Rule of Law, Corporate Governance and AI Humanoid Robots: Charting the Course for a Global Regulatory Framework

Tayewo A. Adewumi ♣

Abstract

On July 7, 2023, a panel of robots told reporters in Geneva, Switzerland, that they could be more efficient leaders than human beings. The nine artificial intelligent (AI) humanoid robots said they would not take anyone's job or stage a rebellion. Four months later, on Monday 13 November 2023, News Direct reported that the world's first AI humanoid robot CEO entered the boardroom. The above events show the advent of artificial intelligent humanoid robots which are likely to become substitutes for humans in corporate and general governance. This article recommends a global regulatory framework for the manufacture, use, and operation of AI humanoid robots. The author argues that allowing the development and operation of AI humanoid robots for governance without adequate international regulation would spell doom to human existence. Artificial intelligent humanoid robots should not be allowed to override human natural intelligence but to complement it and this can be done through global regulation. A regulatory framework for AI systems has already started (in June 2024) with the advent of the European Union Artificial Intelligence Regulation (Regulation (EU) 2024/1689). The way forward envisages that the United Nations General Assembly will follow the footsteps of the European Union.

Keywords:
Artificial intelligence, humanoid robots, corporate governance, rule of law

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1. Introduction

The advent of artificial intelligence has sparked great concern in the global arena. There have been creations of artificially intelligent human-like robots that are capable of doing so many things better than human beings. In November 2023, News Direct reported that the world's first humanoid robot (Mika) has been given the corner office as one company's new CEO.[1] Mika is the brainchild of collaboration between Hanson Robotics and the Polish-run company, Dictador.[2]

Before this, in July 2023, Fox News reported that a panel of nine artificially intelligent humanoid robots told reporters in Switzerland, among other statements, that they could be more efficient leaders than human beings.[3] This was said at the United Nations-driven AI for Good Global Summit in Geneva, Switzerland organised by International Telecommunication Union (ITU). The event explored ways to use artificial intelligence (AI) to help the world achieve the Sustainable Development Goals (SDGs).[4] The UN Secretary General, António Guterres, reiterated that AI must work for everyone's good, including a third of humanity who is still offline. He emphasised the need to urgently agree on the guiding norms and regulations for AI deployment.[5] It is

[1] News Direct (2023). 'World's First AI-Powered Humanoid Robot CEO Enters the Boardroom' https://newsdirect.com/news/worlds-first-ai-powered-humanoid-robot-ceo-enters-the-boardroom-305662827 accessed 10 December 2023.
[2] Ibid.
[3] Julia Musto (2023). 'AI humanoid robots hold UN press conference, say they could be more efficient and effective world leaders' https://www.foxnews.com/tech/ai-humanoid-robots-un-press-conference-more-efficient-effective-world-leaders accessed 10 December 2023.
[4] United Nations (2023). 'UN chief says regulation needed for AI to 'benefit everyone'' https://news.un.org/en/story/2023/07/1138397 accessed 10 December 2023.
[5] Ibid.

crucial to draw a dividing line as to what extent AI should operate in the human world today.

The conversation on robots and artificial intelligence has taken the world stage. This is vividly described by Jeong *et al*:

> With the rapid development of robots and artificial intelligence technology, the world is developing where humans and robots coexist due to advanced human-robot interaction. As a result, cleaning robots, drones, guide robots, delivery robots, and service robots have already penetrated and are used in various industries. Advances in robotics have enabled our machines to explore the sea, go to Mars, and perform surgery. Robots are getting more precise, innovative, functional, and better. In particular, research and development (R&D) on humanoid robots that are similar in appearance to humans, which are the most suitable form for human living environments, is being actively conducted. Humanoid robots have the advantage of being able to adapt to the environment formed by humans and move in uncertain environments in various ways, such as walking, climbing stairs, manipulating tasks, collaborating with humans, and running. It is natural to conclude that humanoid robots are a fascinating topic for the future environment.[6]

This article looks into the implication of these AI humanoid robots taking over the functions of humans. The second section discusses the concept of artificial intelligence, the third section discusses what a robot is and by extension, the notion of a humanoid robot. Sections 4 and 5 deal with the rule of law and the concept of corporate governance respectively. The sixth section discusses the implication of AI humanoid robots on governance and rule of law.

2. Artificial Intelligence (AI)

The term artificial intelligence was first coined by John McCarthy at the Dartmouth Conference in 1956.[7] Since its origin, AI research has been strongly inspired and motivated by human intelligence. Human thinking and problem-solving dominated until the late 1980s, whereby chess playing, theorem-proving, planning, and similar 'cognitive' skills were considered to

[6] Jaesik Jeong *et al* (2023). 'Lightweight mechatronic system for humanoid robot' 38 *The Knowledge Engineering Review*. 1-15, 1. doi:10.1017/S026988892300005X.

[7] Clifford G. Lau and Brian A. Haugh (2018). 'Megatrend Issues in Artificial Intelligence and Autonomous Systems' *Institute for Defense Analyses* 2.

exemplify human intelligence and were proposed as benchmarks for designing systems that should either simulate human intelligence (weak AI) or become intelligent (strong AI).[8] The term artificial intelligence refers broadly to computational devices that perform tasks on behalf of humans. Its programmers are inherent in the claim that it is and does so without immediate, direct human control or intervention.[9]

Antebi[10] describes Artificial Intelligence (AI) as:

> a broad name for simulating intelligent human behavior or creating knowledge and insights that have never existed using information and computer systems. This technology is important and groundbreaking. For the first time in history, software can efficiently perform abilities that traditionally have been considered exclusively human; such as understanding, reasoning, perceiving, or communicating (at low cost and on a wide scale) using various applications and having different uses. The mechanization of these human abilities creates new opportunities and influences many areas, including national security.

Antebi's description of artificial intelligence corroborates Johnson's description of the independence of artificial intelligence.[11] Antebi argues that AI is a real revolution that has enabled products and services such as autonomous vehicles, computerised medical diagnoses, voice interaction in natural language between computers and people, and many more.[12]

Yadav[13] describes Artificial Intelligence (AI) as a term from a branch of science that deals with the imitation of human brain workings to achieve difficult tasks performed by humans whose aim has been to relieve human efforts while performing like them with precision and consistency. The above description clearly states the purpose for which artificial intelligence is created. He explained that AI was not created to hurt or replace humans but

[8] Kerstin Dautenhahn (2007). 'Socially Intelligent Robots: Dimensions of Human-Robot Interaction' 362(1480) *Philosophical Transactions: Biological Sciences* 679.
[9] Deborah G. Johnson (2015). 'Technology with No Human Responsibility?' 127(4) *Journal of Business Ethics* 708.
[10] Liran Antebi (2021). 'Artificial Intelligence—Why Now?' *Institute for National Security Studies* 21.
[11] Deborah G. Johnson (2015), *supra* note 9, at 707.
[12] Liran Antebi (2021), *supra* note 10, at 21.
[13] Nidhika Yadav (2023). 'Ethics of artificial intelligence and robotics: key issues and modern ways to solve them' 1(4) *Journal of Digital Technologies and Law* 957. https:// doi.org/10.21202/jdtl.2023.41

to complement humans and help in difficult situations, especially in medicine, natural disasters, outbreaks of epidemics, and so on.[14]

The aim of AI was never to harm humans. AI was never to replace humans and the AI was never to take over the world of humans. AI was to complement humans, help scientific discoveries, and help humans in case of natural disasters, during pandemic and various contexts. Other applications where AI helps humans are in day-to-day medical care centres, mechanical engineering companies, driving in semi and fully-automated cars, bot-based deliveries (delivery robots) during climate extreme situations like flood. AI is also useful in various segments of application such as textile engineering, advancements in aircraft operations, traffic management, space programmes and so on.

The most favourable area in which artificial intelligence should be used is medicine. This receives a favourable consideration by Nobile[15] who opines that the progress of AI has seen the application of AI techniques to telemedicine to improve results in that area of medicine such as image recognition which has surpassed human capability. She went further to say that despite the better performance of AI in this field of medicine, healthcare professionals are still reticent to use the techniques in clinical practice. Her statement was based on data from the research conducted in 2020 on Italian physicians by the Digital Innovation in Healthcare Observatory of the Politecnico di Milano.

The research outcome states: "On Connected Care in the Covid-19 emergency showed that only 9% of them used them before the Covid emergency and only 6% work in a facility that introduced (or enhanced) them during the pandemic. Despite this, 60% of medical specialists believe AI techniques can play a key role in emergencies, 52% believe they help personalize care, 51% believe they help make care more effective, and 50% believe they help reduce the likelihood of clinical errors."[16] This shows that AI is beneficial to humans in the area of medicine.

However, as good as this may sound, the concern for wrong or manipulative diagnosis by AI is possible and may not be discovered by

[14] Ibid.

[15] Chiara Gallese Nobile (2023). 'Legal Aspects of the Use Artificial Intelligence in Telemedicine' 1(2) *Journal of Digital Technologies and Law* 317. https://doi. org/10.21202/jdtl.2023.13

[16] Ibid.

humans.[17] The concern for transparency in artificial intelligence was voiced by Yampolskiy as quoted by Kharitonova[18] that "if everything we have is a 'black box'," it will be "impossible to understand the reasons for failures and to increase the system's safety. Besides, if we get used to accepting the answers of the artificial intelligence without explanations of reasons, we will not be able to detect when it starts giving wrong or manipulative answers."

In explaining the 'black box' in AI, Kharitonova[19] indicates the non-transparent nature of AI:

> Easiness of comprehension was sacrificed for the rate of decision-making and the technology was called 'a black box' –non-transparent for human comprehension but extremely potent in terms of both results and learning in new spheres. The models that 'open the black box', making a nonlinear and complex process of decision-making clear for human observers, are a promising solution to the 'black box' AI problem, but are limited, at least in their present state, in their ability to make these processes more transparent for most observers. Artificial intelligence uses deep learning (DL), an algorithmic system of deep neural networks, which are generally non-transparent or hidden from human comprehension.

Kharitonova's concern is the non-transparency of deep learning (DL) which is not open to human comprehension. This is corroborated by Gilani *et al*: [20]

> One major worry is that AI systems might be just as biased and discriminatory as the data they were trained on. Artificial intelligence systems might potentially produce conclusions that are hard to explain or defend, which could erode public faith in the judicial system. To alleviate these worries, AI systems employed in the legal sector must be open, responsible, and under constant review. Creating procedures for monitoring and auditing AI systems to verify they are performing as intended may be part of this process, as may the development of ethical principles and standards for the use of AI in the legal area. The expanding legal industry for AI has implications for the rule of law,

[17] Yuliya S. Kharitonova (2023). 'Legal Means of Providing the Principle of Transparency of the Artificial Intelligence' 1(2) *Journal of Digital Technologies and Law* 341. https://doi.org/10.21202/jdtl.2023.14

[18] Ibid.

[19] Ibid.

[20] Syed Hassan Gilani, Nabila Rauf & Shehla Zahoor (2023). 'Artificial Intelligence and the Rule of Law: A Critical Appraisal of a Developing Sector' 5(2) *Pakistan Journal of Social* Research 743. https://doi.org/10.52567/pjsr.v5i02.1156

> both positive and negative. While AI has promise for increasing productivity and expanding access to justice, it must be used in a way that respects basic legal values like fairness, openness, and accountability.[21]

To them, the artificial intelligence system should be monitored and audited consistently and used in such a way that it recognises fairness and accountability. Allen and Thadanin supported this when they opined that "There is no inherent trade-off between mitigating AI risks and accelerating adoption. AI regulation and frameworks must be well balanced, ethically designed, and part of an internationally interoperable framework".[22] The concern about AI is succinctly expressed by Pogue[23] that "once AI gets smart enough, it will be able to improve its own software, over and over again, every hour or minute. It will quickly become so much smarter than humans that – well, we don't actually know".

3. Humanoid Robotics

Robots are described as entities and machines that define mechanical movements and can be with or without any Artificial Intelligence. Nobile describes a robot as a physical machine that can cope with the dynamics, the uncertainties, and the complexity of the physical world.[24] It is important to note that a robotic system is integrated with perception, reasoning, action, and learning, as well as interaction capabilities with other systems. [25]

The word robot first appeared in Karel Čapek's play (Rossum's Universal Robots /R.U.R) and derives from the Czech word "robota", meaning servitude or work.[26] In the play, the robots first appeared as the oppressed, later as the unfeeling, evil oppressors, and finally as the sensitive, empathetic heroes and

[21] Ibid.

[22] Gregory C Allen & Akhil Thadani (2023). 'Advancing Cooperative AI Governance at the 2023 G7 Summit' *Center for Strategic and International Studies* 3-4.

[23] David Pogue (2015). 'Robots Rising' 313(4) *Scientific American* 32.

[24] Chiara Gallese Nobile (2023). 'Regulating Smart Robots and Artificial Intelligence in the European Union' 1(1) *Journal of Digital Technologies and Law* 37. https://doi. org/10.21202/jdtl.2023.2

[25] Nidhika Yadav (2023), *supra* note 13

[26] Erik Brynjolfsson (2022). 'The Turing Trap' 151(2) *Daedalus* 272. John Bohannon (2014). 'Meet your new co-worker' 346(6206) *Science* 180. https://www.jstor.org/stable/10.2307/24917266

heroines saving humanity.[27] Webb[28] admitted that various literary works like movies had influenced our perception of robots. He opines that: "[t]rue robots are a product of computer technology, but the robot idea has been scaring and inspiring us since the dawn of civilization. Legend and scientific predictions, literature, art, and movies have long colored our perception of robots' appearance, capability, and potential."

In the 1930s, engineers from the Westinghouse Electric Corporation built 'Elektro', a 7-foot (2.1 meters) tall robot that could walk, speak up to 700 words, blow up balloons, and smoke cigarettes, it was introduced at the 1939 New York World's Fair, he was likely the first humanoid robot ever created and presented to the public.[29] In describing what a modern humanoid robot looks like, Maia Mulko states: "[m]odern humanoid robots can imitate aspects of human behavior, speech, and even emotions using artificial intelligence and machine learning models"; and she notes that "[t]hey are designed with practical applications in mind, such as personal assistance and caregiving, manufacturing and maintenance, research and space exploration, and search and rescue, among others.[30]

To Mulko, humanoid robots are designed to assist humans in all areas they are needed for. However, Richardson[31]in identifying the category into which humanoid robots could be grouped opines that "[h]umanoid robots invite us to imagine (and, indeed, seem to embody) a form of 'non-human' personhood that is neither 'natural' nor religious in origin".[32] This author agrees with Richardson that humanoid robots are strictly the product of science and technology, their existence has nothing to do with natural phenomena or religion.

As highlighted in the preceding sections, humanoid robots are created from computer, information, and communication technologies. They are made in human form, and are made to imitate humans in the area they are created for.

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[27] Steve Dixon (2004). 'Metal Performance Humanizing Robots, Returning to Nature, and Camping about' 48(4) *TDR* 17.

[28] Michael Webb (1983). 'The Robots Are Here! The Robots Are Here!' 121 *Design Quarterly* 5.

[29] Maia Mulko (2023). '5 of the world's most realistic humanoid robots ever' https://interestingengineering.com/lists/5-worlds-realistic-humanoid-robots accessed 10 December 2023.

[30] Ibid.

[31] Kathleen Richardson (2016). 'Technological Animism: The Uncanny Personhood of Humanoid Machines' 60(1) *Social Analysis: The International Journal of Anthropology* 124.

[32] Ibid.

Sometimes artificial intelligence humanoid robots are made to think and work like any average human, most times, they perform better than humans in such areas. Sections 4 and 5 provide an overview of rule of law and corporate governance followed by Section 6 that relates the themes with AI and humanoid robots

4. Rule of Law and AI Humanoid Robots

The concept of rule of law dates back to Greek and Roman antiquity, but the term came into common usage in the nineteenth century when it was associated with the rise of liberal democracies.[33] It is normally used to describe governance at the national level, but in recent years has been applied to global governance as well. It has implications for international relations in two respects: it is seen as an ideal that ought to be promoted within states and as an ideal that ought to govern relations between states.[34] To Craig Evan Klafter,[35] the concept of rule of law in post-colonial societies is inextricably linked to the body of law adopted from former colonial rulers. Klafter notes that English common law became one of their greatest international exports.[36] The same holds true with regard to the codes of law in Continental Europe's legal tradition that are adopted by various countries.

According to the South African Institute of International Affairs, the rule of law is the bedrock of any democracy as it ensures the principle of equality for all citizens, regardless of race, gender, or social class.[37] The laws of a constitutional state are codified in line with the precepts set out in its constitution. The broad principle is that the state is run according to the laws that represent particular values, then applied to the governed and those in authority, the state and its agents cannot act as they wish. In addition, it is generally agreed that the rule of law as a concept has to do with the principle of equality before the law and separation of powers. The law should treat all people equally and consistently, respecting their rights and holding them accountable for their misdeeds irrespective of their position in society, and

[33] Ian Johnstone (2020). 'The Rule of Law under Siege' 44(1) *The Fletcher Forum of World Affairs* 5.
[34] Ibid.
[35] Craig Evan Klafter (2020). 'Rule of Law, and an Imperfect Inheritance' 44(1) *The Fletcher Forum of World Affairs* 121.
[36] Ibid.
[37] South African Institute of International Affairs (2021). 'Rule of Law, Militarisation of Politics and Organised Violence', Civil Society Submission to the Civil Society APRM in Zimbabwe: 2020/2021, *South African Institute of International Affairs* 54-73.

within the state, the conduct of the various arms should be held accountable by the others.[38]

On the relationship between accountability and the rule of law, Ronja Ganster *et.al*[39] opine that successful completion, implementation, and enforcement of long-standing rule of law and judicial reforms is critical and must be a prerequisite for the efficient implementation of reconstruction projects as well as for maintaining the trust of donor countries.[40] In spite of variation in most scholarly sources, the rule of law demands that "people in positions of authority should exercise their power within a constraining framework," rather than in "an arbitrary, ad hoc, or purely discretionary manner on the basis of their own preferences or ideology"[41]

Rule of law means all must be subject to the law, no one is above the law. In practice, rule of law principles are not easy to abide by. In this regard Miyoshi Masahiro[42] notes the challenges in materializing the rule of law "in the actual world where various national interests and cultural-historical backgrounds tend to collide with each other", and argues that "[d]espite some uncertainty about its concept, however, the rule of law should be the governing principle for the conduct of States in their mutual relations.[43]

Agathe Mora[44] also pointed out that the definition of rule of law is elusive. To Agatha Mora, the implementation of the rule of law has been a great concern. In spite of such difficulties, reference can be made to the definition of rule of law principles by the United Nations which reads:

> … It refers to a principle of governance in which all persons, institutions, and entities, public and private, including the State itself, are accountable to laws that are publicly promulgated, equally enforced and independently adjudicated, and which are consistent

[38] Ibid.

[39] Ronja Ganster *et al* (2022). 'Accountability and Rule of Law: Designing Ukraine's Recovery in the Spirit of the Marshall Plan: Principles, Architecture, Financing, Accountability: Recommendations for Donor Countries' *German Marshall Fund of the United States* 35–43.

[40] Ibid.

[41] Jeremy Waldron (2023). 'The Rule of Law' *The Stanford Encyclopedia of Philosophy*, Edward N. Zalta & Uri Nodelman (eds.), URL = <https://plato.stanford.edu/archives/fall2023/entries/rule-of-law/>. Accessed 29 October 2023.

[42] Miyoshi Masahiro (2016). 'Peaceful Use of the Sea and the Rule of Law' 22 *Asian Yearbook of International Law* 5–19.

[43] Ibid.

[44] Agathe Mora (2020). 'Rule of Law' *Humanitarianism*185–187.

> with international human rights norms and standards. It requires, as well, measures to ensure adherence to the principles of supremacy of law, equality before the law, accountability to the law, fairness in the application of the law, separation of powers, participation in decision-making, legal certainty, avoidance of arbitrariness and procedural and legal transparency.[45]

In light of the discussion above, the following eleven elements can be identified in relation with rule of law and artificial intelligent humanoid robots.

(i) *Supremacy of the law*

This principle provides that the law is the supreme authority and therefore, it must be obeyed. This is with respect to the conduct of humans in ensuring that the rules and regulations laid down by the law are followed by everyone irrespective of their status in society. The challenge arises as to the status of the artificially intelligent humanoid robots in recognising and appreciating the supremacy of the law. This category of intelligent machines cannot be categorised as humans and presently there is no instrument to enforce their recognition of the law and its supremacy.

(ii) *Accountability to the law*

Every human is accountable to the law. The day-to-day conduct of every person is subject to the law. It means that going against the law has adverse consequences. It is the accountability to the law that makes humans avoid committing an offence. In the case of artificially intelligent humanoid robots, accountability is contestable as the law does not provide for these artificial personalities.

(iii) *Equality before the law*

Another principle of the rule of law is equality before the law, and this relates to humans. The artificial intelligent humanoid robots cannot have the same status of equality as human beings.

(iv) *Fairness in the application of law*

Fairness in the application of law refers to maintaining and ensuring justice in all matters, especially in the duty of judicial officers. The pertinent issue here is whether the principle of fairness applies to the artificially intelligent humanoid robots as judges or citizens in pursuit of justice. In resolving the

[45] United Nations (2004). 'The Rule of Law and Transitional Justice in Conflict and Post-Conflict Societies: Report of the Secretary-General,' UN SC, UN Doc. S/2004/616 at 4.

above issue, these artificially intelligent beings are not provided for in this regard.

(v) *Independence of judiciary*

The independence of the judiciary is another principle of the rule of law. We cannot identify how this applies to artificially intelligent humanoid robots. Artificially intelligent beings are not eligible to be appointed as judicial officers.

(vi) *Consistency with international human rights*

International human rights is a clear testament that it relates to 'humans' not artificial intelligent humanoid robots.

(vii) *Separation of powers*

Separation of power means clear identification of the powers and duties of the executive, legislative, and the judiciary. This principle, from all indications, applies to humans, they occupy the three arms of the government.

(viii) *Participation in decision-making*

In the making of regulations in society, people are expected to participate in law-making decisions that affect them. Again, this applies to humans who are the beneficiaries of the decisions.

(ix) *Legal certainty*

This is the principle that identifies consistency of the law and the requirement of certainty relates to the rules and regulations on forms of offences. The law must also: be accessible, identify the ingredients of an offence, be time-specific, specify consequences for its breach, state procedures for redress of a wrong, be in force, and the law cannot have retroactive application. The only relationship this principle has to the existence of the artificially intelligent humanoid robot is the possibility of creating a legal certainty through the law for such artificially intelligent beings.

(x) *Avoidance of arbitrariness*

The rule of law avoids arbitrariness, that is, it treats similar issues in the same manner. It employs rules and procedures in dealing with issues before it. It also has a relationship with accountability which refers to the position of authority. This cannot apply to an artificially intelligent humanoid robot, as it is incapable of emotion and feeling. Such an artificially intelligent being cannot have a conscience for the purpose of identifying arbitrary behaviours.

(xi) *Procedural and legal transparency*

The rule of law employs transparency in its procedure and in arriving at a decision. Procedural transparency involves establishing and following procedures that are fair and clear on the rights and limitations of affected and interested parties; and it provides opportunities for parties to take part in investigative and decision-making processes.[46] In discussing artificially intelligent humanoid robots, the above issue did not envisage the inclusion of this category of artificial legal personality.

The elements of rule of law highlighted above show gaps in the regulation of AI humanoid robots and there is thus urgent attention towards global regulation in the interface between the principles of rule of law and AI humanoid robots.

5. The Concept of Corporate Governance and AI Humanoid Robots

Corporate governance, a phrase once known to a handful of scholars and shareholders, became a mainstream concern and discussion in corporate boardrooms, academic meetings, and policy circles around the globe.[47] Although corporate governance has no single definition, it refers to a uniform concept, i.e., the *proper and adequate control* of corporate organisation. Denis and McConnell[48] define corporate governance as: "…the set of mechanisms-both institutional and market-based-that induce the self-interested controllers of a company (those that make decisions regarding how the company will be operated) to make decisions that maximize the value of the company to its owners (the suppliers of capital)." To Denis and McConnell, corporate governance relates to the executive management through the control and direction of the non-executive management (Non-executive directors) running the company in a fit and proper way in the interest of all stakeholders which include the shareholders.

[46] Organisation for Economic Co-operation and Development (2020). 'Scoping note on Transparency and Procedural Fairness as a long-term theme for 2019-2020' https://one.oecd.org/document/DAF/COMP/WD(2018)6/En/pdf accessed 15, October 2024.

[47] Stijn Claessens (2006). 'Corporate Governance and Development' 21(1) *The World Bank Research Observer* 91.

[48] Diane K. Denis & John J. McConnell (2003). 'International Corporate Governance' 38(1) *The Journal of Financial and Quantitative Analysis* 2.

According to Midillili and Topçu corporate governance aims at maximising the shareholders' worth through the directors' fair and transparent administration of the company, and they state its salient features as follows:[49]

> Companies have to protect and enhance the welfare of their stakeholders by adapting international business standards, tackling corruption, fostering innovation, increasing efficiency, and assuming more social responsibility in their respective societies. Governance of the corporation is a concept that accommodates and communicates these principles systematically. Corporate governance is a process, consistent with the principles and practices of a free market and a democratic society. It assigns final authority and full responsibility to a board of directors whose decision-making responsibility is collegial and participatory, where independent and outside views are valued. The board maximises shareholder value through fairness, accountability, and transparency.

Davies[50] categorizes corporate governance into (1) the Board functions, appointment and removal, and structure (2) Shareholders decision making (3) Directors' duties (4) enforcement of directors' duties, and (5) administrative remedies for breach of corporate duties. The Organisation for Economic Co-operation and Development (OECD)[51] had issued a 2023 version of the principles of corporate governance. The document states that even though the principles are non-binding, they are used as a yardstick for effective corporate governance practices. It notes that the "The Principles aim to provide a robust but flexible reference for policymakers and market participants to develop their frameworks for corporate governance".[52]

The OECD Principles of Corporate Governance are the leading international standards for corporate governance. They aim to assist policymakers and regulators in examining and improving legal, regulatory, and institutional frameworks for corporate governance, to support market

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[49] Ali Midillili & Çağatay Topçu (2002). 'Corporate governance' 4(1) *Insight Turkey* 81.

[50] Paul L. Davies (2003). *Gower and Davies' Principles of Modern Company Law* (London; Sweet & Maxwell,). 294-480.

[51] The Organisation for Economic Co-operation and Development (OECD) is an international organisation that works to build better policies for better lives. The organisation's goal is to shape policies that foster prosperity, equality, opportunity, and well-being for all. It leverages 60 years' experience and insights to effectively prepare the world of tomorrow

[52] G20/OECD Principles of Corporate Governance, 2023. p. 6. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/09/g20-oecd-principles-of-corporate-governance-2023_60836fcb/ed750b30-en.pdf

confidence and integrity, economic efficiency, and financial stability.[53] The following six principles (under OECD Principles of Corporate Governance) evoke the issues highlighted below in the context of a humanoid robot CEO.

(i) Ensuring the basis for an effective corporate governance framework

Principle 1 provides that "the corporate governance framework should promote transparent and fair markets and the efficient allocation of resources. It should also be consistent with the rule of law and support effective supervision and enforcement".[54] Principle 1 is expected to be adhered to by the corporate entity and its organs, which are the shareholders at the general meeting and the board of directors. This provision did not envisage an artificially intelligent humanoid robot CEO, and it is not clear how this artificial personality will be held responsible or sanctioned for any infraction committed.

(ii) The rights and equitable treatment of shareholders and key ownership functions

Principle 2 provides that "the corporate governance framework should protect and facilitate the exercise of shareholders' rights and ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights at a reasonable cost and without excessive delay".[55] The shareholders' rights include the right to dividends, the right to attend general meetings, and the right to vote. This principle did not take into consideration how shareholders can seek redress against an artificially intelligent humanoid robot CEO in the instance of a breach of this principle.

(iii) Institutional investors, stock markets, and other intermediaries

Principle 3 provides that "the corporate governance framework should provide sound incentives throughout the investment chain and provide for stock markets to function in a way that contributes to good corporate governance".[56] An artificially intelligent humanoid robot CEO can make a bad decision that is contrary to good corporate governance; again, the principle did not envisage an artificially intelligent personality.

[53] Id., p. 4.
[54] Id., p. 9.
[55] Id., p. 14.
[56] Id., p. 22.

(iv) Disclosure and transparency

Principle 4 provides that "the corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, sustainability, ownership, and governance of the company". On the issue of disclosure and transparency, it is not clear how an artificially intelligent humanoid robot can be sanctioned if it fails to comply with this principle.

(v) The responsibilities of the board

Principle 5 states that "the corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders".[57] The board of directors has an oversight function over the executive management. Exercising oversight function over an artificially intelligent humanoid robot chief executive officer does not seem to be achievable because the processing of information for such an artificial personality is faster than that of humans and its decisions may be too extreme for the board to comprehend.

(vi) Sustainability and resilience

According to Principle 6, "the corporate governance framework should provide incentives for companies and their investors to make decisions and manage their risks, in a way that contributes to the sustainability and resilience of the corporation".[58] The incentives for managing risks in contribution to the sustainability and resilience of the corporate entity cannnot involve using artificial intelligent humanoid robot as risk manager.

In light of the complexities of the elements of corporate governance, it is yet to be seen how an artificially intelligent robot CEO will manage the relationship needed for a healthy and profitable business organisation without human natural intelligence. This points to the fact that global regulation in this aspect should put the principles of corporate governance into consideration.

[57] Id., p. 34.
[58] Id., p. 44.

6. The Implication of AI Humanoid Robots on Governance and Rule of Law

There are concerns that AI humanoid robots will do bad things and make bad decisions concerning governance and society. The question is how do we use the law to remedy this misbehaviour? Lemley and Casey[59] expressed their concern on how the rule of law can be applied to artificial intelligent robots:

> Robots and AI systems will do bad things. When they do, our legal system will step in to try to make things right. But how it does so matters. Our remedy rules, unsurprisingly, aren't written with robots in mind. Adapting our existing rules to deal with the technology will require a nuanced understanding of the different ways robots and humans respond to legal rules. As we have shown, failing to recognize those differences could result in significant unintended consequences –inadvertently encouraging the wrong behaviors, or even rendering our most important remedial mechanisms functionally irrelevant.

Thus, there is the need for adequate regulatory response and control that can address bad decisions and wrong acts of robots and AI. This reiterates the need to have a global regulatory framework for this fast-developing phenomenon.

Filipova and Koroteev[60] raised an important question as to whether it is possible to stop or slow down the development of artificial intelligence so that humanity could adapt to the new conditions, They underlined the importance of the issue but doubted the possibility of such, considering the published national strategies by each country who are on a mission to win the competition of producing the latest artificial intelligent entities.

According to recent news, the first factory for mass production of humanoid robots is about to open in Salem, Oregon, the United States of America. The factory plans to produce 10,000 two-legged robots in a year,

[59] Mark A. Lemley & Bryan Casey (2019). 'Remedies for Robots' 86(5) *The University of Chicago Law Review* 1396.

[60] Irina A. Filipova & Vadim D. Koroteev (2023). 'Future of the Artificial Intelligence: Object of Law or Legal Personality?' 1(2) *Journal of Digital Technologies and Law* 363. https://doi.org/10.21202/jdtl.2023.15

and the robots are expected to help Amazon and other giant companies with hauling, lifting, and moving[61] in tasks that are dangerous to humans.

Shneiderman[62] had posed a question on the control of AI-enabled devices including the humanoid robots. His question is about what it will take humans to control AI for the advancement of their values and aspirations rather than accepting the control of autonomous decision algorithms that are beyond the human view and direct influence. In order to address these concerns, global regulation for artificial intelligence becomes necessary.

The UN General Assembly (on Thursday, 21 March 2024) adopted a landmark resolution on the promotion of "safe, secure and trustworthy" artificial intelligence (AI) systems that will also benefit sustainable development for all.[63] The need for global governance of artificial intelligence is stated in the executive summary of the United Nations' Governing AI for Humanity final report of September 2024:

> The imperative of global governance, in particular, is irrefutable. AI's raw materials, from critical minerals to training data, are globally sourced. General-purpose AI, deployed across borders, spawns manifold applications globally. The accelerating development of AI concentrates power and wealth on a global scale, with geopolitical and geoeconomic implications.[64]

The report states that no one currently understands all of AI's inner workings enough to fully control its outputs or predict its evolution while the decision makers are not held accountable for developing, deploying or using systems they do not understand and it notes that the negative impacts resulting from such decisions are likely to be global.[65] According to the report, the development, deployment and use of such a technology cannot be left to the whims of markets alone and that the nature of the technology itself which is transboundary in structure and application requires a global approach. Indeed,

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[61] Jennifer A. Kingson (2023). 'The first humanoid robot factory is about to open' https://www.axios.com/2023/12/05/humanoid-robot-factory-agility-bipedal-amazon accessed 10 December 2023.

[62] Ben Shneiderman (2021). 'Human-Centered AI' 37(2) *Issues in Science and Technology* 56.

[63] Vibhu Mishra (2024). 'General Assembly adopts landmark resolution on artificial intelligence' https://news.un.org/en/story/2024/03/1147831 accessed 16 October, 2024.

[64] United Nations Governing AI for Humanity final report of September 2024 paragraph vii, page 7.
Available at: https://digitallibrary.un.org/record/4062495?ln=en&v=pdf#files

[65] Id., paragraph viii, p. 7.

AI presents challenges and opportunities that require a holistic, global approach across political, economic, social, ethical, human rights, technical, environmental concerns; and where such an approach can turn budding initiatives into a logical whole, it can be held firmly in international law and the SDGs, in such a manner that the framework can be adaptable across conditions with gradual process.[66]

In identifying the gaps in global AI governance, the executive summary states that "[t]here is no shortage of documents and dialogues focused on AI governance"; and it states that even though "[h]undreds of guides, frameworks and principles have been adopted by governments, companies and consortiums, and regional and international organizations", none of these documents "can be truly global in reach and comprehensive in coverage. This leads to problems of representation, coordination and implementation."[67] The report recommends the following five guiding principles for AI global governance:[68]

Guiding principle 1: AI should be governed inclusively, by and for the benefit of all.

Guiding principle 2: AI must be governed in the public interest.

Guiding principle 3: AI governance should be built in step with data governance and the promotion of data commons.

Guiding principle 4: AI governance must be universal, networked and rooted in adaptive multi-stakeholder collaboration.

Guiding principle 5: AI governance should be anchored in the Charter of the United Nations, international human rights law and other agreed international commitments such as the SDGs.

The above guiding principles are very important in the global regulation of Artificial Intelligence. On 13 June 2024, roughly three months before the release of the United Nations Governing AI for Humanity final report, the European Council and the European Parliament finalised the AI in Europe Regulation (EU) 2024/1689. The legal instrument laid down harmonised rules on artificial intelligence and it amended Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828

[66] Id., paragraphs ix & x, pp. 7-8.
[67] Id., p. 8.
[68] Id., p. 38 (paragraphs xii and xiii of the executive summary)

(Artificial Intelligence Act).[69] The regulation contains seven chapters and 113 Articles.

Article 1(1) of the regulation states that the purpose of the Regulation is "to improve the functioning of the internal market and promote the uptake of human-centric and trustworthy artificial intelligence (AI)" and meanwhile ensure "a high level of protection of health, safety, fundamental rights enshrined in the Charter, including democracy, the rule of law and environmental protection, against the harmful effects of AI systems in the Union and supporting innovation." The following seven main objectives of the Regulation are laid down under the Article 1(2):

(i) harmonised rules for the placing on the market, the putting into service, and the use of AI systems in the Union;
(ii) prohibitions of certain AI practices;
(iii) specific requirements for high-risk AI systems and obligations for operators of such systems;
(iv) harmonised transparency rules for certain AI systems;
(v) harmonised rules for the placing on the market of general-purpose AI models;
(vi) rules on market monitoring, market surveillance, governance and enforcement;
(vii) measures to support innovation, with a particular focus on SMEs, including start-ups.

According to Article 2(1), the Regulation applies to seven categories of persons, namely:

(a) providers placing on the market or putting into service AI systems or placing on the market general-purpose AI models in the Union, irrespective of whether those providers are established or located within the Union or in a third country;
(b) deployers of AI systems that have their place of establishment or are located within the Union;
(c) providers and deployers of AI systems that have their place of establishment or are located in a third country, where the output produced by the AI system is used in the Union;
(d) importers and distributors of AI systems;
(e) product manufacturers placing on the market or putting into service an AI system together with their product and under their own name or trademark;

[69] Official Journal of the European Union, Regulation EU 2024/1689 of the European Parliament and of the Council of 13 June 2024. p.1.

(f) authorised representatives of providers, which are not established in the Union;
(g) affected persons that are located in the Union.

Annex III identifies high-risk AI systems as referred to in Article 6(2). Paragraph 4 of Annex III identifies AI deployed for employment, workers' management and access to self-employment as high-risk AI under the following condition:

(a) AI systems intended to be used for the recruitment or selection of natural persons, in particular to place targeted job advertisements, to analyse and filter job applications, and to evaluate candidates;
(b) AI systems intended to be used to make decisions affecting terms of work-related relationships, the promotion or termination of work-related contractual relationships, to allocate tasks based on individual behaviour or personal traits or characteristics or to monitor and evaluate the performance and behaviour of persons in such relationships.

In light of this regulation, the artificial intelligent humanoid robot CEO can thus be considered as high-risk AI system if it makes decisions relating to the above conditions. The Regulation provides that such AI system should be made in a manner that ensures transparency and the provision of information to the deployers. In this regard Article 13(1) & (2) provides that:

> High-risk AI systems shall be designed and developed in such a way as to ensure that their operation is sufficiently transparent to enable deployers to interpret a system's output and use it appropriately. An appropriate type and degree of transparency shall be ensured with a view to achieving compliance with the relevant obligations of the provider and deployer set out in Section 3.[70]
>
> High-risk AI systems shall be accompanied by instructions for use in an appropriate digital format or otherwise that include concise, complete, correct and clear information that is relevant, accessible and comprehensible to deployers.

With regard to penalties for non-compliance, Article 99(1) provides that "Member States shall lay down the rules on penalties and other enforcement measures, which may also include warnings and non-monetary measures,

[70] Article 13(3) provides for the content of instructions for the use and operation of the high risk AI.

applicable to infringements of this Regulation by operators", and they "shall take all measures necessary to ensure that [the penalties] are properly and effectively implemented…".[71] The European Union formally kicked off enforcement of the artificial intelligence law in February 2025, thereby opening the avenue for tough restrictions and potential heavy fines for violations.[72] This is indeed a step in the right direction.

7. Conclusion

Following the European Union Regulation of Artificial intelligence, it can be deduced that AI is expected to serve as a complement to human natural intelligence. We must ensure that we regulate AI properly and this is in agreement with the words of Bajema[73] who wisely advised that "[i]t's time to put on our battle armor, wield our swords, and address the risks of AI head-on with creative determination, let's do what humans do best, to imagine the future we want for ourselves and put the pieces in place to achieve it." Bajema further notes that "the beast is not quite as powerful as we imagined" and upon overcoming "the data monster, then we can certainly triumph over the worst of the automation and super-machine monsters".[74]

The path towards global regulatory framework for AI systems has already been charted with the birth of the European Union Artificial Intelligence Regulation. What is expected from the United Nations General Assembly is to develop its global regulation of AI following the footsteps of the European Union. Now is the time to follow in the footsteps of the European Union by making a global regulatory framework for the manufacture, use, and operation of artificial intelligent humanoid robots who believe that they can be better than humans in governance. When this is done, we can then be well-equipped to curtail the excesses that the artificially intelligent humanoid robot CEO may display. ■

[71] Article 96 provides for guidelines on the practical implementation of the Regulation.
[72] Ryan Browne, 'EU kicks off landmark AI law enforcement as first batch of restrictions enter into force' CNBC February 3 2025. https://www.cnbc.com/2025/02/03/eu-kicks-off-landmark-ai-act-enforcement-as-first-restrictions-apply.html accessed 13 February 2025.
[73] Natasha E. Bajema (2019). 'Beware the Jabberwocky' *Air University Press* 198.
[74] Ibid.

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