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Criminal Liability of Robots in Nigeria

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Abstract

Robots are programmable machines that are able to carry out series of actions autonomously or in a partially autonomous way. They can perform the task of human beings. Robots are not human beings because they lack human respiratory and reproductive organs, and as such depend on external source to sustain themselves; nonetheless, they are closely associated with humans. It has been argued that robots should be clothe with legal personhood, capable of rights, duties, responsibilities and liabilities. Such arguments are predicated on the task or performance capacity of the robots as distinct from the humanity and natural independent decision-making capacity

Keywords: Criminal, Robots, Nigeria

Introduction

Calo defines robots as machines that can sense their environment, process the information they sense, and act directly upon their environment. He focuses on machines that are "embodied, physically, in the real world." Balkin takes a more inclusive view of robots, which encompasses "material objects that interact with their environment. artificial intelligence agents, and machine learning algorithms.¹ Robot" does not appear to be a legal term of art. Over the last few decades, courts in various states have taken an expansive view of the word "robot," using it to refer to software programs that access internet servers to gather information, tools that assist surgical procedures, as well as life-sized, mechanical puppets that are "designed to give the impression that they are. AI was created as an alternative to humans, a crafted machine with embedded learning and analysis capabilities, mastered to comply with real-life situations and to perform, as much as accurately possible, the tasks and works once done by men.²

Robots and artificial intelligence are not exactly the same thing. Robotics is however a part of artificial intelligence. While robotics involves the manufacturing of robots, which could function without human intervention, the artificial intelligence system emulate the human minds and try to function as a human being.³ Both robotics and artificial intelligence involves some level of programming, even though the latter enjoy higher measure of 'discretion'.⁴ 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.⁵ Some robots are required to think independently in order to interact with the physical world, and doing so required some level

of the robots. This paper notes that robots are not human beings, but agents of a human enterprise. Furthermore, the concept of *mens rea* cannot be ascribe to a robot even as robots lack the feeling of pains or effect of denial of liberty to appreciate the concept of punishment in criminal proceedings. In addition, there is no specific legislation in Nigeria under which a robot could be held liable for criminal offence. Nonetheless, there are provisions of Nigeria law for holding the manufacturers, programmers, operators and owners of robots liable for the criminal conducts of the robots.

¹ Ying Hu, Robots Criminals, 52 U. Mich. J. L. Reform 487 (2019)

² Maxim Dobrinoiu, 'The Influence of Artificial Intelligence on Criminal Liability', LESIJ NO. XXVI, VOL. 1/2019

³ Naveen Joshi, 3 Key Differences Between AI and Robotics, https://www.forbes.com/sites/naveenjoshi/2022/01/16/3-key-differences-between-ai-and-robotics/

⁴ Ronald Leenes, *et al* (2017) Regulatory Challenges of Robotics: Some Guidelines for Addressing Legal and Ethical Issues, Law, Innovation and Technology, 9:1, 1-44, DOI: 10.1080/17579961.2017.1304921.

⁵ Michael Copeland, What's the Difference between Artificial Intelligence, Machine Learning and Deep Learning? NVIDIA (July 29, 2016), blogs.nvidia.com/blog/2016/07/29/whats-difference-artificial-intelligence-machinelearning-deep-learning-ai/ [https://perma.cc/7W49-G4VY.

of artificial intelligence.⁶ 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.⁷ In a lose sense, robots and artificial intelligence involve the use of technology to perform human tasks. In this regard, both 'devices' obviate the need for physical human action, tasks and intervention, and engender the reliance on artificial object to perform human tasks.⁸

Presently, artificial intelligence (AI) systems become more sophisticated and plays a larger role in society, and are accordingly associated with different aspects of lives.⁹ If for a long time, the idea that robots, and human beings should be separated was in force, an opposite trend has been accentuated, especially in the last decade.¹⁰ Human beings can and should share the same environment as robotic artefacts. As escorts of the elderly-and even children with autism-surgical apparatus, deliverers or security guards, robots have already begun to enter people's homes and lives.¹¹ The fast-evolving field of robotics ignites debate regarding its legal framework. Whereas there are extant laws regulating the conduct of human beings in society vis a vis their responsibility, obligations and benefits in Nigeria,¹² there is no such regulations in place for actions conducted by artificial intelligence or robots.¹³ There is equally no legal regime directly addressing the responsibility and culpability of the creators, manufacturers, designers, programmers and owners of robots in Nigeria.¹⁴ In

⁷ Pradeep Kumar, (2021), 'What are the branches of Artificial Intelligence? Available at what are the branches of Artificial Intelligence? | H2kinfosys Blog last accessed 10th December, 2022.

⁸ Song Tide, 'The Relationship between AI and Human in the Future', accessible at https://(2) (PDF) The Relationship between AI and Human in the Future (researchgate.net) last accessed 10th December, 2022.

⁹ Lior, Anat (2020) "AI Entities as AI Agents: Artificial Intelligence Liability and the AI Respondeat Superior Analogy," *Mitchell Hamline Law Review*: Vol. 46: Iss. 5, Article 2.

¹⁰ Montreal Declaration for a Responsible Development of Artificial Intelligence (2018),

¹¹ Avila Negri SMS (2021) Robot as Legal Person: Electronic Personhood in Robotics and Artificial Intelligence. Front, Robot. AI 8789327, doi: 10.3389/frobt.2021.789327.

¹² Criminal Code Act, Penal Code, Administration of Criminal Justice Act, Economic and Financial Crimes Commission Establishment Act; Independent Corrupt Practices and Other Related Offences Commission Act, Money Laundering Prohibition Act, 2022; Proceed of Crimes Act, 2022, among others.

¹³ PRNITDA Establishes National Centre for Artificial Intelligence and Robotic NCAIR accessible at PRNews

¹⁴ Adeyemi Adepetun, The Guardian 21st September 2020, NITDA Canvasses Safer Use of Artificial Intelligence comparison to pilotless aircraft, it could be concluded that there is no human safety net in case of unforeseen events when conducting an autonomous flight. So, precise regulations have to be developed in the context of artificial intelligence to make sure of conducting a safe autonomous flight.¹⁵

Should the Activities of Robots be Regulated?

It is undebatable that the regulation of activities of robots and their uses is pivotal for Nigeria to adapt effectively to the contemporary global technological advancement. Despite this obvious necessity, it would appear a herculean task to regulate robots effectively considering the rapidity and fluidity of robotics engineering.¹⁶ Technological advancement evolves rapidly and make it difficult to comprehensively address all matters related therefrom.¹⁷ To be specific, programming of robots and other models of artificial intelligence changes according to the dynamism of the relevant machines. This development would doubtlessly hamper enduring regulatory framework on robots and robotics engineering. In addition, the legal personality of robots and other artificial intelligence is recondite¹⁸ leading to the following questions. Are robots human beings? Are they legal persons? Can they commit offence? Can they be fined? Are they subject of criminal responsibility? Can they be imprisoned? Are they agents of the manufacturers (human beings)?¹⁹ These are some of the uncertainties plaguing the legal regulation of robots and artificial intelligence.

Are Robots Legal Persons?

The word ''person'' connotes a bundle of rights, privileges, duties, liabilities, disabilities and immunities, in reference to the entity called person.²⁰ A person refers to any entity, whether human or artificial, which is capable of being a subject of rights and duties in accordance with the rules of the legal system.²¹

accessible at The Guardian Nigeria News and World News last accessed 10th December, 2022.

¹⁵ Elham Fakhraian *et al*, 'Overview of European Union Guidelines and Regulatory Framework for Drones in Aviation in the Context of the Introduction of Automatic and Autonomous Flight Operations in Urban Air Mobility', DATA ANALYTICS 2022: The Eleventh International Conference on Data Analytics, p. 6.

¹⁶Wolfgang Hoffmann-Riem, (2020), 'Artificial Intelligence as a Challenge for Law and Regulation in Wischmeyer T. Rademacher (eds) Regulating Artificial Intelligence, Springer Cham.

¹⁷ L. Spector, L, (2006), Evolution of Artificial Intelligence. Artif. Intell. 170, 1251.

¹⁸ Ikenga K.E. Oraegbunama Artificial Intelligence Entities, Criminal Responsibility and Nigerian Legal Justice System' *International Journal of Law and Clinical Legal Education* (*IJOLACLE*) 1 (2020).

¹⁹ Lior, Anat (2020) "AI Entities as AI Agents: Artificial Intelligence Liability and the AI Respondeat Superior Analogy," *Mitchell Hamline Law Review*: Vol. 46: Iss. 5, Article 2.

²⁰ Malcolm N. Shaw, International Law (2008), Cambridge University Press, p. 195.

²¹ C.C. Wigwe, *Jurisprudence and Legal Theory* (Readwide Publishers 2011).

⁶ David Lat, The Ethical Implications of Artificial Intelligence, available at

https://abovethelaw.com/law2020/the-ethical-implicationsof-artificial-intelligence/ (last visited Sept. 28, 2019) ("Perhaps the most widely discussed example of balancing the risks and rewards of artificial intelligence is the selfdriving car.")

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Legal Personality refers to the legal conception by which the law regards a human being or an artificial entity as a person. It refers to the legal status of one regarded by the law as a person.²² According legal personality to robots involves the robots' capability of enjoying rights, performing duties and enforcing legal claims on breach of those rights. Some had argued that robots' susceptibility to error are not dependent on its personality in law;²³ claiming that robots could naturally perform its task accurately or wrongly, whether or not it enjoys legal personality. However, an unregulated robots regime is an avoidable risk factor.²⁴ Like in every human and inanimate endeavour, the maintenance of law and order, being one of the basic functions of law cannot be overemphasized.²⁵

There are basically two broad subdivision of legal personality to *wit*, natural persons and artificial persons.²⁶ Natural Persons means a human being; a real and living person possessing the power of thought, speech, feeling and choice. Natural persons acquire legal personality naturally, simply by being born even though natural legal person.²⁷ Conversely, artificial persons are non-human legal entities, such as organizations and States that are recognized by law. An artificial person possesses certain rights and duties subject to conditions stipulated by relevant laws.²⁸ Example of artificial persons are corporation, incorporated trustees of organizations and robots and other forms of artificial intelligence.²⁹

Consequently, how would robots be treated as human beings when they lack the basic characteristics of living things, such as breathe, growth from one height to another, excretion and reproduction among others.³⁰ A natural person is distinguishable from a robot because the former has the capacity to understand rules and norms governing the society.³¹ Although, an Artificial Intelligence device code could still mandate the robot to comply with the set of rules but that does not arise from the robots' act of will and cannot prima facie enforce accountability. Nonetheless, robots are technically considered to be human beings because they could make independent decisions even as they could be mobility enabled to move from one place to another.³² If robots are to be treated as human beings, what is the nature of their rights? Can they own property and enter into contractual relationship?³³

Understandably, it is from this technical consideration that robots are treated as legal persons. Notwithstanding this technical approach, the legal status of robots are limited to the extent of their inability to rationalise their decision. Secondly, unlike natural human beings robots depend on others, such as computer programmers, devices or human being to function or carry out their tasks. As a corollary, the reliability of their tasks would be largely determine by the accuracies of the device used. This explains the conundrum as to the place and point of liability in robots related injury claims. Bosakevych³⁴ argues, "properly educated robots will become quite dangerous. In fact, I am sure they will outperform us in any conceivable area of endeavor, intellectual or physical. Inevitably, such a development will lead to a fundamental restructuring of our society and humanity face to problem".35

This article seeks to determine if robots could independently bear criminal liability or their liability is naturally joined with the programmer or author of the computer devices used. Put differently, can robots be treated as agents of the owners thus making the owners vicariously liable in damages caused by the robots? A negative answer to this poser will tend to defeat the logic that robots depends on the computer device and programmers to perform their tasks. Incidentally, holding a case of joint liability regime between the robots and the programmers ignores the probability of a break in the chain of causation leading to the liability. Third party interference and unanticipated natural occurrences (as in the case of *force majeure*) could affect the predictability and accuracy of the tasks of the robots. This quagmire must be resolved either way depending on the context of application and the facts in issue.

²² R. Dias, Jurisrudence, 5th edition, London, 1985, chapter 12; Brian Garner Law Dictionary, 1999.

²³ A. Bertolini, 'Robolaw: Why and How to Regulate Robotics', 24th October, 2014; Weston Kowert, The Foreseeability of Human-Artificial Intelligence Interactions, 96 *TEX. L. REV.* 181, 184 (2017); Peter Y. Kim, Where We're Going, We Don't Need Drivers: Autonomous Vehicles and AI-Chaperone Liability, 69 *Cath. U. L. Rev.* 341 (2020).

²⁴ Saman Rejali and Yannick Heiniger, The Role of Digital Technologies in Humanitarian Law, Policy and Action: Charting a Path Forward in Digital Technologies and War, (2020) *International Review of the Red Cross*, Vol.102, No. 913; Robert Moor, What Happens to American Myth When You Take the Driver Out of It? N.Y. MAG.: INTELLIGENCER (Oct. 17, 2016), http://nymag.com/intelligencer/2016/10/is-the-selfdrivingcar-un-american.html.

²⁵ Constitution of the Federal Republic of Nigeria, 1999(as amended) s.17.

²⁶ Shaw, supra at p. 195.

²⁷ It would appear that in some instances, legal personality begins at conception before birth. See Nigeria Criminal Code Act, s. 309 and 328.

²⁸ Halyani Hassan, 2Zuhairah Ariff Abd Ghada, The Myth of corporate personality': A comparative legal analysis of the doctrine of corporate personality of Malaysian and Islamic laws, *Australian Journal of Basic and Applied Science*

²⁹ Salomon v Salomon and Co Ltd [1897] AC 22.

³⁰ N. Kadhila, '*Characteristics and Classification of Living Organisms*', Cambridge University Press, accessible at www.cambridge.org

³¹ Ben-Ari, M., Mondada, F. (2018). Robots and Their Applications. In: Elements of Robotics. Springer, Cham. https://doi.org/10.1007/978-3-319-62533-1_1

³² Siegwart, R., Nourbakhsh, I.R., Scaramuzza, D. Introduction to Autonomous Mobile Robots, 2nd edn. MIT Press, USA (2011)

³³ De Graaf MMA, Hindriks FA and Hindriks KV (2022) Who Wants to Grant Robots Rights? Front, Robot AI 8:81985, doi: 10.3389/frobt.2021.781985.

³⁴ V. Bosakevych, Legal Liability of AI? (2016) Випуск 4 (8). 2016 Р. 104 -107.

³⁵ Ibid.

Dobrinoiu,³⁶relying on the EU Draft legislation for the regulation of AI³⁷ argues that "the most autonomous robots are, the less they can be considered simple tools in the hands of other actors (such as the manufacturer, the owner, the user, etc.)" and this, in turn, "makes the ordinary rules of liability insufficient and calls for new rules which focus on how the machine can be held partly or entirely responsible for its acts or omissions", while "as a consequence, it becomes more and more urgent to address the fundamental question of whether robots should poses a legal status". This paper agrees that the need for the regulation of the activities of artificial intelligence cannot be overemphasized because the usage of robot will be counterproductive in the absence of legal framework to regulate it. The conundrum of Artificial Intelligence (AI) liability has become a real-life problem in society today even as the debate to its proper legal status refuse to go away.³⁸ Scenarios that were once only plausible in science fiction novels and movies are now transfusing themselves into our routine lives, causing manifold legal and social challenges. We are still far from the ominous scenario in which the machines take over humanity. Nonetheless, today's, AI-based robots and algorithms can and do inflict physical and non-physical damages upon us as a society and as individuals, while the legal approach to handling these damages is highly disputed, principally because, the transformative nature of the robotics technology, gives rise to innumerable legal assumptions at all times. It is logical to ascribe legal personality to robots because of their ability to possess certain characteristics, including sense organs, intelligence, mobility and energy.

Scirmer³⁹ would wonder what exactly AI systems are, legally speaking. It makes one ponder whether we are just looking at sophisticated objects or things, whether we would rather treat them as legal persons, somewhat similar to humans or corporations, or indeed whether we should create a new legal categorization specifically for AI.

Mocanu⁴⁰ argues for theoretical adjustments for a more coherent answer to the legal 'status question' of artificial intelligence systems. He accordingly proposed what he called a 'bundle theory' and concluded on a partial legal capacity postulation. But more than that, Lior⁴¹ suggested that society should understand and treat AI machines, robots, agents, and algorithms (hereinafter "AI entities") as

instruments of humans created and designed for the monopurpose of being utilized by humans for their own personal benefit. A suitable analogy for AI entities must reflect its regulatory purposes. When tort law and AI collide, the appropriate regulatory goal will lead society to recognize and treat AI entities as AI judgment-proof agents, given their instrumental role in society's modern life.

Asimov⁴² is famous for postulating the three laws of Robotics to wit; that a robot may not injure a human being or, through inaction, allow a human being to come to harm; a robot must obey orders given it by human beings, except when such orders conflict with the first Law; and that a robot must protect its own existence as long as such protection does not conflict with the first or second Law.43 Dissecting this philosophy appears to fix robots with human reasoning with ability to exercise discretion. Discretion to avoid harm to itself or to save another from harm. Similarly, the paradigms suggests that robots could sacrifice its safety in the interest of the assigned task.

From the analysis above, it is safe to conclude that robots are artificial persons that depend on the knowledge and activities of human beings to perform its task. This conclusion no doubt reintroduced the hydra headed question of liability for activities of robots.

Can Robots be Criminally Liable?

The liability or otherwise of artificial intelligence depend on the status of the object vis a vis its legal personhood. In other words, how can an artificial robot be held accountable for its actions if it is not a legal person? It is pertinent to state that questions about the legal personality of robots raises deep philosophical problems especially as regards issues of liabilities, rights and duties.

Scholars have increasingly been debating over the last decades whether legal systems should grant personhood to robots and generally speaking, to autonomous artificial agents. This debate has involved legal experts as well as philosophers, sociologists, computer scientists and military experts. As Peter Singer reports in A World of Killer Apps (2011: 400), "today, the US Air Force has argued that its unmanned spy planes, if targeted by radar, have the same right to defend themselves with ammunition as its pilots have. This conferral on unmanned systems of the right to pre-emptive 'self' -defence makes sense from one perspective, but could also be a legal-dispute-turnedinternational-crisis in the making, as well as a huge (and probably unintentional) first step for the cause of robots' rights."⁴⁴

Some scholars⁴⁵ argue that granting independent legal personhood to robots would provide for a more coherent

https://biblio.com/book/runaround-astounding-sciencefiction-march-1942/d/750218984.

³⁶ M. Dobrinoiu, The Influence of Artificial Intelligence on Criminal Liability, LESIJ NO. XXVI, VOL. 1/2019

³⁷ The Committee on Legal Affairs Draft Report with recommendations to the Commission on Civil Law Rules on **Robotics** 2015/2103 (INL) available at http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML%2BCOMPARL%2BPE-

^{582.443%2}B01%2BDOC%2BPDF%2BV0//EN.

³⁸ Lior, Anat (2020) "AI Entities as AI Agents: Artificial Intelligence Liability and the AI Respondeat Superior Analogy," Mitchell Hamline Law Review: Vol. 46: Iss. 5, Article 2, p. 1044.

³⁹ Schirmer, J-E. (2020), Artificial Intelligence and Legal Personality: Introducing 'Teilrechtsfahigkeit': A Partial Legal Status Made in Germany, in Regulating Artificial Intelligence.

⁴⁰ Diana Madalina Mocanu, Gradient Legal Personhood for AI Systems-Painting Continental Legal Shapes Made to Fit Analytical Molds, Front. Robot AI, 11 January 2022. ⁴¹ ibid, at p. 1045.

⁴² I. Asimov, 'Runaround', Astounding Science Fiction (March 1942), accessible at

⁴³ ibid.

⁴⁴ Ugo Pagallo, The Laws of Robots: Crimes, Contract, and Torts (Springer 2013).

⁴⁵ Miller, L.F (2015) Granting Automata Human Rights: Challenge to a Basis of Full-Rights Privilege; Human Rights Review 16; Darling K. (2016) Robot Law, in Extending Legal Protection to Social Robots, The Effects of Anthropomorphism, Empathy and Violent Behaviour Towards Robotic Objects; Levy D, 2009, The Ethical 687

picture of today's legal framework and the legal personhood of robots and strict agency in contract law might be correlated.

Furthermore, it is important to note that there is dissimilarity across legal system of various countries in recognizing the legal personhood of robot. Few examples will be necessary here. In 2017, Sophia, a robot was granted citizenship in Saudi Arabia which contradicts the conditions of granting citizenship under Saudi Nationality System, 2018 by way of birth, marriage or naturalization. Apparently, there will be a conflict both in sharia courts and original jurisdiction since the model of conduct is not specified.⁴⁶ Sophia, created by Hanson Robotics' scientists from Hong Kong, is a humanlike robot. She is endowed with artificial intelligence, thanks to which she is able to learn and adapt to human behaviour. Similarly in 2017, a residence permit was granted to a Chat Bot, Shibuya Mirai,⁴⁷ who is also an artificial person under a special regulation in Japan varying the residence permit procedure in Japan.

Nonetheless, in the year 2015 for instance, the Future of Life Institute released an open letter addressing the challenges and threats posed by this technology: 'Its members-and advocates, among which Bill Gates, Elon Musk, and Stephen Hawking-are concerned that as increasingly sophisticated achievements in AI accumulateespecially where they intersect with advances in autonomous robotics technology-not enough attention is being paid to safety'. A year later, the White House Office of Science and Technology Policy conducted a series of public workshops on questions of AI and policy, culminating with a report that addresses the many ethical issues related to AI, such as fairness, accountability and social justice, that should be tackled with increasing transparency. While the European Parliament's Committee on Legal Affairs and the UK House of Commons have released similar reports on how we should prepare for the future of AI, an Industry Connections Program within the IEEE Standards Association, i.e. The Global Initiative for Ethical Considerations in the Design of Autonomous Systems from December 2017, presented another document,

which insists on the 'ethical concerns for autonomous and intelligent systems design. $^{\rm 48}$

The idea of giving some form of legal personhood to robots has also been voiced in the USA although it has never advanced to the legislative level⁴⁹ perhaps as it would appear that U.S is not favourable in granting legal status to Robots as an individual.

Whereas, Russia has framed its draft bill, "Grishin Law", for regulating the legal relation of robots. It categorizes Robots into two types according to its dualistic nature – Robots as property and agents vested with status of legal personality. It imposes liability on the robot's developer, operator and also permits Robot's representation in courts and other government agencies.

The European Parliament Resolution on Civil Law Rules of Robotics, and its recommendation to the European Commission in its paragraph 59 (f) provides for "Creating a specific legal status for robots in the long run, so that at least the most sophisticated autonomous robots could be established as having the status of electronic persons responsible for making good any damage they may cause, and possibly applying electronic personality to cases where robots make autonomous decisions or otherwise interact with third parties independently."50 This follows the interesting point earlier brought to the attention of the EU Parliament's Committee on Legal Affairs to the effect that "robot's autonomy raises the question of their nature in the light of the existing legal categories - of whether they should be regarded as natural persons, animals or objects or whether a new category should be created, with its own specific features and implications as regards the attributions of rights and duties, including liability.

Many reasons have been put forward to support the grant of rights to robots. Tavani⁵¹ thinks that a robot should have consciousness, intentionality, rationality, personhood, and sentience to be eligible for rights. On his part, Laukyte⁵² added that the increasing autonomy, intelligence, perceptiveness, and empathy of robots has shifted the perception of robots as mere tools. This explains Miller's view that robots with capacity for human-level sentience, consciousness, and intelligence should be considered entities

Treatment of Artificially Conscious Robots, *Intl Journal of Social Robotics* 1, 209-216; Bryson *et al*, (2017) Of, For, and By the People: The Legal Lacuna of Synthetic Persons, *ARTIF. INTELL. L*, 25 273-291; Calo R, (2015), Robotics and The Lessons of CyberLaw, *Californian Law Review* 103, 513-53; Laukyte M (2019), AI as a Legal Person in Proceedings of the Seventeenth International Conference on Artificial Intelligence and Law, Montreal, Canada, June 17-21, 2019 and Wootson C. (2017) Saudi Arabia Which Denies Women Equal Rights, Makes Robot a Citizen, *The Washington Post.*

⁴⁶ Reejhaa Muralidharan, 'Is Robot a Legal Person?' (24 June 2020) <https://www.linkedin.com/pulse/robot-legalperson-reejhaa-

muralidharan?articleld=6681447967641124864> accessed 29 November 2021.

⁴⁷ Anthony Cuuthbertson, 'Tokyo: Artificial Intelligence 'Boy' Shibuya Mirai Becomes World's First AI Bot to be Granted Residency', June, 2017 available at https://www.newsweek.com/Tokyo-residency-artificialintelligence-boy-shibuya-mirai-02382.

⁴⁸ Pagallo U. 2018 Apples, Oranges, Robots: Four Misunderstandings in Today's Debate on the Legal Status of AI Systems, Phil. Trans. R. Soc. A 376: 20180168. http://dx.doi.org/10.1098/rsta.2018.0168.

⁴⁹ J. Armour & H. Eidenmueller, (2020) Self-Driving Corporations? *Harvard Business Law Review, European Corporate Governance Institute - Law Working Paper No.* 475/2019; G. Caroll (2021) How Artificial Intelligence can Transform Risk Management, The Future of ERM Book 2 available at Amazon.co.uk; Jones V. K. (2018), Voice-Activated Change: Marketing in the Age of Artificial Intelligence and Virtual Assistants, Journal of Brand *Strategy*, 7, 239–251.

⁵⁰ Open Letter to the European Commission Artificial Intelligence and Robotics <<u>http://www.robotics-openletter.eu/></u> accessed 29 November 2021.

⁵¹ Tavani, H. (2018), Can Social Robots Qualify for Moral Consideration? Reframing the Question about Robot Rights, Information 9, 73.

⁵² Laukyte M (2019), AI as a Legal Person in Proceedings of the Seventeenth International Conference on Artificial Intelligence and Law, Montreal, Canada, June 17-21, 2019.

that warrant the same rights as those of biological humans.⁵³ However, legal personhood obviously is tied to humans because only humans understand the meaning of rights and duties. 'Actual Thinking' is more than formal symbol and system of manipulation. It involves sensitivity to the meaning of these symbols. Robots can be programmed to conform to rules but they cannot initiate rules outside what is programmed.

Liability of robots could be tortious or criminal. A robot driving a car could be subject to a tortious action in the event of accident. A robot who killed another could be liable for criminal prosecution. However, there is more complexity to these assertions than they appear. Would the robot in question be arraigned in court or will it be sued through the manufacturer? Guerral et al⁵⁴ argues that since robots are insensitive to threats of legal liability, the question arises: how are we to regulate this new class of potential tortfeasors? The need for a theory to better understand robot torts is urgent, given that robots are already capable of driving automobiles and trains, delivering packages, piloting aircraft, trading stocks, and performing surgery with minimal human input or supervision. Engineers and futurists predict more revolutionary changes are still to come. How the law grapples with these emerging technologies will affect their rates of adoption and future investments in research and development.

In the criminal law field, most of today's debate on the impact of AI systems and robots does not regard whether such artificial agents should be granted any kind of agency, or personhood, in the legal domain. Rather, as shown by the series of meetings of the UN Certain Conventional Weapons (CCW) over the past years, what is at stake regards the behaviour of AI lethal systems and robot soldiers on the battlefield, as a new source of responsibility for humans, e.g., military and political authorities. Vice versa, in the field of civil as opposed to criminal law, the use of AI systems and robots does not only raise new hypotheses of human responsibility behaviour of some other agent in the system, such as an animal, a child or an employee.⁵⁵

When a robot harms humans, are there any grounds for holding it criminally liable for its misconduct? Ying Hu⁵⁶answered the question with a qualified affirmation adding that if the robot is capable of making, acting on, and communicating the reasons behind its moral decisions. If such a robot fails to observe the minimum moral standards that society requires of it, labeling it as a criminal can effectively fulfill criminal law's function of censuring wrongful conduct and alleviating the emotional harm that may be inflicted on human victims. Criminal law does not purport to merely declare an act criminal. It goes to inflict some sort of punishment, which essentially deny him of certain level of his right. Ironically, Ying in the same work subsequently asserted that robots has no right or liability. He thus concluded that imposing criminal liability on robots as deterrence will be 'convoluted'.

Although there is no denial that a robot's act could constitute a criminal wrong, it will nonetheless be practically difficult in law to ascribe criminal responsibility to a robot simpliciter. For instance, a robot would not appreciate the effect of pleading guilty to a criminal charge. The concept of punishment in criminal law would be defeated if the person being punished is unaware that he or she is suffering any pains or losing a right because of bad behavior. Thus, even when a robot is enabled to plead guilty or otherwise to a crime, it lacks the requisite feeling of pains to appreciate imprisonment or other forms of punishment. Robots, being objects are bereft of the mental and emotional mentality to suffer pains in prison or community service. In the event of an order of fine following a guilty plea the robots is not known to be operating a bank account with a financial institution. A forfeiture order cannot be made against a robot, who is possibly found guilty of aiding financial crime. A robot that is sentenced to caning will equally suffer no pains. Clearly, robots are undeterred by threats of legal or financial liability, since their personal freedoms and wealth are not at stake.

An unaccountable robotics system will posed unimaginable crisis in society. The safety and orderliness of society requires that someone somewhere must be held criminally responsible for the wrongful act of the robots. This is not entirely without a challenge, as shall be discussed hereunder. Robots functions with the artificial intelligence installed and fixed by the programmer and manufacturer. The functions of the robots are determined by the programmer. That is why a robot programmed to drive a car cannot function as a bar attendant or a robot soldier.

Granted that robots functions according to the dictates of the programmer, it is safe to argue that robots are either agents of the owners who hired the programmer or the programmers themselves. Where a robot commits an offence in the course of carrying out its programmed functions, his act would be taken as that of the 'principal'. The owner of the robots could also be held liable for criminal negligence where injury or criminal wrongs occurred due to the malfunctioning of the robots. A major challenge to liability law comes when robots could be liable. Such cases require legal personhood tests for robots to assess the extent to which they can be liable. One promising personhood test evaluates the robot's intellectual interaction skills, self-consciousness, and communal living ability. Depending on how a robot fares on a personhood test, it could have the same liability as, or less or more liability than, a normal adult human. A robot being liable does not preclude a human party also being liable. Indeed, robot designers should expect more liability for robot harms than would human parents, because robots are designed so much more extensively than human children are.57

Criminal law does not admit of vicarious liability. criminal law recognizes intervening circumstance between the act

⁵³ Miller, L.F (2015) Granting Automata Human Rights: Challenge to a Basis of Full-Rights Privilege; *Human Rights Review* 16, 369-391.

⁵⁴ Guerral, Parisi and Daniel, 'Liability for Robots I: Legal Challenges, *Journal of Institutional Economics* (2021), 1–13.

⁵⁵ Pagallo U. 2018, Apples, Oranges, Robots: Four Misunderstandings in Today's Debate on The Legal Status of AI Systems. *Phil. Trans. R. Soc.* A 376: 20180168. http://dx.doi.org/10.1098/rsta.2018.0168.

⁵⁶ Ying Hu, 'Robot Criminals'(2019)' *University of Michigan Journal of Law Reform* Volume 52.

⁵⁷ Trevor N. White and Seth D. Baum, (2017), 'Liability Law for Present and Future Robotics Technology, available at https://sethbaum.com.

resulting in the crime and the effect thereof. Criminal law pride itself in the mental state of the offender at the time of the offense as well as acts occurring independent of the exercise of one's will. Mistake is a defence in criminal law. But criminal law scienter's rule would hold those in control of dangerous animals liable for their acts. Robots are objects, not animals. Robots are generally not dangerous too to ground a carrier responsibility on the owner.58 Guerra thus posited that 'in the face of the superior decision-making skills of a robot, the relationship between a robot and its operator is different from the relationship between an ordinary tool and its user. As the skills of a robot increase, the need and desirability of human intervention decreases. Bertolini, 2014 earlier envisaged this much when he argued that 'one of the challenges in the regulation of robots concerns accidents caused by 'design limitations' i.e., accidents that occur when the robot encounters a new unforeseen circumstance that causes it to behave in an undesired manner.

Another challenge to ascribing liability is that robots can evolve beyond the design and foresight of their original manufacturers. With these technologies, legal policymakers face what Matthias⁵⁹ described as the 'responsibility gap', whereby it is increasingly difficult to attribute the harmful behavior of 'evolved' robots to the original manufacturer. Robots are not just any other technology. Robots are (or at least can be) intelligent, autonomous actors moving about in the physical world.⁶⁰ Trevor and Seth answered the question that if robots merit personhood, then they can be held liable for harms they cause. Otherwise, they cannot be held liable, and instead liability must go to some human party, as is the case with non-human animals and other technologies or entities that can cause harm.⁶¹

Who Bears Criminal Liability for Activities of Robots?

Nonetheless, the liability regime of robots is determinable. For instance, in the United States, agencies such as the Department of Defense produce regulations on the use of laws that are not dramatically different from that of other weapons.⁶² Internationally, bodies like the UN's International Court of Justice could hold a state liable for authorizing drone strikes that caused excessive civilian casualties. Similarly, commercial drones can be regulated as other aircraft are now by a combination of the FAA and corporate oversight by their creators.⁶³ In a related development, it was held in Nelson v. American Airlines⁶⁴ that operators of autopilot aircrafts (i.e. the airlines) would be held liable when an accident was caused by an autopilot system.⁶⁵ Earlier, it was held in Brouse v. United States⁶⁶, in which two airplanes crashed, one of which was a US military plane that was using an early form of autopilot (robot). The court rejected the US claim that it should not be liable because the plane was being controlled by the robotic autopilot; instead, the court found that the human pilot in the plane is obligated to pay attention and avoid crashes. This is because at any stage of the flight, the pilot can intervene by making appropriate inputs to the autopilot or the FMS. In the event of emergency, the pilot can disengage the autopilot and take over manual control, usually by pressing a switch mounted conveniently on the control column (although alternative means of disengaging the autopilot are available). Modern aircraft have another switch or throttle position, which allows the pilot to change instantly from approach to go-around mode if necessary. If the aircraft is not fitted with an automatic go-around function, pilots must disconnect the autopilot and fly the missed approach manually.67

In Thailand,⁶⁸ there is no specific legal provision for dealing with the damage caused by an autonomous system embedded in UAVs. Under Thai Civil and Commercial Code (CCC), the UAV's operator could be regarded as assumed liable person. In addition, the damage may be caused by the defect of UAVs in which the manufacturer who manufactures the vehicle containing a computer program shall also be assumed as another liable person under the Product Liability Act (PLA). Nevertheless, due to an unforeseeable and inexplicable behavior addressed by AI tools in higher level of automation, it generally causes a challenging issue for existing liability rules to find an appropriate liability model including additional measures to ensure the compensation to injured persons.

Currently, an appropriate liability model to be adopted for the damage caused by an autonomous system with AI capabilities is a strict liability regardless of burden of proof on misconduct which is more beneficial than fault-based ones. In order for the effective applicability under CCC, the term "controller" should cover only the case of semiautonomous level in which the human operator has the authority over the operation. Besides, in order to ensure the compensation, the implemented approach such as

⁵⁸ Alice Guerra, F. Parisi and D. Pi., (2021) 'Liability for Robots II: An Economic Analysis, Journal of Institutional Economics, 1-16.

⁵⁹ Andreas Matthias, The Responsibility Gap: Ascribing Responsibility for the Actions of Learning Automata, (2004) *Ethics and Information Technology* 6(3): 175-183.

⁶⁰ Seth Baum, 'Liability Law for Present and Future Robotics Technology, available at https://gcrinstitute.org/liability-law-for-present-and-futurerobotics-technology/

⁶¹ Trevor N. White and Seth D. Baum, (2017), 'Liability Law for Present and Future Robotics Technology' available at https://sethbaum.com.

⁶² Trevor, ibid.

⁶³ McFarlane. N. (2017), The UAE now has a Minister of Artificial Intelligence. Retrieved November 22, 2017, http://whatson.ae/dubai/2017/10/uae-now-minister-artificialintelligence (3) (PDF) Artificial Intelligence. Available

from:

https://www.researchgate.net/publication/323498156_Artificial_Intelligence [accessed Jan 18 2023].

⁶⁴ 263 Cal. App. 2d 742 [1968].

⁶⁵ D Matsuda, E Mears & Y Shimada (2019) Legalization of Self-Driving Vehicles in Japan: Progress Made, but Obstacles Remain' available at: https://www.dlapiper.com/en/japan/insights/publications/20 19/06/.

⁶⁶ United States District Court, N.D Ohio decided March 25th (1949).

⁶⁷ Volha P. and Ivan Z. 'Autopilot Operation: The Future Is Coming' *Science, Trends and Perspectives of Development*.
⁶⁸ Janewit Panichraksapong, (2020) 'Legal Liability for Damage arising from Drones', *Thammasat Business Law Journal* Vol. 10 2020 17.

compulsory insurance schemes and compensation fund recommended by EU should be adopted as well.⁶⁹

In Nigeria, there is no authoritative statutory framework and judicial precedent on AI Liability in Nigeria thus making it impossible to determine with precision the liability regime for damage caused by AI. It, therefore, remains to be seen, how the court will handle such issue if it becomes a subject of litigation before the Nigerian courts.⁷⁰

Oraegbunam⁷¹ justify the lack of specific statutory provision on the ground that artificial intelligence is a growing field in Nigeria, that is yet to evolve in Nigeria as it is in other countries. However, he believed that in the nearest future, given the craze by Nigerians for exotic goods, use of artificial intelligence would become more popular in Nigeria. Nigeria reportedly approved a Robotics and AI agency in August 2018 with the hope to leverage collaborations with the international research bodies on robotics and AI and enable research and teachings in more complex technology skills to thousands of young people. The ultimate goal is to have an agency mandated solely on advancing knowledge and usability of robots and AI across sectors in Nigeria.⁷²

Notwithstanding this gap in the Nigerian law, the owner, user and manufacturer of a robot could be held liable for crimes committed by the robots. Nigeria law has not treated robots as legal persons. Owners of dangerous animals and weapons are however under obligations to protect the society from the dangerous animals or equipment. Accordingly, section 304 of the Nigeria's Criminal Code provide that:

"It is the duty of every person who has in his charge or under his control anything, whether living or inanimate, and whether moving or stationary, of such a nature that, in the absence of care or precaution in its use or management, the life, safety, or health, of any person may be endangered, to use reasonable care and take reasonable precautions to avoid such danger; and he is held to have caused any consequences which result to the life or health of any person by reason of any omission to perform that duty".

The law accordingly imposed liability on them for criminal, tortious and negligence acts of their animals or equipment resulting in harm to others. Besides section 24 of the criminal code impliedly provide for the offence of criminal negligent to ground liability for manufacturers and programmers of robots, whose careless act or omission enabled the robots to injure others.⁷³ The argument that their liability be based on the provision of section 7 of the criminal code because they are parties to the offence committed is not sustainable because the said section envisaged acts or omission done by natural human beings. Most importantly, unlike section 304, CC, section 7 of the criminal code required premeditated criminal intent. On the

contrary, criminal liability of the users, manufacturers, and operators of robots pursuance to section 304 is predicated on failure to act or unreasonable action resulting in danger.

Conclusion

In this paper, we had discussed the hydra-headed issue of liability of artificial intelligence. We noted that robots is a part of artificial intelligence, and that neither of them enjoy legal personhood in Nigeria. The paper noted that Nigeria has no specific legislation dealing with artificial intelligence even though there are pronouncements by government officials anticipating such regulation in the nearest future. Notwithstanding legislative gap in determining the liability of robots in Nigeria, section 304 of the criminal code among other extant laws could be relied upon to hold the users, operators, manufacturers and programmers of robots liable for crimes committed by the robots. Additionally, negligent usage of robots could ground a charge of criminal negligence. The implication remains that victims of robot related crimes in Nigeria are not without remedy.

⁶⁹ Ibid.

⁷⁰ Inam Wilson and Tolulope Falokun, 'Liability for Damage Caused by Artificial Intelligence' TEMPLARS Law

⁷¹ Ikenga K.E. Oraegbunama, Artificial Intelligence Entities, Criminal Responsibility and Nigerian Legal Justice System' *International Journal of Law and Clinical Legal Education* (*IJOLACLE*) 1 (2020).

⁷² Ibid.

⁷³ cf, s.303 of the Criminal Code.