THE PARADOX OF LEGAL UNCERTAINTY: A SCHRODINGER'S CAT ANALYSIS OF THE LEGAL PERSONALITY OF AI

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ABSTRACT

Schrödinger's Cat thought experiment of quantum mechanics is used in this paper to investigate the **uncertain position of legal personhood of Artificial Intelligence (AI)**. While the cat in the thought experiment exists in the quantum state, as Schrödinger put it, can be both alive and dead at the same time, in the same way, recognition of Artificial Intelligence as legal person, can exist in **superposed legal state i.e. both, acknowledged or unacknowledged**, depending upon any given interpretation of the legal framework or the observer's perspective. In order to elaborate on this fact, this paper uses quantum concepts such as **superposition, measurement, entanglement, and collapse** as reference to make the analysis. The main question of this paper is: how AI's legal identity remains fluid, with competing views on its recognition as a legal entity, tool, or non-human agent. This paper reflects on these vagaries in terms of legal, ethical, and social concerns by focusing on case studies and comparing different legislations to argue that the legal status of AI remains uncertain and ambiguous.

Keywords: Legal Personhood, AI Accountability, Autonomous Entities, Jurisprudence of AI, Technological Governance

INTRODUCTION

Artificial Intelligence is no longer a subject for theoretical constructs like in the movies but a tool for changing many aspects of our lives, and even ways of governance. Once used in specific technological roles, AI has seeped into every area of life from **health, finance, transport, and law**.[1] Automated conveyance or vehicles[2], smart legal services, intelligent diagnostics in medicine[3], and AI-supported information agents are some of the more prominent creations to illustrate the integration of humans with AI. A global economic analysis made by the **World Economic Forum in 2023** suggested that AI will bring **$15.7T to the global GDP** by the **2030**, which proofs AI's major role not only in economy but in society as well. Some spectacular and famous advancements were made, including **DeepMind AlphaGo** created by Google and reaching the proficiency level in the board game of Go.[4] This integration into society raises a pressing question: as AI is moving closer to being able to make **decisions independently**, how should it be addressed by the law? This question of owing legal persona to AI has become the most debatable question in today's legal discussion, with significant consequences on justice, liability, and responsibilties concerning the roles of artificial intelligence.

AI has the ability to challenge the idea of legal personality, which refers to an individual or, in some situations, a legal entity like a business. A legal person has particular legal personality, privileges, and the authority to sue, hold property, and be held liable for certain legal situations. The law has historically seen **AI as a tool**, with the programmers, operators, and deployers of these systems making the choices and/or acts.

However, citing the fact that these capacity has been gradually being devolved to the artificial intelligence systems especially in sensitive areas like self-driving vehicles or hawk-eyed

[1] Akhter Hossain, K. (2023) 'Evaluation of challenges for extensive use of artificial intelligence (AI) in every aspect of life', *American Journal of Computer Science and Technology* [Preprint]. doi:10.11648/j.ajcst.20230604.11.
[2] Rashmi and Bisinfotech (2024) *AI revolutionizing automotive design, safety, and experience*, *Bisinfotech*. Available at: https://www.bisinfotech.com/ai-revolutionizing-automotive-design-safety-and-experience/ (Accessed: 31 December 2024).
[3] Siang, L.K. (no date) *How Prudential is harnessing AI to shape the future of life and health insurance for every customer*, *The Business Times*. Available at: https://www.businesstimes.com.sg/companies-markets/banking-finance/future-of-finance-2024/how-prudential-harnessing-ai-shape-future-life-and-health-insurance-every-customer (Accessed: 31 December 2024).
[4] Lee SedolWinner of 18 world Go titles (no date) *AlphaGo*, *Google DeepMind*. Available at: https://deepmind.google/technologies/alphago/ (Accessed: 21 December 2024).

military drones. For example, the **UN General Assembly** has been provided a **2013 report** on lethal autonomous robotics[5], which include drones capable of making decisions about killing. Also, investment banks have joined the bandwagon and use robot traders for the high-frequency trades. Thus, the problem of the legal status of AI is **not only theoretical but also has a legal emergency**.

The legal status of AI personhood remains highly ambiguous and varies significantly across jurisdictions. For example, the **2017 directive from the European Parliament** highlighted the necessity of immediate consideration of civil liability of autonomous systems, and proposed the creation of a concept of "**electronic personhood**" for complex AI capable to engage in direct interactions.[6] In support of its call for legal personhood of AI, AI's advocates suggest that the granting of limited legal rights to the product could actually help resolve some of the emerging concerns in relation to **accountability or responsibility** when it comes to actions carried out by the application.

Discussions that have taken place in the recent past regarding the AI and the Intellectual Property laws, including the case of the AI naming **the DABUS which came up with patentable ideas[7]** have led the courts to the world's most important question, whether non-natural persons can own the Intellectual Property rights. Last year, the UK, along with the European Patent Office, denied patent protection to an AI concept because the patent applicant did not fit the criteria to be considered an inventor. Still, it is possible to state that such an interpretation may require a change in the near future due to the expanding usage of AI in creative and intellectual work.

AI is also increasingly becoming part of societal functions that engage on the emerging legal questions on the ethics, governance, and rights of people.[8] There is already a lot of legal and social debate about matters like data protection, fairness in algorithms, and biasness in decisions made by Artificial Intelligence systems. AI is now used to decision making with immediate impact on individuals from job selection to criminal justice sentencing thereby

[5] 'The role of the United Nations in addressing emerging technologies in the area of Lethal Autonomous Weapons Systems' (2019) *UN Chronicle*, 55(4), pp. 15–17. doi:10.18356/87196c84-en.
[6] Avila Negri, S.M. (2021) 'Robot as legal person: Electronic personhood in robotics and artificial intelligence', *Frontiers in Robotics and AI*, 8. doi:10.3389/frobt.2021.789327.
[7] Kim, D. (2022) 'The paradox of the *dabus* judgment of the German Federal Patent Court', *GRUR International*, 71(12), pp. 1162–1166. doi:10.1093/grurint/ikac125.
[8] *Ethics of Artificial Intelligence* (no date) *UNESCO.org*. Available at: https://www.unesco.org/en/artificial-intelligence/recommendation-ethics (Accessed: 31 December 2024).

raising questions about legal structure of AI's controlling functions as well as rights and responsibilities.

For example, the **General Data Protection Regulation in the EU**[9] has already imposed important legal requirements associated with AI particularly in the realm of automated decision-making.[10] It mandates **transparency and the right to human intervention in automated processes, recognizing the potential for AI to infringe on individual rights**. However, even in countries that have such frameworks, there a lack of consensus on the legal personality of AI,

SCHRODINGER'S CAT ANALYSIS VIZ-A-VIZ LEGAL PERSONALITY OF AI

Quantum Superposition Explained

In quantum mechanics the idea is known as superposition which means that the physical system can be in several states at the same time. One of the most famous examples of this idea is **Schrödinger's cat** put forth by **physicist Erwin Schrödinger**. The cat placed in the box contains a radioactive atom which may decay or does not, thus the cat is both **alive and dead at the same time** until the box is open and the state is then measured. This paradox highlights the **uncertainty inherent in quantum systems**.[11]

Superposition of AI's Legal Identity

Perhaps the concept of AI can be as well considered as Schrödinger's cat: being in more potential legal states at the same time. In other words, AI can be discussed in terms of an **instrument, an object or an agency**. Its scope depends on **the jurisdiction, the context of the use, as well as the type of actions an AI system performs**. For example, in some countries it can be **deemed that AI is a tool** created by a human being which is similar to software or a machine. However in other contexts the social actors can be considered as legal subjects

[9] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), 2016 O.J. (L 119) 1

[10] *Zooming in on ai - #5: AI under financial regulations in the U.S., EU and U.K. – A comparative assessment of the current state of play: Part 1* (no date) *A&O Shearman*. Available at: https://www.aoshearman.com/en/insights/ao-shearman-on-tech/zooming-in-5-ai-under-financial-regulations-in-the-us-eu-and-uk-a-comparative-assessment-part-1 (Accessed: 31 December 2024).

[11] Kanitscheider, B. (1992) 'Schrödinger's cat and the interpretation of Quantum Mechanics', *Erwin Schrödinger's Worldview*, pp. 41–52. doi:10.1007/978-94-011-2428-7_6.

capable for holding rights and duties in the same way as it is in the case of such subjects as corporations or artificial legal personalities. In countries like India which are yet to update their laws according to the modern use of technology the legal status of AI is not well defined and might change depending on the particular legal questions of the case.[12]

For example, **Amazon India v. Future Retail (2020)[13]** the case though was a commercial relation conflict, it also highlighted involvement of AI systems in business relations, and exercise of enforcement of terms of automated contracts. The case mentioned a bit about the changing nature of new work intermediated by AI, particularly in contracts. The problem will only grow when AI solutions write the contracts for various parties or make the definitive judgments on people's welfare independently. Of course, the case did not come to the legal entity quality of AI, but raised an issue, whether AI system shall bear the decision-making responsibility.

Likewise in **Tata Consultancy Services (TCS) v. State of Uttar Pradesh** (2015)[14] the apex court gave judgements regarding questions of liability as well as questions relating to taxation pertaining to software and IT services. While it did not refer to AI, it nevertheless cast a light on the **changing legal issues about the responsibility of automatic program systems**. The problem that will face the courts is **where to allocate the responsibility** – as AI software becomes more prominent in business, it is not clear whether the software or the human user is legally liable for problems resulting from its performance. This bring to the debate of legal accountability of AI and hence the subject of legal personality of AI.

They create areas of confusion such as accountability, attribution of liability and property rights. Until there is a clear legal distinction, AI's function will operate in a state of quantum uncertainty.

Jurisdictional Variations

There are differences in how several legal structures across the globe define AI. In some

[12] Saai Sudharsan Sathiyamoorthy and Sundar Athreya H. (no date) *Does India need an elvis act? right to personality in the age of ai*, *The New Indian Express*. Available at: https://www.newindianexpress.com/web-only/2024/Dec/19/does-india-need-an-elvis-act-right-to-personality-in-the-age-of-ai (Accessed: 31 December 2024).
[13] AIR 2021 SUPREME COURT 3723, AIRONLINE 2021 SC 443
[14] WRIT - C No. - 28028 of 2014

jurisdictions AI is still narrowly defined **as property, as tool, as an object** which lacks legal personality, consequently cannot be punished. On the other hand there are some jurisdictions that are considering the proposition of **AI as having a legal personality** that can both o**wn rights and or duties under certain circumstances**.[15] This difference has far-reaching import on any matter touching directly on the AI including intellectual property rights, compensation for accidents, and the formation of contracts.

The Legal Standing of AI has not been clearly defined in many aspects in India at the present time. According to the Indian law, The **Information Technology Act, 2000**, which deals all cyber activities in India, does not give legal status of AI as an independent entity but it use **AI as a tool operated by human being**. But there are now more debates and voices raised in India legal communities about how new legal framework is required to deal with the new invention of AI and other related technologies throughout the world. For example, the **National Strategy on AI launched by the NITI Aayog[16]**, defines that many sectors should use AI but does not determine clear requirements addressing how AI is legally legal in India.

On the other hand, countries such as Estonia have elaborated an approach that more emphatically includes AI into the legal system. **Estonia's recent developments indicate that AI is provided with certain legal entity rights for Limited Purposes[17]** including manufacturing of contracts and business transactions and possibly delivering judgments in the near future.[18]

Case Study The 2018 Uber Autonomous Vehicle Accident

One of the most striking examples that exemplify legal uncertainty related to AI may be traced to an accident that occurred in the United States in 2018 involving an autonomous Uber car. The autonomous vehicle was on the road and, suddenly, it hit and killed a pedestrian, but who

[15] Lovell, J.J. (2024) 'Legal aspects of artificial intelligence personhood: Exploring the possibility of granting legal personhood to advanced AI systems and the implications for liability, rights and Responsibilities', *International Journal of Artificial Intelligence and Machine Learning*, 4(2), pp. 23–40. doi:10.51483/ijaiml.4.2.2024.23-40.
[16] *Indiaai*. Available at: https://indiaai.gov.in/research-reports/national-strategy-for-artificial-intelligence (Accessed: 31 December 2024).
[17] Sinha, N. (2017) *Estonia mulls giving legal status to Artificial Intelligence*, *Inshorts*. Available at: https://inshorts.com/en/news/estonia-mulls-giving-legal-status-to-artificial-intelligence-1507658931723 (Accessed: 31 December 2024).
[18] *Estonia is building a 'robot judge' to help clear legal backlog* (no date) *World Economic Forum*. Available at: https://www.weforum.org/stories/2019/03/estonia-is-building-a-robot-judge-to-help-clear-legal-backlog/ (Accessed: 31 December 2024).

is to be blamed: the AI system? It becomes crucial to distinguish at this point whether the developer or operator of the car, was at fault for the accident, or whether the blame lies with the AI system that controls the car, for not registering the pedestrian?

It is evident in this particular case that determining legal liability in cases of AI systems' operation is challenging. Finally, there was no criminal conviction on Uber, yet the case highlighted the **lack of proper guidelines for briging charges of accountability for AI operated activities.**

Similarly, in India, there remains much uncertainty regarding autonomous vehicles regarding liability. The Indian Motor Vehicles Act, 1988[19], provides no provision for intelligent vehicles since this law was drafted years before Intelligent Transport Systems were achieved.

The Observer Effect

The notion that the mere observation affects the state of the observed quantum mechanical system describes the legalization process by which legal institutions determine the legal status of AI. In this regard, '**Courts, lawmakers and regulatory bodies'**, are best described as '**active observers**' as they increasingly participate in determining the legal position of AI. Using the **Realist school of jurisprudence[20]** the law is not an aggregate of rules but rather a legal culture in the collectors' making. Similarly to quantum states which are only when becoming fixed after observed, AI has rather not very well-defined legal status and its definition is rather set by the legal system based on the cultural and political environment at the time of judicial actions. The observer effects of AI-law means that powering for legal decisions is **not simply a passive interpretation of pre-existing normative frameworks, but is actually active in deciding on the status of AI.**

Also analyzing this phenomenon with the help of concerns and issues that the **Critical Legal Studies (CLS)**[21] movement raises is stimulating. CLS theorists want everyone to understand that law is not innocent but it is a reflection of a social, political and economic force. In the context of AI, this implies that the legal and regulatory status of AI shall not only be a material

[19] The Motor Vehicles Act, 1988, No. 59 of 1988, 1988 W.L.R. (C) 398.
[20] Goel, S. (2014) 'The explorative study of the Realist School of Jurisprudence in Indian context', *SSRN Electronic Journal* [Preprint]. doi:10.2139/ssrn.2485904.
[21] Wacks, R. (2017) '13. critical legal theory', *Understanding Jurisprudence* [Preprint]. doi:10.1093/he/9780198806011.003.0013.

determination, but mainly a construct of the legal decision-makers' conceptions of the value and function of AI in society, as a tool, an actor, or something else. This legal state status is active in creating and defining by the legal system, it **reflects the collapse of superposition quantum to a certain state observed externally**.

Collapse of Superposition into Legal States

Quantum superposition means a system being potentially in any of the number of states possible until it is observed and then it settles in one. In legal theory, this concept can be related to **Positivist jurisprudence** which state that law is summation of officials decisions. As the positivist **H.L.A. Hart**[22] suggests, law is made from the identified sources, such as constitution, statute or previous case law. Under this structure, legislative enactment or judicial ruling in handling AI can be parallel to measurement in quantum mechanics, as the latter determines value. The law is not ambiguous – it is the courts and legislatures that clarify the meaning of the system's AI work by defining and applying the law to specific cases and creating precedents.

In the Indian context, there is lack of legal definition of Artificial Intelligence or even AI being separately defined therefore it stands in a preposition of superposition. The present Act of Information present Act of 2000 however carries an **Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011**[23] that will allow handling of issues regarding the **interaction of AI** . This is the situation of legal uncertainty of AI's place in India today; while some aspects of legislation know AI, the country has not yet recognized AI in its entirety.

Contextual Variability

Similarly as in the case of observer effect which is context dependent, similarly the legal status of AI greatly differs from jurisdiction to jurisdiction as mentioned earlier, where each legal systems 'measures' AI in its own way - following local legal culture, local contextual and political realities. The **Theory of Legal Pluralism**[24] is a useful concept in capturing the

[22] McCormick, N. (2008) *H. L. A. Hart*. Stanford, CA: Stanford Law Books.
[23] Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011, Gazette of India, Extraordinary, Pt. II, Sec. 3, Sub-sec. (i), 4 March 2011.
[24] 'On the theoretical groundwork of legal pluralism' (2016) *Ubiquitous Law*, pp. 45–60. doi:10.4324/9781315549460-4.

inconsistency in the legal treatment of AI across jurisdictions. In this theory, there is no differentiation between national, international, customary laws, etc, as they all are in use; the legal status of AI here can therefore be viewed in more than one way depending on which legal system is premier.

The **EU's Artificial Intelligence Act** focuses on regulating AI based on risk tiers and considers AI as an **instrument/tools under human direction** without providing them with legal personality. The **GDPR** also **regulates the use of AI** in data processing and privacy but does not accord AI legal personality. On the other hand, **Estonia** is looking into the question in which AI would be given some legal personality, albeit **limited to engaging in contract negotiations**. 'National Artificial Intelligence Strategy' from NITI Aayog[25] explains opportunities which exist in sectors like agriculture, health and education but does not introduce AI's legal personality. As a result social and legal status of AI is still undefined. Indian legal scholars are now demanding improved definitions for the application of AI while still contemplating about the effectiveness of developments in conditioning ethical and legal responsibility.

Legal Positivism, Legal Realism, and Legal Pluralism Jurisdictions frame the legal standing of AI depending on the nation's chosen approach. On the legal level, the issue is made more **challenging by jurisdictional differences**, the European Union's legal system, Estonian legal system, and the legal system of India is different and concerned the problem in different areas. The longer AI is defined as a machine, the longer it takes for reasonable legal standards to emerge, which currently looks increasingly attractive as AI technologies evolve, yet its status will ultimately **depend on how legal institutions learn to "measure" it.**

The Hybrid Legal Personality

The hybrid legal personality approach complies between two forms – AI is not a legal person like the human being, but it is accepted as having clear function and legal obligations in some legal schemes.

The European Commission introduced the Artificial Intelligence Act in the context of the EU

[25] NITI Aayog, National Strategy for Artificial Intelligence (June 2018).

in 2021 to regulate AI technologies[26]. Although the proposal does not bring complete recognition of legal personality of AI, which means that an AI may have a legal person's position **only to the extent and for the purposes of liability.** The proposed framework divides AI systems into **different risk categories**, and besides, the AI systems belonging to the most dangerous category **- high risk, including self-driving cars, are subject to special stochastic rules regarding liability**. For instance, speaking of the legal battle in Tesla case[27], the intensity of the former was higher. In **Lamontagne v. Tesla Inc. (2020)[28],** the court affirmed Tesla's autonomous driving system **did not exclude the manufacturer from legal responsibility** in case of an accident, which confirms the adage that a machine never made a mistake while the inventor of the system was held responsible for the acts done through it.

In the United States, the application of AI in intellectual property law was first raised to prominence in **2019 when Dr. Stephen Thaler** an AI researcher sought to secure a patent using the **United States Patent and Trademark Office (USPTO).** Thaler tried to register an AI system known as **DABUS as the inventor[29]** for two patents. Although the USPTO later **rejected the application**, stating that only humans can be inventors under the present patent law of the United States, it introduced **discursively into the relationship of AI and the IP law** as well as in pioneering the **possibility of receiving similar legal recognition in the future**. The case, **Thaler v. United States Patent and Trademark Office (2021)**, recognizing the difficulties of an AI inventor and pointed at the extensive legal analysis of this matter.

Japan however, has made some progress in identifying artificial intelligence in certain legal setting mainly dealing with corporate governance. Japan has in 2017 created the **AI and Legal Personality Project** to discuss the **possibility of granting AI limited rights**, such as the **ability to own property or hold patents.[30]** Although, AI is not legally accepted as a legal person it is an essential development towards acknowledgement of roles played by Artificial Intelligence organism particularly within legal affairs within technological innovation areas.

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[26] Rostam J. Neuwirth, *The European Union's proposed Artificial Intelligence Act (AIA)*, The EU Artificial Intelligence Act 9–41 (2022).
[27] - Metla Sudha Sekhar et al., Tesla's "full self-driving" faces defect probe in US after fatal crash The Economic Times, https://economictimes.indiatimes.com/industry/auto/auto-news/teslas-full-self-driving-faces-defect-probe-in-us-after-fatal-crash/articleshow/114359685.cms?from=mdr (last visited Dec 31, 2024).
[28] 23-cv-00869, U.S. District Court, Northern District of California (San Francisco)
[29] Rita Matulionyte, *Ai as an inventor: Has the Federal Court of Australia erred in Dabus?*, SSRN Electronic Journal (2021).
[30] Ai Watch: Global regulatory tracker - japan: White & Case LLP, Japan | White & Case LLP (2024), https://www.whitecase.com/insight-our-thinking/ai-watch-global-regulatory-tracker-japan (last visited Dec 31, 2024).

The **Japan Patent Office (JPO)** has also examined cases where AI could be named as the inventor and that the ownership of such invention then reverts to the developer or the firm that created the AI.[31]

In the **United Arab Emirates**, in some governance structures, **AI has recently been accepted as a legal entity** as another achievement. In 2017, the UAE created the world's first state ministry of artificial intelligence. The fact that AI does not have full personhood under UAE law, the ministry's work endeavours a **partial recognition of the AI's legal capacities, especially insofar as their regulatory powers and policy-making capacities** are concerned. While the UAE Artificial Intelligence Law recognizes AI **as an instrument of governance**, it does not provide it with legal personality but nearly does so.

Though, in India, AI has not been conferred with a partial personage, recently there has been certain acknowledgement of its place in the intellectual property rights. Though, AI was not directly involved in the case, precedents like **the Bajaj Auto Ltd v/s TVS Motor Company Ltd (2014)[32]** can be prevailing the judgments over patents rights which can be the case while deciding the AI generated innovations.

Case Study: Autonomous Vehicles as an Example of Hybrid Legal Personhood

The case of self-driving cars offers clear instances of how AI could receive partial legal acknowledgment, or a semi-legal status. However, while the Indian legal regime traces the major rubric of road traffic and accidents in the Motor Vehicles Act of 1988, the impact of self-driving automobiles is not considered.[33]

Globally, some of the more developed jurisdictions have gone ahead to formulate policies and laws regarding to AI controlled autonomous vehicles although different jurisdiction is considering the AI merely as an instrument of prosecution where negligence occurred and thereby denies it full legal personhood. However, some places, including some states in the

[31] Ana Ramalho, *AI and patent protection*, Intellectual Property Protection for AI-generated Creations 75–148 (2021).
[32] ((2008) ILLJ 726 Mad)
[33] Saloni Khanderia, *Self-driving cars and some (unintended) regulatory barriers in India: A road less travelled?*, 15 Journal of Tort Law 177–214 (2022).

USA, for example, may start using models based on **shared responsibility[34] for the autonomous system and its developers, which makes the AI system and its makers liable in one or another manner**.

Entanglement in Quantum Mechanics and the Ethical Dilemma of AI's Autonomy

In quantum mechanics, entanglement is a phenomenon captured by the phrase: two particles are always connected, such that a given state influences the other particle irrespective of the distance between the two. This phenomenon can be applied to AI since its legal matters are closely connected with general tendencies such as **ethics, governance and impact on society, and evolution of the technologies**. They point out that the development of AI cannot be brought out of these contexts and it interferes with **public policy[35], human rights[36] and the International Law[37].** Whether AI should be awarded legal personhood or be considered simply as a tool is a legal/ethical question tied to **operational jurisdiction, credit, and responsibility**, the question/concerns of **rights and morality cannot be ignored**.[38]

This intertwinement is well illustrated in the moral question of AI's self-fulfillment especially in use of Application in **military applications** example being the automatic drones[39]. Natural emergence of drones with Artificial Intelligence enables the **UAVs to decide on targets and operations independently leaving legal and ethical concerns** most viable. Under international law, particularly **the Geneva Conventions**, the issue of accountability arises: *Should an operation being conducted by an autonomous drone transgress International Humanitarian Law, who is to blame? Who is the programmer or the operator of the drone, which state has used it, or is it the artificial intelligence system?*

[34] Human factors in autonomous vehicles, https://www.americanbar.org/groups/tort_trial_insurance_practice/publications/tortsource/2019/fall/human-factors-autonomous-vehicles/ (last visited Dec 11, 2024).
[35] Regine Paul, Emma Carmel & Jennifer Cobbe, *Introduction to the handbook on public policy and artificial intelligence: Vantage points for Critical Inquiry*, Handbook on Public Policy and Artificial Intelligence 1–25 (2024).
[36] Heine Klaus, *Human rights, legal personality, and Artificial Intelligence*, Artificial Intelligence and Human Rights (2023).
[37] Rolf H. Weber, *Global law in the face of datafication and Artificial Intelligence*, Artificial Intelligence and International Economic Law 54–69 (2021).
[38] Sylvie Gerbaix, Sylvie Michel & Marc Bidan, *Coping with artificial intelligence ethical dilemma and ethical position choices?*, Proceedings of the 26th International Conference on Enterprise Information Systems 382–388 (2024).
[39] Xing Zhuang et al., *Military target detection method based on EfficientDet and generative Adversarial Network*, 132 Engineering Applications of Artificial Intelligence 107896 (2024).

Case Study: Autonomous Drones in Military Applications

Under the context of the principle of IHL, the autonomous drones present some challenges[40] as pertains to the principle of distinction in that it as per the principle of distinction in IHL, parties to conflict should differentiate between **civilian populations and fighters**. And if such AI systems cannot make these distinctions, even certain uses of force may be in violation of international law. Also inconclusive is the issue of responsibility for violations committed by the drones that are driven by Artificial Intelligence. Whose action is it if the drone conducts an unlawful attack, or is it the operator or the state that deployed the drone liable?

The main misunderstanding in the usage of AI in warfare is that with usage of weaponized AI the decision making for utilizing force and resulting in the injury or death of human beings, or violation of its rights, is given to the organized systems. For instance, **in the 2015 drone strike where a CIA operated drone killed US citizen Anwar al Awlaki** without any trial, raises the question of exactly who should be deemed responsible for actions by **highly or semi-autonomous tools in warfare.[41]**

Still, the application of AI in defense is at a very early stage in the Indian context. But **India's Defence Cyber Agency** and other military organizations are looking at the use of AI in surveillance, in decision making and even in designing autonomous weapons. This development then leads to question on the accountability of the operator in the event there is a mistake or a breach of law. Current laws such as the **Armed Forces Special Powers Act (AFSPA)[42]** vest significant discretion in security forces, yet there are no standard rules governing the application of AI's autonomous systems in warfare. This brings about a demand for development of other legal requisites to govern aspects of accountability and ethics in application of AI in defense.

In the international level, the United Nations has formed a convention known as the

[40] Author links open overlay panelAnna Konert a et al., Military Autonomous Drones (uavs) - from fantasy to reality. legal and ethical implications. Transportation Research Procedia (2021), https://www.sciencedirect.com/science/article/pii/S2352146521008838 (last visited Dec 2, 2024).
[41] Micah Zenko, The United States does not know who it's killing Foreign Policy (2015), https://foreignpolicy.com/2015/04/23/the-united-states-does-not-know-who-its-killing-drone-strike-deaths-pakistan/ (last visited Dec 31, 2024).
[42] The Armed Forces (Special Powers) Act, 1958, Act No. 28 of 1958, 11 September 1958.

Convention on Certain Conventional Weapons (CCW)[43] which has created a GGE i.e. **group of governmental experts** which discusses the issue of **Lethal Autonomous Weapon Systems** (LAWS)[44]. But there is no common opinion regarding the regulation of such systems. They claim that the critical factors that give shape to modern warfare are embedded in the idea of artificial intelligence, which is still shrouded in uncertainty highlighting the **complex entanglement of legal, ethical, and political issues surrounding autonomous systems.**

IMPLICATIONS OF RESOLVING THE PARADOX

This paper highlights that giving legal personhood to AI creates a dilemma in that could result in the distribution of responsibility from the human actors. Solving this conundrum requires the view of the implications as to the ethical, legal, and pragmatic, especially when most corporations have become dependent on artificial intelligence for various decision-making procedures.

Agency and Accountability Challenges

At the core of the analysis is the question of how AI systems can be assigned legal personality and thus rights and duties that would be assigned to them. Demonstrating how granting AI legal personality would make it possible for it to own or possess property, make contracts, as additionally as to be sued. But, that is a decision that brings numerous further questions about responsibility into consideration. Legal personhood might **save developers, deployers and operators, from legal consequences**.

For example, **Tesla's autopilot** showcased this in **2016**(as previously discussed in detail) whereby the self-driving car resulted in an accident. The incident posed critical questions: should it be the driver, Tesla or the AI responsible in case there is an accident? Likewise, one of the doctors worked with **IBM Watson for Oncology**, an AI system that helps doctors, made impromptu suggestions in certain urgent scenarios[45], which led to the question of whether

[43] Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects [1] (and Protocols) (As Amended on 21 December 2001), 1342 U.N.T.S. 2 137, 10 October 1980.
[44] Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems (GGE on LAWS), Convention on Certain Conventional Weapons (CCW), U.N. Doc. CCW/MSP/2023/7 (2023).
[45] IBM's supercomputer helps doctors to fight cancer, The Hindu (2016), https://www.thehindu.com/business/IBM%E2%80%99s-Supercomputer-helps-doctors-to-fight-

developers, users, or AI system itself is responsible for the outcomes generated by the system.

Recognizing AI as a legal person could even further complicate these tasks due to the sheer fact that the physical bodies behind an AI system are bureaucratically detached from its actions and exactly its legal existence amplifies this effect. This might let developers say that AI works independently, and thus should assume the legal liabilities, too.

Cross-Border Agreements and International Complexities

That is the case with the advancement in AI engineering, which is taking place on a global level, further intensifying the issue. Most AI systems have implications for policy across a range of jurisdictions and involve developers, deployers, and users from a variety of countries. For instance, the use of Self-driving cars may comprise of **Software from Silicon Valley**, **components from Japan, and assembly in the EU**. In such circumstances, determining as to who is to be held liable turns into a gigantic exercise and becomes even more challenging when **the issue is transnational in nature**.[46]

Let it be the facial recognition technology[47] driven by artificial intelligence and practiced by police departments in India and other nations. Wrong identifications that cause wrong arrests are likely to lead to severe liability risks. Whose job would it be to handle this reinforcement learning – the developers of this technology, the agencies which incorporate this kind of technology or the AI itself? Even these questions are left unanswered due to lack of definitive international guidelines – a clear indication that there is a need for transnational coalition in nurturing the legal personality of the AI.

India's Stand and the Stance of MeitY

The Indian Government to its credit, through **Ministry of Electronics and Information Technology (MeitY)** has woken up to the challenge of defining legal and ethical issues in AI. MEITY's Committee Working on Cybersecurity, Safety, Legal, and Ethical Issues has

cancer/article14556945.ece#:~:text=Somashekhar%20S.%20P.%2C%20a%20top%20oncologist,be%20used%20to%20target%20it. (last visited Dec 31, 2024).

[46] Esmat Zaidan & Imad Antoine Ibrahim, *AI governance in a complex and rapidly changing regulatory landscape: A global perspective*, 11 Humanities and Social Sciences Communications (2024).

[47] Prabhjote Gill, India is ramping up the use of facial recognition to track down individuals without any laws to keep track of how this technology is being used: Business Insider India Business Insider (2021), https://www.businessinsider.in/tech/news/what-is-facial-recognition-technology-and-how-india-is-using-it-to-track-down-protestors-and-individuals/articleshow/80782606.cms (last visited Dec 31, 2024).

provided a report[48] and it calls for **consideration to debate on the legal personality of AI systems**. It propose that if such personhood is to be given then it should be coupled with structures such as **insurance policies or indemnity funds** in case of harm that can be caused by an AI driven action.

This conservative outlook is in line with India's analogue of an **open door policy towards AI development[49]** on the one hand and the various challenges accompanying the application of artificial intelligence on the other. Even though India has not extended the legal personhood to AI, its attempts toward AI regulation are convincing that address the difficulties and opportunities of this discussion.

Other Indian Examples

Such challenges are highlighted in this report with use of real life examples of the incorporation of artificial intelligence in governance and public service in India.

Recently, in 2021, the Supreme Court of India has raised several questions in regard to the current uses of AI in judicial proceedings **regarding transparency, biasness and accountability[50]**. Likewise, increasing application of **AI in facial recognition** in India has raised concerns over violation of privacy, compromising for results and unearthing no procedure to fix accountability. These examples exemplify why it is important for the **Indian courts to remove the paradox of legal personhood.**

Managing the Consequences of Legal Personality

There's a serious legal, economical and social consequences that extending legal personhood to AI is **not just a theoretical concept**. Of course, it may reduce certain aspects of liability because AI systems themselves will be liable for their actions, but it also opens legal and/or ethical loop holes. For example, the legalization of AI may at least formally relieve stakeholders of guilt, which will **not create public confidence in the regulation of artificial intelligence**.

[48] MEITY's Committee Working on Cybersecurity, Safety, Legal, and Ethical Issues, REPORT OF COMMITTEE – D ON CYBER SECURITY, SAFETY, LEGAL AND ETHICAL ISSUES (December 2019).
[49] https://www.forbes.com/sites/bryanpenprase/2024/10/13/the-future-of-ai-and-india/
[50] https://www.barandbench.com/columns/artificial-intelligence-in-context-of-legal-profession-and-indian-judicial-system

But, the advocates recalled that the idea of qualifying legal personhood to be applicable only in **specific circumstances is reasonable**[51]; thus, it should be applied also for AI systems.[52] This was likely to entail specifying the extent to which AI should be granted rights, and/or under what circumstances it should be given responsibilities and accountability mechanics to ensure that developers, deployers, and operators of AI systems were **properly hauled to book for any shortcoming.** This would help bring **AI's agentic capabilities** into line with current legal structures which opens the door for the development of a differentiated approach to governance.

The choice of architecture that is going to be proposed as a solution needs to free the agency of the AI legal person while providing accountability and endorsing international cooperation. As India and other nations grapple with these challenges, the outcome of this debate will shape the future trajectory of AI regulation, innovation, and societal impact.

CONCLUSION

The legal status of AI also creates major difficulties for the global legal community. With the advancement of AI technologies, legal reforms all over the world try to adapt to them which result in an inadequate and incongruent legal regulation environment.

Different legal perception about the legal status and legal responsibility of AI in the global governance can result in issue of extra territoriality and impaired international collaboration. For instance, one state can recognize AI as an object of ownership and another state can assign some degree of rights or duties to AI. This could lead to **contrary legal decisions**, and particularly in **cross-border AI operations and digital markets**.

Moreover, the global society has not come to any agreement on the question of legal classification of AI as a subject or as an instrument. Missing legal answers are many, and they are related to such issues as whether AI can be attributed as holding IP rights, which agreements can it sign, and whether it can be held legally liable for harm.

[51] I. B. Danilov, *Concepts of legal personality of Artificial Intelligence Systems*, 5 Interexpo GEO-Siberia 23–26 (2022).
[52] Jan-Erik Schirmer, *Artificial Intelligence and legal personality: Introducing "Teilrechtsfähigkeit": A partial legal status made in Germany*, Regulating Artificial Intelligence 123–142 (2019).