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Rethinking the Legal Status of Robots and Artificial Intelligence in Transnational Criminal Jurisprudence

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Abstract

Globalization and technological advancements have occasioned dramatic increase in transnational crimes, posing a huge threat to the socioeconomic basis of societies and the confidence reposed in the rule of law. Transnational crimes are contraventions of law that involve more than one country in their planning and execution. Their actual and potential effects transcend national boundaries and are hardly ever of entirely local interest. This explains the very pivotal involvement of the international community in combating the upsurge and multiplicity of transnational crimes. In the prosecution of transnational crime actors, international law recognizes the culpability of natural persons and artificial entities also known as juridical persons in the perpetration of transnational crimes. Natural persons are human beings and are held to be responsible for their actions according to law while juridical persons are creations of the law, usually, businesses or corporations which have capacity to sue as well as to face legal actions. A major development that appears to be overlooked in the consideration of the legal personality and liability of transnational crime perpetrators is the culpability of Robots and artificial intelligence (AI). The fast evolving field of robotics and artificial intelligence have ignited debates regarding its transnational criminal legal framework. There are no transnational legal regimes regulating actions conducted by artificial intelligence or robots. There is equally no transnational legal regime directly addressing the culpability of creators, manufactures, designers, programmers and owners of robots transnationally. The legal personality of robots and other artificial intelligence is recondite, raising several legal issues such as, are robots humans, are they legal persons capable of committing transnational crimes, can they be fired, can they be imprisoned, are they agents of their

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manufacturers e.t.c. This research reechoes the need for these complex issues plaguing the legal regulation of robots and artificial intelligence transnationally to be resolved with a great sense of urgency.

Key Words: *Transnational, Crime, Artificial Intelligence, Robots, Legal*

1. Introduction

Transnational Crimes have existed since the inception of organised societies. They have remained prominent in popular policies and cultures, evolving through different dispensations, under different economic and political conditions. These crimes encompass various offences ranging from corporate to organised and political crimes. Specifically, some of the crimes that are transnational in nature include human trafficking, cybercrimes, drug trafficking, migrant smuggling, sea piracy, terrorism e.t.c.

Globalization enlarged their markets and technological advancements have accelerated their trends. Despite the challenges posed by state sovereignty, the International Community have been actively involved in the suppression of transnational crimes. This is evidenced by the evolution of various Suppression Conventions, principal of which is the United Nations Convention against Transnational Organized Crime (UNTOC). Several International Institutions such as the United Nations Office on Drugs and Crimes (UNODC) and the International Criminal Police Organization (Interpol) have also been set in place to combat transnational crimes.

Technology has created a dynamic, rapid and complex world. The transnational nature of transnational crimes has been corroborated by technology, due to its global outreach. Technology has offered a cooperative medium for the perpetration of multiple transnational crimes and the anonymity provided by technology has contributed negatively to the evasion of justice by transnational crime perpetrators. Artificial Intelligence (AI) and robots are forms of technology used in the perpetration of transnational crime. These technologies are simply intelligence, demonstrated by machines as opposed to human intelligence. AI and robots are currently engaged for commission of transnational crimes by transnational crime actors, the same way legitimate businesses and companies are engaged for the same purpose.¹ In transnational crimes, AI and robots manage illegal supply chains, illegal social media data mining, they serve as tools for money laundering, concealing expensive and luxurious purchases as well as concealing the exchange of crypto currencies into physical cash. Transportation of contrabands are effected

¹ Enact observer 'AI and Organized Crime in Africa' (2023) <<https://enactafrica.com.org>> accessed 7 April, 2023

using these technologies and they perform several other transnational crime enabling functions. Most transnational crime syndicates have operations on all continents of the world and AI helps them run those operations more efficiently and speedily than ever.

Sadly, International legislations on transnational crimes appear to be oblivious of these trends. Existing legal frameworks speak less proactively on the legal personhood of these technologies and do not function in anticipation of future problems that these technological advancements may engender, thereby creating loose ends in transnational criminal investigations and prosecution. As artificial intelligence and robotic technologies become increasingly sophisticated and integrated into our lives, there is an increasing urgency to address legal issues that may be raised by their existence.² Understanding and tackling transnational crimes will remain problematic without careful consideration of some of its critical conceptual nuances and preempting the future. There is an urgent need to overhaul transnational crimes multilateral legislations (particularly the UNTOC) to reflect current realities as well as preempt the future.

2. Legal Personhood in Transnational Criminal Jurisprudence

Generally, the law recognizes two types of persons, natural persons and artificial entities also known as juridical persons.³ Natural persons are human beings, esw and are held to be responsible for their actions according to law while juridical persons are creations of the law, usually businesses or corporations which have capacity to sue as well as to face legal actions.⁴

Originally, criminal law focused basically on assigning criminal culpability for the commission of certain crimes on natural persons. It was considered inappropriate that a juridical person, who is deemed to be incapable of moral culpability could be subjected to it. This idea has greatly changed. The old maxim that a corporation cannot commit a crime is no longer the position of the law, particularly in response to current transnational criminal trends. Transnational crimes actors may be natural persons or juridical persons. Therefore, prosecution of juridical persons is currently acknowledged as a relevant component of fighting transnational crimes.⁵

Transnational crime perpetrators are known to use businesses, charitable organizations, corporations or other juridical entities to commit serious transnational crimes. They use these organizations to mask the involvement of individuals in the perpetration of various crimes as well as

² *ibid*

³ B Smith 'Legal Personality' (1928) 37(3) *Yale Law Journal* 283-299.

⁴ *ibid*.

⁵ R Bhattacharjee, *Concept of Legal Personality in Jurisprudence* (Thinking Press, UK 2020) 1-5.

to preserve ownership of the proceeds of crime. The role of juridical persons in transnational crimes span through the various reflections of transnational crimes. There are very many manifestations of the involvement of business corporations in the perpetration of transnational crimes. For instance, corporations can be involved in the trafficking of persons through three different categories. The first involves the most obvious case which happens when companies directly and willingly recruit victims, transport them and provide them with the needed documentation to migrate to the place where they will be exploited. In most egregious cases, companies are specifically created as an instrument for commission of this nature of crime and to launder the obtained benefits.

The second category include use of companies to hire workers supplied by third parties domestically and abroad. Under this category, recruitment agencies engage in coercive recruitment practices including, isolation, surveillance, debt bondage, withholding money, violence and threats of denunciation to authorities in order to exploit people. The third category involves the involvement of corporations in human trafficking when their services, products or facilities are used in the trafficking process. This is rampant in the hospitality, tourism and transport sectors. The new position of the law as to liability of juridical persons serves to address the challenges faced in identifying transnational crimes perpetrators who try to shield their criminal conduct through the use of business corporations and to target the assets of a corporations used as a front for criminal conducts. Attention is not only had to key perpetrators of transnational crimes but a plurality of actors and enablers of transnational crimes both natural persons and artificial entities.

At the international level, the obligation upon state parties to implement the liability of juridical persons finds its basis as far as transnational crimes is concerned in the UNTOC, Article 10. The said liability may be criminal, civil or administrative.⁶The United Nations Convention against Corruption (UNCAC) has a similar provision with the UNTOC with respect to states establishing the culpability of juridical persons. It mandates states in its Article 26 to adopt measures as may be necessary and consistent with its legal tenets to establish the culpability of juridical persons for participating in the commission of offences established in the Convention. The liability may also be criminal, civil or administrative and would not absolve a natural person who was involved in the commission of the crime of his culpability. The UNTOC in its Article 10 (3) also provides that liability of juridical entities must be established without prejudice to the criminal liability of the natural persons who have committed the offence. The liability of natural persons who perpetrated the crimes in issue must be in addition to any corporate liability and must not

⁶ Article 10 (2) there is no obligation to establish criminal liability if that is inconsistent with a state's legal principles. In such case, civil or administrative liability will be sufficient.

be affected by it. In effect, when an individual commits a crime on behalf of a juridical person, it is possible to prosecute and sanction both the individual and the legal entity.

The attribution of responsibility to an artificial entity or a natural person is often a complex problem for most jurisdictions because most legal systems base their criminal laws on a combination of physical and mental states.⁷ While the element of physical conduct is relatively straight forward, the attribution of mental states such as intention or knowledge to a legal person is very difficult. However, some jurisdictions make the liability of juridical persons dependent on the culpability of individuals. In legal systems that adopt this approach, a company may be held culpable for a crime committed by an officer or employee of the organization. Other countries take the approach of identifying the responsibility of the organization in the way, in which it is structured, the policies of the organization and its failure to supervise its employees or agents. As with crimes committed by natural persons, defences to liability may be available to juridical persons. For instance, the defence of due diligence. A juridical person may reduce its culpability or escape liability if it is able to prove that it took reasonable steps to ensure compliance with the relevant provisions of the law.

The UNTOC in its Article 10 (4) specifies that states also have to ensure that effective, proportionate and dissuasive punishments are imposed on juridical persons upon conviction. The most frequently used sanction against juridical persons are fines which can be characterized as a criminal sanction, non-criminal sanction, or a hybrid one. Other sanctions include confiscation, restitution, or even closing down of legal entities. Some states may wish to consider applying non-monetary punishments available in some jurisdictions such as withdrawing of certain advantages or prohibition of certain activities, publication of judgment and the appointment of a trustee and direct regulation of corporate structures.

The establishment of the liability of juridical persons is a welcomed development as far as transnational criminal matters are concerned as it increases the difficulty for those in legitimate businesses to act as facilitators for transnational crime activities. It also has a deterrent effect considering that reputational damage can be very costly for organizations. It also acts as a catalyst for more effective management and supervisory structures to ensure compliance.

The offence of participation in an organized criminal group as seen in the UNTOC Article 5 is another encompassing provision as regards the liability of transnational crimes actors. Criminal offences such as conspiracy and criminal association existed in many jurisdictions long before it was affirmed at the international level. The offence as encapsulated in Article 5 advances the criminal justice response well

⁷ UNODC 'Liability of Legal Persons' available at <<http://www.unodc.org>> accessed on 27 April 2023.

beyond the material commission of or attempt to commit the eventual offences damaging specific protected interests and it proscribes lesser participation in criminal groups.⁸

This expanded criminal liability targets not just the heads of criminal organizations who plan, coordinate and manage but do not always participate in the material commission of the final offence but also persons participating in non-criminal activities that aid the criminal capacity of the crime groups. This criminal policy can be translated into either the offence of association to commit crimes which is typical of Civil Law countries or the offence of conspiracy which is typical of Common Law countries. The differences are immaterial although the UNTOC by virtue of its Article 3 allows the adoption of either of both models.

That criminalization of association/conspiracy is essential to the successful prosecution of transnational crime offences because without a theory of vicarious group liability it would be almost impossible to overcome the secrecy, layering and hierarchical defences utilized by sophisticated organized criminal groups.⁹

3. The Legal Status of Robots and Artificial Intelligence (AI) in Transnational Criminal Justice

A major development that appears to be overlooked in the consideration of the legal personality and liability of transnational crime perpetrators is the culpability of Robots and artificial intelligence (AI). Through innovations in technology, engineering, science and complex mathematical calculations, sophisticated sets of rules called algorithms are being designed into artificial intelligence, making them capable of taking decisions and using high level of intelligence, thinking and emotion¹⁰ just like humans.

The term robot was derived from the word Robota (which means forced labour) in the year 1921 by the Czech writers known as the Capek brothers.¹¹ Robots are defined as machines that can sense their environment, process the information they sense and act directly upon the environment. A more inclusive perception of robots describes them as artificially intelligent agents and machine learning algorithms. AI was created as an alternative to humans, a crafted machine with embedded

⁸ UNODC, Legislative Guides for the Implementation of the United Nations Convention against Transnational Organized Crime and the Protocols thereto (New York United Nations 2004) 21, para 41.

⁹ United States answers to the Questionnaire on the implementation of the United Nations Convention against transnational organized crime and the Protocol thereto, UNODC Informal Papers (28 July, 2004).

¹⁰ A Thanaraj, 'Can Robots be Prosecuted for a Crime' <<http://cumbria.ac.uk>> accessed on 5 February 2024

¹¹ R Adams, *The History of Science Fiction* (Palgrave Macmillan, New York)

learning and analysis capabilities, mastered to comply with real life situations and to perform as much as accurately possible, the task and works done by men.¹²

Robots and artificial intelligence are not exactly the same thing. Robotics is however, a part of artificial intelligence involving the manufacturing of robots, which could function without human intervention. The artificial intelligence system emulate the human minds and try to function as human beings. Both robotics and artificial intelligence involves some level of programming, even though the latter enjoys higher measure of discretion.¹³ Thus, it would appear in a strict sense that robots are programmable machines that are able to carry out series of actions autonomously or in a partially autonomous way. Most robots are required to think independently in order to interact with the physical world and doing so requires some level of artificial intelligence. Conversely, artificial intelligence is a branch of computer science that involves the development of computer programs to complete tasks that should be carried out by human beings. In a loose sense, robots and artificial intelligence involve the use of technology to perform human tasks.¹⁴ The dynamism of AI and robots have been categorized thus:

- i. **The zero generation** – This generation was one in which malfunctions or changes in the monitored areas (signalled by sensors) result in the next step being disallowed and the system being stopped while the maintenance staff is called.¹⁵
- ii. **The first generation** – Here robots work with single feedbacks capable of switching between several deterministically operating subprograms (developed in advance by a human) and working.¹⁶
- iii. **The second generation** – Robots worked with optimization capability which is the ability to select the optimal program from predefined programs based on specified anterior i.e the precise rule governing the decision about the next known action.¹⁷
- iv. **The third generation** – characterized by robots capable of independently modifying the original program (action plan) with a posteriori knowledge. Here only activity (task) is predefined, while the method of achieving the goal is left to the intelligence of control system, which itself creates an action plan consisting of successive steps and activities to achieve the given goal.¹⁸

¹² B S Kokpan 'Criminal Liability of Robots in Nigeria' (2023) *International Journal of Advanced Multidisciplinary Research*.

¹³ *ibid*.

¹⁴ L Anat 'AI Entities as AI Agents: Artificial Intelligence Liability and the AI Respondent Superior Analogy' (2020) 46 (5) *Mitchell Hamline Law Review*.

¹⁵ V Smejkal and J Kodi 'Challenges and Solution to Criminal Liability for Actions of Robots AI' (2024) 9(1) *Advances in Technological Innovation* 65-84.

¹⁶ *Ibid*.

¹⁷ *Ibid*.

¹⁸ *Ibid*.

- v. **The fourth generation** – represented by autonomous robots with social, human like behaviour which means, they choose the goals of individual tasks independently based on an appropriate global criterion e.g the principle of long term existence/autonomy of such a system (survival, energy saving etc.)¹⁹

Currently, artificial intelligence and Robotics have become more sophisticated and are accordingly associated with different aspects of human life.²⁰ The fast-evolving field of robotics ignites debates as regards their legal status and legal framework. Whereas there are extant laws regulating the conducts and responsibility of humans in the society, there are scarcely legal frameworks directly and extensively addressing the culpability of robots as well as their creators, manufacturers, programmers and designers.²¹

Traditionally, laws are enforceable by and against legal persons, natural and artificial as already established. Within this traditional context, human beings are legal persons, countries and states are legal persons, businesses and corporations are legal persons, however, there are no provisions yet, especially in the transnational criminal jurisprudence, as to the status of robots and other Artificial Intelligence (AI) machines capable of reasoning and carrying out actions. In effect, they cannot be held liable or culpable for wrongdoings.²²

As robots become increasingly sophisticated and integrated into our lives, there is an increasing urgency to address legal issues that may be raised by their existence.²³ As can be seen from recent events, self-driving cars already roam some streets in most countries of the world²⁴ and can be used as means for supplies of contrabands, weapon systems of varying degrees of autonomy have been integrated into armed forces of different countries.²⁵ Robots have shown potential to cause significant physical, financial and emotional harm to humans. In fact, automated trading allegedly triggered a crash in the United States stock market in 2018²⁶ and Tay, a “chat bot”²⁷ repeatedly made racist and rude remarks on twitter

¹⁹ *ibid*

²⁰ *Ibid.*

²¹ *ibid.*

²² Y Hu, ‘Robot Criminals’ (2019) *University of Michigan Journal of Law Reform*

²³ *ibid*

²⁴ G Gates and Others, ‘The Race for Self-Driving Cars’ (2016)

<<http://www.nytimes.com/interactive/2016/12/14/technology/how-self-driving-cars-work.html>> accessed on 24 January 2024.

²⁵ R Crootof, ‘The killer Robots are Here: Legal and Policy Implication’ (2014) 36 *CARDOZO L. Rev* 1837, 1840

²⁶ Z Karabell, ‘This Week’s Stock Market Drops was Machine-Made. The Freak-out that Followed was Man-Made (2018) <<http://www.washingtonpost.com>> accessed on 24 January 2024.

²⁷ D Victor, Microsoft Created a Twitter Bot to Learn from Users. It Quickly Became a Racist Jerk (2016) <<http://www.nytimes.com>> accessed on 24 January 2024.

before it was shut down in 2016. As scientists continue to make breakthroughs in robotics and artificial intelligence, Robots and AI may soon reach a level whereby they would be capable to form criminal intents and act on that intent. There are alarming predictions that AI will reach human capabilities by the year 2029²⁸ and humans and machines will gradually converge, reaching the point of singularity in 2045.²⁹ Similar catastrophic predictions have been published by renowned figures such as Steven Hawking, Bill gates and Elon Musk.³⁰ In January 2015, they jointly signed an open letter on AI, with other AI experts.³¹ The letter calls for research into the social impact of AI to prevent some potential pitfalls of speedy developments in Robotics and AI innovations which may also raise unsettling legal issues. The question is, how prepared are transnational criminal legal jurisprudence to face or cushion these impending repercussions?

Existing international legislations on transnational crimes appear to be oblivious of these trends. Transnational criminal legal frameworks, as they currently are, do not appear to take into cognizance future problems and needs, that may be created in transnational criminal investigations and prosecutions by the uncertainties surrounding the legal personhood and operations of robots and AI. The need to overhaul transnational criminal multilateral legislations (particularly the UNTOC) to reflect current realities as well as preempt the future is therefore of dire essence.

4. Arguments for and Against the Legal Personhood of AI and Robots

It is undoubtable that the regulation of the activities of robots is very important for the world to adapt effectively to the contemporary technological advancements. An unaccountable robotics system will pose grave problems for the society.³² The safety of the globe requires that liability be ascribed to the wrongful conducts of robots. This is not entirely without challenges as it is argued that a robot will not feel nor appreciate the effect of pleading guilty to a criminal charge. It is argued that a robot lacks the requisite emotions to feel the pains of imprisonment or other forms of punishment. Robots are bereft of the mental capacity to feel the deprivations in prison or labour for community service. In event of an order for payment of fine, a robot is not known to be operating a bank account. A forfeiture order cannot be made against a robot and a sentence

²⁸ S Vladimir and K Jindrich 'Challenges and Solutions to Criminal liability for the Actions of Robots and A J (2024) Vol 9 (1) *Advances in Technology Innovation Journal* 65 – 54.

²⁹ R Kurzweil, 'The Singularity is Near: when Humans Transcend Biology' (Penguin Books, New York 2006).

³⁰ S Russell, D Dewey and M Tegmark 'Letter to the Editor: Research Priorities for Robust and Beneficial Artificial Intelligence: An open letter (2015) 36 (1) *AI Magazine* 3-4.

³¹ *ibid.*

³² B S Kokpan, 'Criminal Liability of Robots in Nigeria' (2023) *International Journal of Advanced Multidisciplinary Research and Studies* 684-691

to caning will amount to no pain for the robot.³³ In effect, the concept of sanctions would be defeated if the person punished is unaware that he or she is suffering or losing a right as a result of misconduct.

Arguments, however, lie in favour of the culpability of robot manufacturers for the actions of the robots. Under this school of thought, robots are deemed either agents of their owners or manufacturers.³⁴ Where a robot commits a crime, in the course of carrying out its programmed functions, its act would be taken as that of his principal. In other words, the culpability of a robot would ground the liability of its programmer or designer.

Other scholars³⁵ argue that robots can evolve beyond the design and foresight of their creators. They opine that robots are not just any other technological creation but are intelligent and autonomous actors moving about in the physical world.³⁶ If robots merit personhood, then they can be held liable for their actions. Otherwise, liability must go to some human party.³⁷ Incidentally, subscribing to a case of joint liability between robots and their designers ignore the probability of a break in chain of causation leading to the culpability, third party interference and unanticipated natural occurrences.³⁸ This quagmire ought to be resolved one way or the other depending on the context of application of the facts in issue.

5. Jurisdictional Overview

Creation of regulatory regimes for robotics is a lengthy and multi-step process. Most regions have taken bold steps in this regard. The European policies for robotics are initiated by the European parliament, the European Commission and by individual government.³⁹ The European Union and its members possess a rich legislative framework that accommodates crucial roboethical principles. The American region have also made serious efforts in this regard. The United States' (US) interest in AI is evident in several executive orders, memorandums, reports⁴⁰ and cases. In the case of *Nelson v American Airlines*⁴¹ it was held that operators of autopilot aircrafts would be held liable in event of an accident caused by

³³ *ibid.*

³⁴ *ibid.*

³⁵ T N White and S D Baum, 'Liability Law for Present and Future Robotics Technology' (2017) <<http://sethbaum.com>> accessed 5 February 2024. See also P Volha and Z Ivan, 'Autopilot Operation: The Future is Coming' *Science, Trends and Development*.

³⁶ S D Baum, 'Liability Law for Present and Future Robotics Technology' (2017) <<http://sethbaum.com>> accessed 5 February 2024

³⁷ *ibid.*

³⁸ B S Kokpan, 'Criminal Liability of Robots in Nigeria' (2023) *International Journal of Advanced Multidisciplinary Research and Studies* 684-691

³⁹ S Langman and Others, 'Roboethics Principles and Policies in Europe and North America' (2021) *SN Applied Sciences Review Paper*.

⁴⁰ *ibid.*

⁴¹ 263 Cal App. 2d 742 (1968).

an autopilot system. In *Brouse v United States*⁴² in which two planes crashed, one of which was a US military plane that was using an autopilot (robot), the court rejected the US claim that it should not be liable because the plane was being controlled by a robot. The court held that the human pilot ought to have paid attention and avoided such crash.

In Nigeria, there is no specific and authoritative statutory framework and judicial precedent on AI and robots culpability.⁴³ It remains to be seen how Nigerian courts will respond to cases relating to the liability of AI and robots in criminal law. Despite this gap in Nigerian law, manufacturers, owners and users of AI and robots could be held liable on the strength of Section 304 of the Nigeria Criminal Code which provides that it is the duty of every person who has in his charge or control anything, whether living or inanimate and whether moving or stationary, to apply all necessary care and precaution in the use or management of such a thing, in order not to cause harm to another. Also, section 24 of the Criminal Code impliedly provides for the offence of criminal negligence to ground the liability of manufacturers and programmers of robots whose careless acts or omissions enabled their robot to injure another. The argument that their liability can also be based on Section 7 of the Criminal Code because they are parties to the offence committed is not sustainable as unlike section 304, section 7 requires premeditated criminal intent.⁴⁴ The International Community is yet to embrace the urgency of this rapidly evolving reality of AI and robots especially as it relates to transnational crimes and liability of perpetrators.

A comparative analysis of legal frameworks surrounding the criminal liability of robots in various jurisdictions reveal both similarities and difference in their approaches.⁴⁵ While there are shared challenges, overarching legal principles, variations in legislation, case law and regulatory measures across the jurisdictions, one common challenge is the question of how to attribute criminal liability to robots that lack subjective consciousness and intent. The absence of human like mental states in robotic systems raises fundamental questions about culpability and the application of traditional legal principles such as *mens rea*.⁴⁶ Each jurisdiction grapples with finding a balance between holding individuals accountable for actions of robots while acknowledging the limitations of machine agency.⁴⁷

⁴² United States District Court, N.D Ohio, decided in March 25th (1949)

⁴³ B S Kokpan, 'Criminal Liability of Robots in Nigeria' (2023) *International Journal of Advanced Multidisciplinary Research and Studies* 684-691

⁴⁴ Ibid.

⁴⁵ G Makam 'Criminal Liability of Robots – A Critical Analysis of the Legal Framework in the US, UK and Europe' <https://SSM.com/abstract24649764> accessed on 31/1/2025.

⁴⁶ R Susskind 'The Criminal Liability of Artificial Intelligence Entities' (2019) *Cambridge Law Journal*.

⁴⁷ R Johnson 'Criminal Intent and Robots: The Challenges of Attributing Culpability' (2019) *Harvard Law Review*.

6. Factors Considerable in Formulating Principles to Establish Culpability of Robots and AI

An argument can be made for the criminal liability of a robot provided the following threshold conditions are satisfied.

- a) The robot or AI is equipped with algorithms that can make nontrivial morally relevant decisions.
- b) The robots or AI are capable of communicating its moral decisions to humans and
- c) They are permitted to act on their environment without immediate human supervision.⁴⁸

Each of the conditions is significant in its own right. The first distinguishes a robot or AI from a mere tool. The second condition ensures that humans are apprised of the moral significance of the robots decisions and thirdly that the robots or AI do not merely serve in an advisory capacity. A transnational criminal regulation for robots and AI will help reduce ambiguities by providing a minimum set of moral standards which all robots and AI must be held accountable. These minimum standard should not be left to the whims and behest of robot or AI manufacturers or trainers but should be decided by the society collectively.⁴⁹

The fact that robots and AI will be programmed to take into account criminal laws to regulate their own behaviour will certainly have some deterrence effect on them. Imposing criminal liability on robots and AI can also help to identify culpable individuals who are truly responsible for the harm caused such as the manufacturers and trainers of the robots and AI. These manufacturers and trainers will be forced to establish ex ante mechanisms to prevent robot from wrong doing.⁵⁰ Robot and AI's criminal liability will also serve as a self-policing device to discourage individuals from using them to perpetrate crime.

7. Conclusion and Recommendation

Transnational criminal jurisprudence overlooks the increasing legal conversations surrounding the existence of artificial intelligence and the legal status or liability of robots. Robotics and artificial intelligence are gradually conquering the world. Just as any progress, this development is expected to have relevant impact on the law in general as well as criminal law in particular.⁵¹ It involves the potential of transforming the traditional conception of criminal responsibility, as notions of personhood, capacity and culpability will not stay unaffected. As fictional as the idea of a guilty

⁴⁸ Y Hu 'Robot Criminals' (2019) 52 University of Michigan Journal of Law Reform.

⁴⁹ *ibid*

⁵⁰ *ibid*

⁵¹ M Simmler and N Markwalder, 'Guilty Robots- Rethinking the Nature of Culpability and Legal Personhood in an Age of Artificial Intelligence' (2019) 30 Criminal Law Forum 1-30

robot appears today, it may be nothing unrealistic nor unlikely in the near future. It is becoming highly imperative that the understanding of personhood and criminal responsibility be reconsidered to define the legal personality of robots and other autonomous machines. Some proposed legal solutions that can help navigate this challenge include:

- i. Clarification of Legal Definitions – There is a great need to provide clear and comprehensive definitions of key terms related to robots and AI such as autonomy, agency and responsibility under transnational criminal jurisprudence precisely. Unambiguous definitions of key concepts related to the subjects of discourse shall also help establish a common understanding and facilitate consistent application of legal principles across jurisdictions.
- ii. International Cooperation and Standardization – Promotion of international cooperation and collaboration is crucial for addressing the global nature of robotic and AI technologies. Harmonization of legal frameworks, sharing of best practices and establishing international policies can facilitate consistent approaches to the certainty of transnational criminal liability of robots.
- iii. Public Awareness and Education – Engendering public education schemes to create more awareness and understanding of the legal and ethical dimensions of robotic systems and AI is also very crucial. Educating individuals about their rights, the potential risks of robotic and AI technologies and the legal recourse available in cases of violation of rights will empower the populace to make informed decisions as well as engage public debates on the regulation of these technologies.
- iv. Creation of Regulatory Sand Boxes and Adaptive Governance - Creating controlled environments where innovative Robotic systems are tested and monitored can facilitate the development of effective regulations. These sand boxes will allow for experimentation while ensuring compliance with legal and ethical principles. Also the adoption of governance approaches that foster strong dialoguing between regulators, industries, and experts can enable timely updates to legal frameworks to meet up with the dynamism of the subjects of discourse.