Prospects of Artificial Intelligence Criminal Liability Regulations in Indonesian Criminal Law

Gregorius Widiartana[1] Vincentius Patria Setyawan[2]
Fakultas Hukum, Universitas Atma Jaya Yogyakarta, Kabupaten Sleman, Provinsi Daerah Istimewa Yogyakarta, Indonesia[1,2]
Email: g.widiartana@uajy.ac.id[1] vincentius.patria@uajy.ac.id[2]

Abstrak
Kecerdasan buatan adalah hasil dari perkembangan teknologi yang demikian pesat di era revolusi industri 4.0. Kehadiran kecerdasan buatan memberikan banyak manfaat dan memudahkan pekerjaan manusia sehingga lebih efektif dan efisien. Selain dampak positif dari kecerdasan buatan, ternyata terdapat potensi permasalahan dari kehadiran kecerdasan buatan yakni jika kecerdasan buatan melakukan tindak pidana dan menimbulkan korban. Hukum positif Indonesia belum mengatur mengenai pengaturan pertanggungjawaban perbuatan yang dilakukan oleh kecerdasan buatan ketika melakukan tindak pidana. Artikel ini bertujuan untuk mengetahui prospek pengaturan pertanggungjawaban pidana terhadap perbuatan yang dilakukan oleh kecerdasan buatan. Metode yang digunakan dalam penulisan artikel ini adalah metode penelitian hukum normatif dengan pendekatan konseptual. Hasil dari penelitian ini adalah kecerdasan buatan bukanlah subjek hukum dalam hukum pidana, dan pertanggungjawaban pidana terhadap tindak pidana yang dilakukan oleh kecerdasan buatan dibebankan kepada pembuat kecerdasan buatan, dan pengguna kecerdasan buatan.
Kata Kunci: kecerdasan buatan; pertanggungjawaban pidana; subjek hukum.

Abstract
Artificial intelligence is the result of such rapid technological developments in the era of the industrial revolution 4.0. The presence of artificial intelligence provides many benefits and facilitates human work so that it is more effective and efficient. Apart from the positive impact of artificial intelligence, it turns out that there are potential problems with the presence of artificial intelligence, namely if artificial intelligence commits crimes and causes victims. Indonesia's positive law does not yet regulate the regulation of accountability for actions committed by artificial intelligence when committing a crime. This article aims to find out the prospects for setting criminal liability for acts committed by artificial intelligence. The method used in writing this article is a normative legal research method with a conceptual approach. The results of this study are that artificial intelligence is not a legal subject in criminal law, and criminal responsibility for crimes committed by artificial intelligence is borne by artificial intelligence makers and artificial intelligence users.
Keywords: artificial intelligence; criminal liability; legal subject.

INTRODUCTION

Technological developments and advances that are rolling so fast in this century have had positive and negative impacts on human life.[1] Technology plays a very important role in facilitating human work so that if a job is a difficulty if it is done by humans, then one of the roles of technology is to provide convenience for this.[2] The positive impact that can be felt

---

[1] Paulus Wisnu Yudoprakoso, *Kecerdasan Buatan sebagai Alat Bantu Proses Penyusunan Undang-Undang dalam Upaya Menghadapi Revolusi Industri 4.0 di Indonesia*, Jurnal Hukum Simbur Cahaya, Vol. 25, No.2, 2018, p. 136.
[2] Hari Sutra Disemadi, *Urgensi Regulasi Khusus dan Pemanfaatan Artificial Intelligence dalam Mewujudkan Perlindungan Data Pribadi di Indonesia*, Jurnal Hukum Wawasan Yuridika, Vol. 5, No. 2, September 2021, p. 178.

from the rapid development of technology is being able to support humans in doing very complex work, which can be done by artificial intelligence.

Discuss related to artificial intelligence as an outcome of technology and or systems created by humans which can imitate human activities and have a frame of mind like humans in carrying out a job.[3] The stages of development of artificial intelligence to date have reached 3 (three) stages, namely narrow artificial intelligence which is still weak in intelligence level, further developed into artificial general intelligence which is equivalent to human capabilities, and most recently artificial super intelligence which has exceeded human intelligence.

The stages of development of artificial intelligence that have occurred to date are still weak in artificial intelligence. This can be seen in the use of artificial intelligence in the world of transportation, namely the features embedded in cars that can run without a driver or what is known as the autopilot feature. In addition, the use of artificial intelligence can also be seen in the ability to replace human tasks in translating writing in various languages, which can be done with Google Translate, which is able to translate languages faster than human language skills.[4] The presence of artificial intelligence in human life in the modern world is not only limited to providing convenience in one field of work, more than that the existence of artificial intelligence is able to change human behavior and habits, and even the use of artificial intelligence has become a lifestyle for modern humans.[5]

The development of the use of artificial intelligence has also penetrated into various aspects of human activity, and also touched the realm of law enforcement. One example is what happened in China, which since 2017 has taken advantage of the development of artificial intelligence technology as a judge in electronic trials. However, in its implementation, this is still very limited and is still in the process of further development.[6] The use of artificial intelligence in the legal sphere has also been implemented in Indonesia through the Legal Intelligence Assistant (LIA) platform owned by Hukumonline. The platform owned by Hukumonline is designed with the aim of assisting the public in providing information related to the world of law enforcement in dealing with various legal problems.[7] Apart from that, in Indonesia the use of artificial intelligence has also been implemented in making contracts that are drawn up electronically.[8]

The existence of artificial intelligence as a result of technological development cannot be separated from the existence of legal regulations that apply in the form of positive law in a country. Observing technological developments and advances manifested in artificial intelligence that can carry out human work, of course, has the potential to cause various legal issues related to the actions they commit. Artificial intelligence as man-made coupled with technological capabilities has limited ability to perform actions, especially actions that are

---

[3] Naiman Fahrudin, *Penerapan Metode Finite State Machine Pada Game Adventure "Franco",* Jurnal Jati (Jurnal Mahasiswa Informatika), Vol. 2, No. 1, Maret 2018, p. 447.

[4] Surden, *Artificial intelligence and law: Anoverview*, Georgia State University Law Review, Vol. 35, No. 4, p. 1307.

[5] Endang Irawan Supriyadi dan Dianing Banyu Asih, *Implementasi Artificial Intelligence di Bidang Administrasi Publik pada Era Revolusi Industri 4.0*, Jurnal Sosial dan Humaniora: RASI, Vol. 2, No. 2, Oktober 2020, p. 12.

[6] Eka N.A.M. Sihombing, and Muhammad Yusrizal Adi Syaputra, *The Implementation of Artificial Intelligence Usage in Local Legislation Forming*, Jurnal Ilmiah Kebijakan Hukum, Vol. 14, No. 3, November 2020, p. 420.

[7] *Ibid*, p. 421.

[8] Aditya Kurniawijaya, Alya Yudityastri, and Ayuta Puspa Citra Zuama, Pendayagunaan *Artificial Intelligence dalam Perancangan Kontrak serta Dampaknya bagi Sektor Hukum di Indonesia*, Khatulistiwa Law Review, Vol. 2, No. 1, April 2021, p. 262-263.

legal actions.[9]

Indonesia does not yet have regulations that specifically regulate artificial intelligence. Changes that arise as a result of technological developments that affect the world of law should have a normative and limiting legal basis in positive law legislation. If this is not done, it will potentially cause problems in the future when artificial intelligence commits actions which in fact are included in legal actions that violate the provisions of positive law. An example of this is when artificial intelligence commits criminal acts that violate the provisions of criminal law, causing victims to suffer material or immaterial losses. Seeing good practices from other countries, several countries have placed the position of artificial intelligence as a legal subject. Artificial intelligence as a legal subject certainly has consequences, namely that it is subject to rights and obligations that must be fulfilled. This of course also relates to criminal responsibility in the context of criminal law. The research outlined in this article intends to discuss criminal liability for artificial intelligence from a criminal law perspective.

RESEARCH METHOD

This article is written using a normative legal research method with a conceptual approach. The legal material used in writing this article is in the form of primary legal material and secondary legal material which is collected, studied and used to analyze related issues, namely criminal liability against artificial intelligence when committing criminal acts that cause harm to victims. The analysis technique used in writing this article is to use deductive analysis. The nature of the analysis used in writing this article is prescriptive analysis, namely providing guidelines on how to do or regulate according to the law that applies to the legal issues at hand.

DISCUSSION

Artificial intelligence as a result of technological developments and advances is etymologically unnatural intelligence or intelligence created by humans as a result of technology developed from human intelligence. Artificial intelligence made by humans, of course, has weaknesses in carrying out activities as carried out by humans. Artificial limitations in carrying out their duties replace the actions carried out by humans in their daily activities only based on codes created from technological advances in which there are orders to do something. Unlike the case with humans who perform actions by being governed by the mind naturally.

The purpose of creating artificial intelligence is to support human activities so that they become easier, that is, they become more effective and efficient. Artificial intelligence is designed with the ability to think like a human mind, and thus it can make a decision to act like a human so that it can complete human work in their daily activities.[10] Artificial intelligence can be interpreted as an equipment or tool to support the work of humans who have the ability to think and reason like humans. The work process of artificial intelligence is based on human orders. Artificial intelligence is a technological product created by humans which in certain respects has advantages in terms of work ability compared to humans. The advantage of the artificial intelligence work process is seen from the speed and accuracy of work. The artificial intelligence that is currently being developed does not rule out the possibility that in the future it will have capabilities that exceed those of the humans who

---

[9] Tom. C.W. Lin, *Artificial Intelligence, Finance, and The Law*, Fordham Law Review, Vol. 88, Issue 2, 2019, p. 533.
[10] Ririen Kusumawati, *Kecerdasan Buatan Manusia (Artificial Intelligence): Teknologi Impian Masa Depan*, Jurnal Ulil Albab, Vol. 9, No. 2, 2008, p. 258-259.

created them.

Based on technology that is embedded in artificial intelligence that can act like humans, of course, in this regard, legal regulations are needed in positive law which specifically regulate artificial intelligence. Until now, the State of Indonesia has regulations in the form of laws related to information and communication technology, namely Law Number 11 of 2008 concerning Information and Electronic Transactions as amended by Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions. The expectation from the issuance of this law is that this regulation will be able to accommodate and stem the rapid pace of information and communication technology development. However, in reality this is not the case with the presence of artificial intelligence in the midst of human life. The law has not specifically and limitedly provided regulations related to artificial intelligence. This has the potential to cause problems, namely when there are legal problems related to artificial intelligence, various interpretations of the law still appear. This condition, if left unchecked, will lead to legal uncertainty in society as a result of the legal vacuum in the field of artificial intelligence.

According to Indonesian positive law, artificial intelligence is interpreted as an electronic system. Based on this interpretation, we can find some compatibility when it comes to the characteristics of artificial intelligence. The work process of artificial intelligence is to collect data obtained from codes that have been embedded by humans to be processed and then it can work to do human work. In addition, artificial intelligence also works on human orders, where the automatic work system owned by artificial intelligence will not be able to work if there are no commands from humans to use or operate it.[11]

Artificial intelligence based on positive law in Indonesia, until now only serves as a legal object and has not been recognized as a legal subject. Artificial intelligence is considered as a product of information technology that is operationalized by humans, and cannot do their own work at will. According to Indonesian positive law, operators of artificial intelligence are referred to as electronic system administrators. Responsibility for actions carried out by artificial intelligence according to positive law lies in the hands of the electronic system operator, except in a *force majour* situation.

With regard to the position of legal subjects associated with artificial intelligence, this has certainly given rise to many debates with different opinions and perspectives regarding artificial intelligence's position in the legal actions it has committed. If the problem of artificial intelligence as a subject cannot be equated with a legal entity, according to Otto Von Gierke through the theory of organs, in fact a legal entity is the true reality of a natural nature and personality of humans in their legal association. Which of course a legal entity has rights and obligations and can act independently in every decision issued as a legal subject. Another opinion from L. J. Van Apeldoorn "to be able to carry out a legal action, the legal subject itself in this case must have the ability to hold the rights given to him" and the purpose of the ability to hold these rights is that the capacity is distinguished from that of minors in carrying out legal actions. and people under guardianship, in general these people can be given rights which can then be used in carrying out a legal action, but legally the person is not competent in carrying out his legal actions and this determines a legal subject.[12]

Artificial intelligence cannot be compared with legal entities in terms of its recognition

---

[11] Based on the provisions of Article 1 number 5 and Article 1 number 8 of the Electronic Information and Transaction Law

[12] Peter Mahmud Marzuki, 2008, *Pengantar Ilmu Hukum: Edisi Revisi*, Kencana (Prenada Media Group), Jakarta, p. 218.

as a legal subject. A legal entity has aims and objectives that are normatively and limitedly stated in its establishment and in which there are people who are legal subjects who have the capacity to be responsible. Meanwhile, artificial intelligence cannot act independently because artificial intelligence is not a group of people who create new legal subjects. Artificial intelligence is a computer programmed by humans that can only work on human commands. So that artificial intelligence in making decisions is based on human orders that operate it, at certain times this computer can also experience errors in its programming system.

In line with this, according to progressive law initiated by Satjipto Rahardjo that law is for humans. This phrase can be interpreted that the law must serve the interests of humans and not vice versa.[13] This is of course in line with the development of technology called artificial intelligence, which must serve humans. So that when a loss is suffered by humans, the law must be at the forefront to overcome it. With regard to criminal liability, criminal law in Indonesia provides limitations on the scope of criminal liability not only covering aspects of criminal law, but also covering aspects of morality and justice. Criminal responsibility in Indonesia refers to the dualism school, namely the understanding that separates criminal acts and their accountability. This flow, the rules regarding criminal acts are rules that are formed and enforced in a country where these rules aim to regulate actions that are prohibited in criminal law and other actions outside of these prohibited actions. Meanwhile, the concept of regulation of criminal liability is intended as a determinant of the suitability of a legal subject whether it is legal in imposing a sentence against him. Not all actions can be categorized as criminal acts, an act and an action that may be said to be a criminal act can be said to be so if it contains an unlawful nature in it, and the act contains an element of error which consists of intention (dolus) and also negligence (culpa).

According to Simons, a criminal responsibility is a psychological condition in such a way that based on a person's point of view, criminal efforts can be justified. Which in its meaning is that a person who commits a crime can be said to be capable of being responsible for a criminal act if he knows and realizes that the act is an unlawful act and is able to determine his will against himself against his self-awareness. In fact, the conditions for a person to have criminal responsibility are based on: the existence of a criminal act committed; there is an intentional error (dolus) and negligence (culpa); there is accountability from the perpetrator; and no excuses.[14]

An error is a form of accountability itself. Regarding intentionality, doctrinally, intentionality is something the will of the perpetrator in realizing the actions he has committed, that is can then be distinguished into intentional as intent, then intentionality with certainty and intentionality with possibility. According to Van Hamel, who argues regarding the limitations of an accountability namely related to the meaning of: able to understand the meaning and consequences of deeds done; being able to be aware of actions that are contradictory with public order; and being able to determine the will in doing deed. In the concept of criminal liability to legal subjects in this case it is charged to the perpetrator of the act, and the basis for the imposition punishment to the perpetrator for the act he committed must contain element against the law, then the perpetrator can be held criminally responsible for the act. However, criminal responsibility can lose its nature to the perpetrator if elements are found in the perpetrator that result in the loss of the ability to be responsible.

---

[13] Faisal, 2015, *Pemaknaan Hukum Progresif: Upaya Mendalami Pemikiran Satjipto Rahardjo*, Thafa Media, Yogyakarta, p.1.
[14] Info-Hukum.com, Teori Pertanggungjawaban Pidana, https://info-hukum.com/2019/04/20/teori-pertanggungjawaban-pidana/diakses pada 26 Maret 2023.

The concept of criminal responsibility in the use of artificial intelligence is to focus on whether intelligence assistance can be held accountable for the criminal acts it has committed. Basing on the principle of responsibility in criminal law, namely (Geen straf zonder schuld; Actus non facit reum nisi mens sir rea) is not criminal if there is no mistake. It should be noted that the subject of criminal law that applies in Indonesia is an individual (Naturalijk Persoon) and in accordance with the expansion of the subject of criminal law, legal entities (corporations) can become subjects of criminal law in Indonesia. Regulations regarding artificial intelligence in Indonesia have not been specifically regulated and formed, therefore interpretation is needed to determine whether artificial intelligence is a legal subject or not in Indonesia.

Based on the law on information and electronic transactions, artificial intelligence is included in electronic systems which in the process of work require instructions from humans. According to this law, the giver of the order is referred to as the administrator of the electronic system which can consist of several legal subjects in it. Based on this understanding, artificial intelligence is not a legal subject, and cannot be equated with a legal entity. Artificial intelligence cannot act independently or by itself without orders from humans who operate it. When artificial intelligence is incapable of acting, it is actually the humans who are incapable of operating it. When artificial intelligence experiences system errors, the humans who operate it are also responsible for the actions carried out by artificial intelligence.

According to Van Hamel, who provides an operational definition of responsibility associated with artificial intelligence, in this case artificial intelligence does not have intentional actions. Unlike the case with humans who have a will, who know and want an action, and the consequences that arise. In addition, artificial intelligence also has no awareness in carrying out a legal action, and only bases it on the operator's orders. Likewise with negligence, then the negligence of artificial intelligence is of course interpreted as the negligence of the humans who control it. Based on this, artificial intelligence cannot be used as a legal subject in criminal law and does not have criminal responsibility for the criminal acts it commits.

With regard to accountability in the use of artificial intelligence, in this case looking at it from the perspective of applicable criminal law, if artificial intelligence commits an act and/or acts against the law it can return to the concept of accountability in criminal law, namely those responsible are the creators and users of intelligence. self made. because according to Simons the perpetrators of criminal acts must be aware of and know and be able to determine the will for their actions, which in this case artificial intelligence does not have awareness in its actions but is based on orders and is limited in determining will according to the intent and purpose of the maker, and vice versa applies who have awareness of actions.

CONCLUSION

The development of artificial intelligence regulations in positive law in Indonesia requires more adequate regulations. Laws and regulations related to information technology in Indonesia are not sufficient to accommodate artificial intelligence as a product of technological progress. So far, artificial intelligence has been likened to an electronic system, which carries out activities based on orders from electronic organizers. So criminal responsibility for criminal acts committed by artificial intelligence lies in the hands of operators or users of artificial intelligence.

According to criminal law, artificial intelligence is not a legal subject. The concept of

criminal responsibility requires that legal subjects must have awareness and be able to will their actions, and as it is known that artificial intelligence does not have awareness of the actions it has committed and also artificial intelligence cannot wish for a possible criminal act it has committed, and in the perspective of criminal law related liability in the utilization of artificial intelligence, the creators and users of artificial intelligence can be held accountable for the actions committed by the artificial intelligence. Because humans are absolute legal subjects in criminal law who have awareness and an element of intent towards actions and deeds committed by artificial intelligence.

BIBLIOGRAPHY

Aditya Kurniawijaya, Alya Yudityastri, and Ayuta Puspa Citra Zuama, Pendayagunaan *Artificial Intelligence dalam Perancangan Kontrak serta Dampaknya bagi Sektor Hukum di Indonesia*, Khatulistiwa Law Review, Vol. 2, No. 1, April 2021.

Eka N.A.M. Sihombing, and Muhammad Yusrizal Adi Syaputra, *The Implementation of Artificial Intelligence Usage in Local Legislation Forming*, Jurnal Ilmiah Kebijakan Hukum, Vol. 14, No. 3, November 2020.

Endang Irawan Supriyadi dan Dianing Banyu Asih, *Implementasi Artificial Intelligence di Bidang Administrasi Publik pada Era Revolusi Industri 4.0*, Jurnal Sosial dan Humaniora: RASI, Vol. 2, No. 2, Oktober 2020.

Faisal, 2015, *Pemaknaan Hukum Progresif: Upaya Mendalami Pemikiran Satjipto Rahardjo*, Thafa Media, Yogyakarta.

Hari Sutra Disemadi, *Urgensi Regulasi Khusus dan Pemanfaatan Artificial Intelligence dalam Mewujudkan Perlindungan Data Pribadi di Indonesia*, Jurnal Hukum Wawasan Yuridika, Vol. 5, No. 2, September 2021.

Info-Hukum.com, Teori Pertanggungjawaban Pidana, https://info-hukum.com/2019/04/20/teori-pertanggungjawaban-pidana/diakses pada 26 Januari 2023.

Naiman Fahrudin*, Penerapan Metode Finite State Machine Pada Game Adventure "Franco"*, Jurnal Jati (Jurnal Mahasiswa Informatika), Vol. 2, No. 1, Maret 2018.

Paulus Wisnu Yudoprakoso, *Kecerdasan Buatan sebagai Alat Bantu Proses Penyusunan Undang-Undang dalam Upaya Menghadapi Revolusi Industri 4.0 di Indonesia*, Jurnal Hukum Simbur Cahaya, Vol. 25, No.2, 2018.

Peter Mahmud Marzuki, 2008, *Pengantar Ilmu Hukum: Edisi Revisi*, Kencana (Prenada Media Group), Jakarta.

Ririen Kusumawati, *Kecerdasan Buatan Manusia (Artificial Intelligence): Teknologi Impian Masa Depan*, Jurnal Ulil Albab, Vol. 9, No. 2, 2008.

Surden, *Artificial intelligence and law: Anoverview*, Georgia State University Law Review, Vol. 35, No. 4.

Tom. C.W. Lin, *Artificial Intelligence, Finance, and The Law*, Fordham Law Review, Vol. 88, Issue 2, 2019.