requirement of mens rea, or criminal intent, which is a key element

in criminal liability (Mecaj, 2022). AI systems, lacking consciousness and subjective experiences, cannot possess intent in the traditional sense. This gap raises questions about liability and accountability when AI actions result in harm or criminal outcomes. Additionally, the rapid evolution of AI technologies may outpace the legal system's ability to adapt, creating a lag in effective legal regulation.

However, the application of these laws to AI-related offenses presents several challenges. Firstly, the lack of explicit recognition of AI as legal entities or subjects within these laws complicates the attribution of liability and accountability. Secondly, the dynamic and autonomous nature of AI systems raises questions about intent and negligence, which are pivotal in criminal law. Lastly, the global and interconnected nature of AI technologies necessitates cross-border legal considerations, which the current framework does not adequately address.

10.1 Potential Areas for Legal Adaptation in Bangladesh

To bridge the gap between current penal laws and the challenges posed by AI, Bangladesh could explore several avenues for legal adaptation. These might include the introduction of specific legislation addressing AI crimes, amendments to existing laws to explicitly include AI systems, or the development of a legal doctrine that allows for the attribution of liability to AI developers, operators, or owners for harms caused by AI actions. Furthermore, adopting a functional approach to criminal liability, which focuses on the outcomes of actions rather than intent, could offer a way to hold AI entities accountable within the legal framework.

10.2 AI in the Context of Bangladeshi Penal Laws

In the context of Bangladeshi penal laws, the integration and implications of Artificial Intelligence (AI) present a complex landscape that necessitates a nuanced examination. This section trying to explores the intersection of AI with the penal laws of Bangladesh, focusing on potential scenarios where AI could be implicated in legal cases, identifying legal gaps and issues, and considering judicial responses. By referencing relevant legal provisions, this discussion aims to shed light on how existing laws might address AI-related offenses and the need for legal evolution to adequately govern AI activities.

Several hypothetical scenarios illustrate the challenges AI poses to the current legal framework in Bangladesh. For instance:

- o Autonomous Vehicles: Involvement in accidents leading to damage or loss of life could raise questions under Section 304A of the Penal Code, 1860, which pertains to causing death by negligence, questioning the application of "negligence" to AI decisions.
- o AI in Healthcare: An AI system's misdiagnosis resulting in harm could impli

cate Section 304A for negligence, and Section 420 for cheating and dishonesty, if the AI was trusted with decisions without proper oversight.

- o AI and Cybersecurity: AI-driven cyber-attacks could fall under Sections 26 and 31 of The Cyber Security Act, 2023, dealing with unauthorized use of identity information and destruction of computer data with malicious intent, respectively.

10.3 Legal Gaps and Issues

As I mentioned in previous discussion, the primary legal gap is the absence of explicit recognition or provisions for AI entities in Bangladeshi penal laws. This omission leads to several issues:

- o Attribution of Liability: Current laws do not clearly address how liability should be attributed in cases where AI actions result in harm or loss (Miazi, 2023). The question of intent, a key element in many criminal offenses, becomes problematic when the "actor" is an AI.
- o Determining Negligence: For AI, determining negligence involves assessing the algorithms and the decision-making process, which challenges traditional legal notions of negligence centered on human oversight and error.
- o Cross-border Challenges: AI technologies often operate across borders, complicating jurisdictional issues and the application of national laws like those of Bangladesh to internationally developed or deployed AI systems.

10.4 Judicial Responses

While there is limited jurisprudence specifically addressing AI within the Bangladeshi legal context, the judiciary's approach to technology-related cases can offer insights. For example, the application of The Cyber Security Act, 2023, in cases involving digital crimes, suggests a judicial willingness to interpret existing laws in the context of new technologies. However, explicit cases or rulings directly involving AI are yet to emerge, indicating a nascent stage of legal and judicial engagement with AI issues.

11. Legal Evolution and Recommendations

The exploration of the legal personality of Artificial Intelligence (AI) in the context of the penal laws of Bangladesh reveals significant challenges and opportunities for the legal system to adapt to technological advancements. This section synthesizes the findings and proposes recommendations for legal reforms, ethical considerations, and future research directions, culminating in a conclusion that underscores the importance of a proactive approach to AI regulation.

11.1 Adapting Legal Frameworks

- a) **Amendment of Existing Laws:** It is imperative to amend the Penal Code, 1860, and The Cyber Security Act, 2023, to include provisions that explicitly address AI-related offenses. This could involve defining AI entities' legal status, establishing criteria for liability, and specifying the applicability of traditional legal concepts such as negligence and intent to AI actions (The Cyber Security Act, 2023; The Penal Code, 1860).
- b) **AI-specific Legislation:** Bangladesh should consider drafting AI-specific legislation that outlines the rights, responsibilities, and ethical guidelines for the development and deployment of AI technologies. This legislation should aim to protect public welfare while fostering innovation and technological advancement.
- c) **International Collaboration:** Given the global nature of AI technologies, Bangladesh should engage in international collaboration and dialogue to adopt best practices, harmonize legal standards, and address cross-border legal challenges related to AI.

11.2 Ethical and Societal Considerations

- a) **Ethical Framework for AI:** Develop a comprehensive ethical framework that guides AI development and use, ensuring that AI technologies respect human rights, privacy, and dignity. This framework should also address concerns related to bias, discrimination, and transparency in AI systems.
- b) **Public Engagement and Awareness:** Promote public engagement and awareness campaigns to educate citizens about AI's benefits and challenges, fostering a well-informed public discourse on AI ethics and regulation.

11.3 Future Research Directions

- a) **Interdisciplinary Research:** Encourage interdisciplinary research that bridges law, computer science, ethics, and social sciences to explore the multifaceted implications of AI and develop holistic approaches to AI regulation.
- b) **Empirical Studies on AI Impact:** Conduct empirical studies to assess the impact of AI on society, the economy, and the legal system, informing policy-making and legal reforms.
- c) **Comparative Legal Studies:** Engage in comparative legal studies to analyze how different jurisdictions address the legal challenges posed by AI, drawing lessons for Bangladesh.

12. Conclusion

The rapid advancement of AI technologies presents unprecedented challenges and opportunities for the legal system. As AI becomes increasingly

integrated into various aspects of society, the legal framework in Bangladesh must evolve to address the complexities of AI entities and ensure they are used responsibly and ethically. By adopting a proactive and informed approach to legal reforms, Bangladesh can harness the benefits of AI while mitigating its risks, ensuring that the legal system remains relevant and effective in the digital age. The recommendations outlined in this article provide a roadmap for legal, ethical, and societal adaptation to AI, highlighting the need for ongoing dialogue, research, and collaboration to navigate the future of AI regulation.

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