



Prospective Position of Humanoid Robots as Subjects of Criminal Law in Indonesia

Renfred Valdemar^{1*}, Mompang. L. Panggabean², Richard. M. Nainggolan³

¹Master of Law, Faculty of Law, Universitas Kristen Indonesia, Jakarta, Indonesia.

E-mail: renfred.valdemar@gmail.com

²Master of Law, Faculty of Law, Universitas Kristen Indonesia, Jakarta, Indonesia.

E-mail: mompang.panggabean@uki.ac.id

³Master of Law, Faculty of Law, Universitas Kristen Indonesia, Jakarta, Indonesia.

E-mail: richardmn88@gmail.com

Corresponding Author: renfred.valdemar@gmail.com

Article Info

Article history:

Received 12 Feb, 2026

Revised 29 Mar, 2026

Accepted 20 Apr, 2026

Keywords:

Humanoid Robots; Legal Subjects; Legal Responsibility; Indonesian Criminal Law

ABSTRACT

The advancement of Artificial Intelligence (AI) technology in the form of humanoid robots (human-like robots) has led to numerous incidents and violations of criminal law, often caused by the actions of the humanoid robots themselves. This has given rise to debate among experts as to who is responsible for these violations. Indonesian Criminal Law stipulates that the subjects of criminal law are humans and legal entities. Meanwhile, the position of AI robots within the Indonesian legal framework (UU ITE) is as an 'electronic agent' which is an electronic system device controlled by an individual or institution/corporation. If examined more closely, technically, humanoid robots have almost the same capabilities as humans to think and move independently (autonomous) without being driven or by anyone. The concept of criminal law stipulates that to determine a crime must look at the element of the perpetrator's mental condition (*mens rea*). If a criminal offense is committed by a humanoid robot that does not have a natural mental condition, can it be categorized as a crime and who should be held responsible? Because there is no consensus yet on whether the subject of criminal law is appropriate to be assigned to humanoid robots, this study will discuss briefly and concisely the prospective position of humanoid robots as subjects of criminal law in Indonesia.

INTRODUCTION

The shift in world civilization, accompanied by a paradigm shift, has driven humans to create environmental engineering to meet the needs of life. Humans design technology with the aim of making all tasks easier. In today's digital era, technology has developed rapidly and significantly in almost every aspect of human life. The results of this technological development have produced various products, both simple and complex, and one of them is artificial intelligence, also known as Artificial Intelligence (AI). After going through various stages of updating, AI has now created Artificial Super Intelligence (ASI) products in the form of humanoid robots with extraordinary abilities and intelligence to replace human work.

In general, AI has many functions, including facilitating every human task, from natural language processing to movement, reasoning, and object manipulation. Furthermore, AI is expected to possess intelligence equal to, or even surpass, that of humans. With AI, humans will assume the role of government (someone with command or control). Robots will then function as devices to perform manual labor. These intelligent robots will possess knowledge beyond that of humans, as humans will only need to state or input data, and the system will automatically process it. The presence of AI robots in the current era has generated various pros and cons across all levels of society. In general, AI itself is very helpful for human work due to the ease of access it offers. However, on the other hand, various questions arise regarding how AI robots are held accountable for their actions.

Currently, in several developed countries, humanoid robots have been utilized by local government authorities to fill law enforcement roles such as police, judges, prosecutors, and lawyers. Humanoid robots are also used in various fields in Indonesia, particularly by government agencies such as the Indonesian National Police

(POLRI) in maintaining security and law and order. The position of these humanoid robots directly creates a legal relationship between them and humans. However, to date, discussions on AI-based humanoid robots and their impact on law in Indonesia have not progressed much. It is also clear that Indonesia does not have specific legal regulations addressing the existence of these intelligent robots, especially in criminal law. If drawn from a legal conceptual perspective, there is a possibility that AI can be viewed and recognized as a new type of legal subject. This raises the question: can humanoid robots be classified as legal subjects? And who is entitled to be held accountable for legal violations committed by humanoid robots?

The lack of discussion regarding regulations regarding the use of AI-based humanoid robots has raised public concerns about the potential for increased legal violations and crime in Indonesia. Although Indonesia has not yet fully embraced the use of robots, the trend is growing rapidly. Several countries in the Middle East, China, Japan, and Europe have recognized humanoid robots as legal subjects. So far, Indonesian criminal law, according to the National Criminal Code (Law No. 1 of 2023), does not yet regulate robots as legal subjects. We only recognize individuals (Natuurlijke Person) and legal entities (Recht Persoon) as subjects of criminal law. Several regulations that are vaguely related to robots include:

Law No. 11 of 2008 concerning Electronic Information and Transactions (ITE Law) in conjunction with Law No. 19 of 2016 in conjunction with Law No. 1 of 2024;

Law No. 11 of 2019 concerning the National System of Science and Technology (Sisnas IPTEK Law);

Presidential Regulation No. 74 of 2019 concerning the National Research and Innovation Agency (BRIN Presidential Decree).

This law is categorized as a special legal provision, also known as "lex specialis derogate legi generali." Of the existing regulations, only Article 33 of the ITE Law addresses violations and crimes against robots. This article imposes liability on anyone who intentionally causes or operates an electronic system to malfunction. However, the substance of this article still has weaknesses in the use of the term "electronic system." The regulations do not yet focus on purely criminal acts by robots. For example, in the case of a robot losing control of its human operator, which then causes loss of life, bodily injury, health hazards, environmental damage, or harm to those around it. Another weakness concerns humanoid robots, which are almost 70% human-like in structure and thought. How can a humanoid robot act and think independently according to the AI embedded in its memory? Because if a crime occurs, the physical elements of the act (*actus reus*) and the malicious intent (*mens rea*) of the perpetrator must first be established. The criminal justice system also has several aspects, namely:

Personal accountability is personal.

Punishment is only given to the guilty person.

RESEARCH PROBLEM

Based on the background outlined above, the research questions are formulated as follows:

What is the prospective position of humanoid robots as legal subjects in the reform of criminal law in Indonesia? Who is responsible for violations of the law by humanoid robots as *ius constituendum*?

RESEARCH METHOD

This legal research employs a mixed approach, namely normative juridical research and empirical research. This research will empirically integrate legislation, legal theory, expert opinions, and legal perspectives within society. The research approaches employed are a comparative approach and a conceptual approach. The comparative approach compares the laws of one country with those of another country. The conceptual approach, on the other hand, provides an analytical perspective on resolving legal problems from the perspective of the underlying legal concepts, or even from the values contained in the norms of a regulation related to the concepts used.

DISCUSSION

The Position of Humanoid Robots as Legal Subjects in Criminal Law Reform in Indonesia

Artificial intelligence, or better known as Artificial Intelligence (AI), has the ability to perform one or many tasks that rely on and require intelligence similar to that of humans. Artificial Intelligence (AI) is a technology that can be used by humans as a tool to support their activities. Functionally, AI has more or less the same function as robots, however, AI comes in a different form, namely a computer system displayed visually. Therefore, it can be said that Artificial Intelligence is the brain of a robot. With human input and knowledge, AI is able to acquire knowledge through simulations of reasoning processes and human-like thinking to solve various problems that arise in human life itself. Although AI has limitations, its existence is increasingly needed and its technology is developing rapidly. Artificial Intelligence is very capable of obtaining what is needed. Through human commands, AI can acquire knowledge and by simulating the reasoning process, artificial intelligence can use knowledge and think like humans to solve existing problems. Even though AI cannot conduct research, provide experience, and have a conscience like humans, through the efforts made by humans, AI can acquire the knowledge they need.

Currently, AI visualizations are created in the form of humanoid robots that resemble the anatomy of the human body. Most types of AI can be understood by examining two categories: Artificial Intelligence (AI)

capabilities and Artificial Intelligence (AI) functions. Types of Artificial Intelligence (AI) are divided into three based on their capabilities:

Artificial Narrow Intelligence (ANI), a narrow intelligence system designed and developed to perform specific tasks and unable to operate outside of its intended scope.

Artificial General Intelligence (AGI), a theoretical system whose intelligence is made equivalent to human intelligence, thus capable of replacing human intellectual tasks.

Artificial Super Intelligence (ASI), a purely theoretical system that will possess advanced cognitive skills and reasoning abilities beyond human capabilities.

From this explanation, it can be interpreted that the presence of Artificial Intelligence-based humanoid robots that have been designed in such a way has the aim of being able to do the same or more things than humans can do so that these humanoid robots can function as a means of assisting and replacing humans in doing small things or big things. As humanoid robots become increasingly integrated into human life, a topic of discussion arises regarding their status as legal subjects. Regulations in several countries, such as Saudi Arabia, Japan, and Poland, recognize humanoid robots as legal subjects, possessing the rights and obligations to perform human tasks. Saudi Arabia has a humanoid robot named "Sophia," officially granted citizenship and a Saudi Arabian passport. Similarly, in Japan, humanoid robots can become family members, officially registered on family cards and possessing identification. A recent breakthrough was the appointment of a Polish beverage company, a humanoid robot named "Mika," as a director. Indonesia itself has not yet clearly regulated the legal status of AI-based humanoid robots. This creates a legal vacuum and could lead to future problems. Over time, humanoid robots will replace human tasks and functions, whether in business, education, government, or security. This situation will ultimately give rise to numerous legal issues, particularly those directly related to criminal law.

Theoretically, legal subjects can make a legal act or legal act and the legal subjects contained in Indonesian positive law are humans (natuurlijke person) and legal entities (recht person). According to L.J. Van Apeldoorn that "To be able to carry out legal acts, certain conditions are required, namely legal subjects who have the ability to hold rights". According to L.J. Van Apeldoorn "The ability to hold the rights concerned must be distinguished from their ability to carry out legal acts as against minors and people under guardianship are called legal subjects because these people have rights. However, from a legal perspective, these people are declared incompetent to carry out legal acts." In this case, what determines whether or not a legal subject is eligible is the law. Based on this explanation, it can be understood that something that can be declared a legal subject or not is determined by applicable laws. Like humanoid robots based on artificial intelligence or AI, if artificial intelligence is like other legal subjects, then rights and obligations must be regulated by legal norms. Humanoid robots cannot be equated with humans as a whole because artificial intelligence does not have the nature of the soul and conscience like humans. In criminal law, if a criminal act occurs, the mens rea or mental condition of a person as the perpetrator of the crime will first be seen. This is not entirely owned by humanoid robots that act automatically due to AI-based programming or artificial intelligence. However, many also argue that humanoid robots can be equated with legal entities as an "electronic entity", because their existence was created by a person or group of people. There are many differences of opinion regarding the placement of artificial intelligence-based humanoid robots as legal subjects that are equated with legal entities. There is an opinion that artificial intelligence cannot be equated with legal entities to become legal subjects, where a legal entity has clear and firm intentions and objectives in its establishment and there is a human scope, and artificial intelligence cannot stand alone, as it is known that computers are regulated and programmed by humans and if computers or artificial intelligence make decisions that can be equated with humans, then perfection in decisions cannot be ensured if there is no human supremacy in decision-making, because computers are not always free from system errors.

A legal entity is an association of people conducting a business activity with capital. A legal entity is a non-human entity that supports rights and obligations based on law. As a legal subject, a legal entity has the ability to carry out legal actions or legal acts. A legal entity also has legal rights and obligations regulated by law. AI-based humanoid robots are considered more appropriately equated with a legal entity as a legal subject, rather than a human as a natural legal subject. Because humanoid robots are created by humans and can be produced by a legal entity, their existence can become a new entity. As previously explained, humanoid robots possess artificial intelligence capabilities to carry out legal acts, making them capable of acting as bearers of rights and obligations. The legal status of humanoid robots as legal subjects indeed requires in-depth study. Although they appear to have the same existence as a legal entity, their accountability for legal acts carried out by humanoid robots is unclear and requires legal certainty.

Based on a search of Indonesian positive law, there are no provisions explicitly regulating Artificial Intelligence (AI) as a subject of criminal law. The National Criminal Code (Law No. 1 of 2023) maintains the classic construction that subjects of criminal law are individuals and corporations. In the context of technology-based crimes, relevant provisions can be found in:

the Electronic Information and Transactions Law (ITE Law);

the Personal Data Protection Law (PDP Law);

Provisions regarding corporate criminal liability in the National Criminal Code.

However, these norms still focus on human actors or legal entities, not autonomous systems capable of

independent decision-making. Thus, a normative gap exists when AI produces actions that meet the elements of a crime without direct human involvement at the time of the act. Therefore, it can be concluded that AI, as an autonomous computing system, does not have legal standing as a subject of criminal law in Indonesia.

Criminal Liability for Legal Violations by Humanoid Robots

Regarding the criminal liability of humanoid robots when they violate criminal law, it is necessary to discuss criminal liability first. The concept of criminal liability actually does not only concern legal issues, but also concerns the issue of moral values or general decency adopted by an organization, community or group in society, this is done so that criminal liability is achieved by fulfilling justice. Criminal liability is a form of determining whether a suspect or defendant is held accountable for a crime that occurs. In other words, criminal liability is what determines whether a person is punished or not. According to Chairul Huda, the basis of a criminal act is the principle of legality, while the perpetrator can be punished on the basis of error, this means that a person will have criminal responsibility if he has committed an act that is wrong and contrary to the law. In essence, criminal liability is a form of mechanism created to react to violations of a certain act that has been committed as agreed. Error is the main element in criminal liability. In the sense that a criminal act does not include the issue of criminal responsibility, a criminal act only refers to whether the act is against the law or prohibited by law, regarding whether a person who commits a crime is then punished depends on whether the person who committed the crime is at fault or not.

Criminal liability in the legal system is always associated with *mens rea* (mental state). Criminal liability is related to society, namely the relationship of responsibility with society as a function, accountability here has the function of imposing penalties, so that accountability here has a social control function to prevent crime in society. In addition, criminal liability in the common law system is related to *mens rea*, that criminal liability is based on the state of mind as a faulty mind. Guilty mind is understood as a subjective error, namely a person is declared guilty because the perpetrator is considered to have a faulty mind, so that person must be responsible. There is criminal liability imposed on the perpetrator, therefore the perpetrator of the crime must be punished. The absence of a faulty mind means there is no criminal liability and results in the perpetrator not being punished. Considering the principle of liability in criminal law, namely (*geen straf zonder schuld; actus non facit reum nisi mens sit rea*) a crime is not valid if there is no fault. It should be noted that the subject of criminal law in Indonesia is a person and in accordance with the expansion of the subject of criminal law, legal entities (corporations) can be subjects of criminal law in Indonesia. Regulations regarding artificial intelligence in Indonesia have not been specifically regulated and established, therefore interpretation is needed to determine whether artificial intelligence is a legal subject or not in Indonesia.

Based on the theory of criminal responsibility, it is clear that criminal responsibility is always linked to a person's *mens rea*. As previously mentioned, *mens rea* is unique to humans. A person can be punished if they have a guilty mind, and conversely, a person is not punished if they do not have a guilty mind. When linked to criminal responsibility for crimes committed by artificial intelligence, it can be concluded that artificial intelligence does not possess *mens rea* like humans. The thinking ability possessed by artificial intelligence is actually the result of human thought packaged in a computer system run by an algorithm. When artificial intelligence commits a crime, it does not understand the meaning of the consequences of its actions and cannot determine its own will to carry out an action, and artificial intelligence does not possess consciousness in carrying out legal actions. Regarding consciousness, humans as absolute legal subjects in criminal law are not always free from negligence in their actions, whereas artificial intelligence is a set of tools created by humans with the help of technology, so consciousness is not present in artificial intelligence.

Therefore, from several conceptual frameworks of responsibility, artificial intelligence does not have the ability to be a legal subject that can be held responsible in criminal law. An entity can be positioned as a subject of criminal law if it meets the elements of capacity to be responsible. Classical doctrine asserts that criminal responsibility requires inherent fault (*schuld*) on the part of the perpetrator. However, AI as artificial intelligence, does not meet this criterion because:

- It lacks moral consciousness;
- It lacks free will;
- It lacks the natural ability to understand norms;
- It cannot experience suffering as a consequence of criminal conduct.

The idea of granting AI-based humanoid robots the status of electronic entity or "electronic personhood" remains conceptually problematic. Criminalizing AI has neither preventive nor retributive significance because AI is not a moral agent. Furthermore, recognizing AI as a subject of criminal law has the potential to obscure human responsibility as the creator and controller of the system. Thus, the analysis shows that AI cannot be positioned as a subject of criminal law in the Indonesian criminal law system, which is still based on the principle of human culpability. Because humanoid robots cannot be punished, responsibility must be traced to the humans or corporations involved in the AI ecosystem. Based on theoretical studies and normative analysis, several attribution models can be applied, namely:

Direct Liability

Direct liability can be imposed on:

The developer or programmer, if the system is intentionally designed to commit an unlawful act;

The system operator, if there is negligence in supervision;

The user, if the humanoid robot is used as an instrument of crime.

This model is relevant when there is an element of intent (*dolus*) or negligence (*culpa*) that can be concretely proven. Regarding criminal liability for artificial intelligence that commits a crime, if the artificial intelligence commits a crime, responsibility can be shifted to the creator or user of the humanoid robot. This is because to be held criminally responsible, the perpetrator must know and intend the act and its consequences. Humanoid robots, on the other hand, lack will or awareness of their actions. The actions taken by artificial intelligence are limited to carrying out instructions from a user who possesses the awareness and will to achieve the purpose of using the artificial intelligence. Therefore, if a humanoid robot commits a crime, the individual who can be held criminally responsible is its creator or user.

Vicarious Liability

This model can be applied when humanoid robots operate within a specific employment relationship or organizational structure. Corporations or employers can be held accountable for the actions of AI robot systems used in business activities. In this context, humanoid robots are viewed as "tools" (instrumentality) like other machines or technological devices.

Corporate Criminal Liability

In modern practice, the development and use of AI are generally carried out by technology corporations. Therefore, the corporate criminal liability approach is the most relevant model. Corporations can be held liable if:

AI robots are used in business activities;

The crime occurs within the scope of the corporation's interests;

There is a failure of the supervisory system (lack of due diligence);

The organizational culture encourages violations.

This approach aligns with developments in modern criminal law, which recognizes corporations as subjects of criminal law.

Strict Liability on High-Risk AI

In certain high-risk sectors, such as autonomous vehicles or AI-based healthcare systems, a strict liability approach may be considered. In this model, proving fault is not a primary requirement; instead, proof of the act and its harmful consequences is sufficient. This approach aims to provide maximum protection to the public while encouraging a high standard of care for AI developers.

CONCLUSION

The development of Artificial Intelligence (AI)-based humanoid robots has presented conceptual and normative challenges to the classical construction of criminal liability. AI systems in robots that have a high degree of autonomy are capable of performing actions that fulfill the elements of a criminal act, but at the same time lack the moral capacity, free will, or ability to take responsibility as required by criminal law doctrine. Therefore, based on the principle of "geen straf zonder schuld," humanoid robots cannot be positioned as subjects of criminal law in the Indonesian legal system. This study found that Indonesian positive law does not specifically regulate criminal liability in the context of AI-based crimes. Although provisions in the Criminal Code, the ITE Law, and the Personal Data Protection Law can be used to cover acts committed through digital systems, their normative constructions are still oriented towards human or corporate actors. This condition indicates a normative gap when humanoid robots operate autonomously and produce criminal consequences without direct human involvement at the time of the act. Theoretically and normatively, the most rational model of accountability in AI-based crimes still relies on humans and/or corporations as legal subjects. Attribution of responsibility can be made through: (1) direct liability against programmers, operators, or users that have elements of intent or negligence; (2) vicarious liability in employment or control relationships; and (3) corporate criminal liability against corporations that develop or operate AI systems within the scope of their business activities. In certain high-risk sectors, a strict liability approach can be considered to guarantee the protection of the public interest and encourage higher standards of prudence. Therefore, the reconstruction of criminal law policy is necessary with an emphasis on strengthening individual and corporate accountability, implementing due diligence obligations for AI developers and operators, and integrating penal and non-penal approaches in the supervision of autonomous technology. This reformulation is important to ensure that the development of AI technology does not create space for impunity, while maintaining consistency with the basic principles of criminal law based on culpability and justice.

REFERENCES

Book Literature

- Dudu Duswara Machmudin., "Pengantar Ilmu Hukum", (Bandung: Refika Aditama, 2003).
- I Gusti Kade Budhi H, "Hukum Pidana Progresif Konsep dan Penerapan Dalam Perkara Pidana", (Depok : Rajawali Pers, 2021).
- Lilik Mulyadi, "Menggagas Model Ideal Dalam Sistem Hukum Pidana Indonesia", (Jakarta : Kencana, 2022).
- P.A.F. Lamintang dan Theo Lamintang, "Delik-Delik Khusus Kejahatan Terhadap Nyawa, Tubuh, & Kesehatan", (Jakarta : Sinar Grafika, 2020).
- Peter Mahmud Marzuki, "Pengantar Ilmu Hukum", (Jakarta: Kencana Prenada Media, 2008).
- R. Otje Salman, "Beberapa Aspek Sosiologi Hukum", (Bandung, 2000).
- Shely Cathrin, "Teknologi dan Masa Depan Otonomi Manusia: Sebuah Kajian Filsafat Manusia, Jurnal Foundasia", Vol. 10, No. 1 (2020).
- Hanafi Amrani and Mahrus Ali, Sistem Pertanggungjawaban Pidana, (Surabaya: Rajawali Pers, 2015).
- Chairul Huda, Dari Tiada Pidana Tanpa Kesalahan Menuju Kepada Tiada Pertanggungjawaban Pidana Tanpa Kesalahan (Jakarta: Kencana Prenada Media Group, 2013).

Journal

- Febri Jaya dan Wilton Goh, "Analisis Yuridis Terhadap Kedudukan Kecerdasan Buatan Atau Artificial Intelligence Sebagai Subjek Hukum Pada Hukum Positif Indonesia", Jurnal Supremasi Hukum, Edisi Vol. 17 No. 02, Juli 2021.
- Ririen Kusumawati, "Kecerdasan Buatan Manusia (Artificial Intelligence): Teknologi Impian Masa Depan", Jurnal Ulul Albab: Jurnal Studi Islam, Edisi Vol. 9, No. 2, 2008.
- Donovan Typhano Rachmadie dan Supanto, "Regulasi Penyimpangan Artificial Intelligence pada Tindak Pidana Malware Berdasarkan Undang-Undang Republik Indonesia Nomor 19 Tahun 2016", Recidive, Vol. 9, No. 2 (2020).
- Hari Sutra Disemadi, "Urgensi Regulasi Khusus dan Pemanfaatan Artificial Intelligence dalam Mewujudkan Perlindungan Data Pribadi di Indonesia", Jurnal Wawasan Yuridika, Vol. 5, No. 2 (2021).
- F.L. Yudhi Priyo Amoro dan Khusuf Komarhana, "Prospek Kecerdasan Buatan Sebagai Subjek Hukum Perdata di Indonesia", Law Review, Vol. 21, No. 2 (2021).
- Muhammad Tan A. R. H & Tantimin, T, "Analisis Pertanggungjawaban Hukum Pidana Terhadap Pemanfaatan Artificial Intelligence di Indonesia", Jurnal Komunikasi Hukum (JKH), Vol.8, No.1 (2022).

Link Internet

- <https://ekonomi.republika.co.id/berita/pxzaho284/tren-penggunaan-teknologi-robot-di-industri-indonesia-naik>, diakses pada 12 Maret 2026.
- <https://www.detik.com/jogja/berita/d-7265905/brimob-polda-diy-kerahkan-robot-cek-31-gereja-jelang-misa-paskah>, diakses pada 12 Maret 2026.
- <https://www.ibm.com/think/topics/artificial-intelligence-types>, (Data IBM dan Tim AI, Understanding the Different Types of Artificial Intelligence) Diakses tanggal 16 Maret 2026.
- <https://internasional.republika.co.id/berita/oyl5cv366/saudi-negara-pertama-yang-beri-robot-kewarganegaraan>, diakses pada 17 Maret 2026.
- <https://www.detik.com/sulsel/berita/d-6548271/makin-canggih-robot-di-jepang-bisa-jadi-anggota-keluarga>, diakses pada 17 Maret 2026.
- <https://www.detik.com/jabar/berita/d-6933757/pertama-di-dunia-robot-ai-jadi-bos-perusahaan>, diakses pada 17 Maret 2026.