



Topic: Human Right Issues of Artificial Intelligence (AI) Gaps and Challenges, and Affected Future Legal Development in Various Countries

Legal Analysis Of Intellectual Property Rights In The Use Of Artificial Intelligence

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Abstract. *This research aims to identify and analyze the importance of legal protection regulations regarding intellectual property rights in the use of artificial intelligence (AI) in Indonesia, as well as the potential for AI as a legal subject in the Indonesian legal system. The research methodology used is normative research with a legislative and comparative approach. The research questions in this study are how the regulation of artificial intelligence in the use of copyright in Indonesia, and the potential for artificial intelligence as a legal subject in the Indonesian legal system. This research found that the Copyright Law in Indonesia does not recognize AI as a legal subject, so AI cannot be considered as a creator under the Indonesian Copyright Law. However, the potential to recognize AI as a new entity related to legal subjects other than humans and recognized legal entities is very open in Indonesia. This is because AI can be considered as a legal entity based on the theory of legal entities and the concept of Work Made For Hire in the US Copyright Law, which can be adopted by Indonesia to include AI as a new entity recognized in the context of legal subjects in Indonesia.*

Keywords: *Artificial Intelligence; Intellectual Property Rights; Legal Subjects.*



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1. Introduction

Technological change and its development are global changes that have a significant impact on a country. Likewise in Indonesia, technological developments have a major impact on people's lives. This development will fundamentally change society, both in terms of behavior, patterns of social relations, and working methods.

The increasingly massive technological developments in the current era have an impact on human life that is getting faster and easier. With the presence of very rapid technological developments, humans are increasingly easy to interact with each other, because the ease of interaction is supported by the existence of advanced technologies.

In addition to influencing social interaction, technological advancements also influence the way humans work, which initially used to do work manually, now it has changed to be completely automatic and digital. One of the things that makes

human work patterns change to automatic and digital patterns is the existence of

"Artificial intelligence, or commonly known as AI."¹

Poole and Mackworth define AI as a field that integrates and analyzes a computational agent that is run intelligently. Meanwhile, Andreas Kaplan and Michael Haenline define AI as the ability of a system to interpret external data, which is then studied and used to carry out tasks to achieve specific goals with a flexible adaptation pattern.²

Furthermore, John McCarthy, known as the father of AI, defines AI as the science and engineering of making intelligent machines. Another definition related to AI is expressed by Minsky, who defines AI as a field of science that studies how to make computers do things like humans do³. Based on these understandings of AI according to experts, it can be said that AI is an agent created by humans to be able to carry out a certain job or goal like ordinary humans.

¹ Shabrina Fadiyah Ghazmi, "Urgency of Artificial Intelligence Regulation in the Online Business Sector in Indonesia" Jurnal Hukum Lex Generalis 2, no.8 (2021): P 782–803.

² Daly, Angela, Thilo Hagendorff, Hui Li, Monique Mann, Vidushi Marda, Ben Wagner, and Wayne Wei Wang. "AI, Governance and Ethics: Global Perspectives." SSRN Electronic Journal (2020).P 123

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³ Amzad, H., and K. Vijayalakshmi. "Tourism Recommendation System: A Systematic Review." International Journal of Engineering Research & Technology (IJERT) 2010 P 67

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Regarding copyright, there are currently many works of creation or creations produced through AI technology. Before discussing works of creation produced through AI technology, it is necessary to first understand the basic concepts of intellectual property rights and copyright. According to McKeough and Stewart, intellectual property rights are a set of rights that can be legally used to protect the economic and moral rights of creative endeavors⁴. Meanwhile, according to Patricia Loughlan, copyright is a form of ownership that grants the exclusive right to control the use of a work of creation.⁵

Regarding works of creation or creations made using AI technology that can paint like Van Gogh, reported by CNN Indonesia news channel, AI lens is an application created by Prisma Labs that can be used to take selfies which are then processed using AI technology to create photos in various styles, both conventional and controversial⁶. The existence of applications that can create photos using AI technology has raised concerns from artists. Reported by Liputan6.com, several

artists expressed their concern about the existence of applications that create photos using AI technology. Some artists believe that the existence of this application has the potential to falsify or steal works of art.

Based on this, Surend Dayal, an AI expert from Australia, as reported by Tempo.com from ABC News, argues that artists cannot do much about copyright works produced through AI. At present, AI creations already exist, such as the AI lens. Regarding the development of AI, as summarized by Salwa Asshafa, there have been several AI achievements in recent years. In early 2021, the company DALL-E introduced AI technology that can turn text into images. Then, at the end of 2022, the Chinese company NetDragon Websoft made AI the CEO of the company. Then there is ChatGPT, which can create summaries, cover letters, find solutions related to mathematics, and even, in early 2023, the ChatGPT application was able to pass the university entrance exam in the United States. In addition to ChatGPT, there is also an American company called DoNotPlay that uses AI as a lawyer, which can help clients with traffic violations, and the last is helping Netflix Japan in creating animation works.⁶

Based on this explanation, we can see that the development of AI globally is very rapid and has entered almost all aspects of human life. This makes it very important to regulate the existence of AI based on applicable legal provisions, especially rules related to copyright.

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If viewed from the perspective of positive law in Indonesia, AI cannot be categorized as a legal subject, but AI can be categorized as a legal object in positive law in Indonesia. This was revealed in a study conducted by Febri Jaya and Wilton Goh in 2021. Then, Muhammad Tan Abdul Rahman Haris and Tantimin, based on research conducted in 2022, stated that when associated with the concept of criminal liability in Indonesia, AI cannot be classified as a legal subject either. This is because, based on the concept of liability, it is to have awareness and can will its actions, while AI as a program cannot will a criminal act that it might commit.⁷

Furthermore, based on research conducted by Muhammad RM Fayasy Failaq, it was found that by using ethical and sovereign considerations, only animals can be called legal subjects, while AI cannot be said to be a legal subject. This is because

AI is bound by its users as legal subjects, both individuals and legal entities.⁸ A legal subject, according to Said Sampera as quoted by Fence M.Wantu, states that a legal subject is anything that can be a holder of rights and obligations. Thus, it can be said that a legal subject is a holder of rights and obligations. Currently, a legal subject consists of humans (naturelijk person) and legal entities (recht person).⁹

Based on the explanation above, it can be understood that AI cannot be classified as a legal subject and cannot be held criminally liable. However, AI can be classified as a legal object. Then, it would be interesting if this is developed further through legal research in the form of a

⁴ Ibrahim, M. "Legal Protection of Moral Rights Against Songwriters at the Republic of Indonesia Radio Broadcasting Institution (RRI) in Ternate City." *de Jure Jurnal Ilmiah Ilmu Hukum* 3, no. 1 (2022): P 61–77.

⁵ Ariefzani, T. "Legal Protection Of The Creator Of Online SKCK Computer Programs Which Hasn't Be Registered Under Law Number 28 Year 2014." *Veteran Justice Journal* 1, no. 1 (2014): P 24–40

⁶ CNN Indonesia, (2022), Viral AI Lens 'Painting' Like Van Gogh and Anime, Potential Problems, Available from: <https://www.cnn.com>

⁷ Asshafa, Salwa. February 15, 2023 "AI Achievements So Far: Netflix's Help in Making Animations, to Becoming an Art Curator." *Akurat*. <https://www.akurat.co/infotech/1302404434/Pencapaian-AI- Sejahtah-Ini-Bantuan-Netflix-Bikin- Animasi-Hingga-Jadi-Kurator-Seni>. accessed on March 23, 2024

⁸ Haris, M. T. A. R., and T. Tantimin. "Analisis Pertanggungjawaban Hukum Pidana Terhadap Pemanfaatan Artificial Intelligence Di Indonesia." *Jurnal Komunikasi Hukum (JKH)* 8, no. 1 (2022): P 307–316. > Analysis of Criminal Law Liability for the Use of Artificial Intelligence in Indonesia

⁹ Failaq, M. R. F. Transplantation of Fiction Theory and Concession of Legal Entity to Animals and Artificial Intelligence as Legal Subjects: 1. Legal Subject: Rights and Obligations of Humans and Legal Entities. 2. The Anthropocentric Legal State of Indonesia 3. Transplantation of Fiction Theory and Legal Entity Concession Theory 4. Probability of Animals and Artificial Intelligence as Legal Subjects. *Jurnal Hukum dan HAM Wara Sains* 1, no. 02 (2022): P 113–125.



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law journal with the title: "Legal Analysis of Intellectual Property Rights Protection in the Utilization of Artificial Intelligence (AI)"

2. Research Methods

The issues raised in this study use a normative legal research method, which is a legal research method conceptualized and developed based on a doctrinal approach. The approach used in this legal research is a legislative approach (statute approach) and a comparative approach. This study aims to understand the urgency of regulating AI in the Copyright Law in Indonesia and the potential of AI as a legal subject in the legal system in Indonesia.

3. Results and Discussion

3.1. Legal System for the Regulation of Intellectual Property Rights (IPR) Protection in Indonesia

From a historical perspective, intellectual property rights originated with the invention of the printing press in 1476 in England by William Axton. This invention led to the development of the printing industry in England, and the use of printing presses by publishers to publish written works. This, in turn, led to competition between printing and publishing businesses. On the other hand, the printing press also threatened the position of the English King at the time, as many written works contained criticism of the king, the teachings of the church, and political views that did not align with the king's policies. Ultimately, in 1534, the English King established a rule prohibiting the publication of written works without permission from an official censorship body.¹⁰

Meanwhile, the history of copyright regulation in Indonesia began with the implementation of the Auteurswet 1912 with Staatsblad Number 600, which was applicable in Indonesia based on the provisions of Article 2 of the Transitional Provisions. As the Auteurswet was deemed inadequate in protecting copyrights, it led to changes in copyright regulations, starting with the enactment of Law Number 6 of 1982 (UUHC 1982), which was then amended to Law Number 7 of 1987 (UUHC

¹⁰ Triatmojo, F. A. I. Hamzani, and K. Rahayu. 2021 "Commercial Song Copyright Protection" p 142

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1987), and further amended to Law Number 12 of 1997 (UUHC 1997). It was then updated with Law Number 19 of 2002 (UUHC 2002), and is currently regulated under Law Number 28 of 2014.¹¹

Regarding AI, given the rapid development of technology, AI has entered the realm of copyright due to its association with creative works generated by AI technology through applications as described previously. In this regard, Edward O.S Hiariej¹³, as reported by the Republika news channel, stated that the existence of AI technology that can create creative works better than human-created works will further blur the distinction between works created by humans and those created by AI technology.

This will undoubtedly lead to problems in the future, considering the massive development of AI technology and its frequent intersection with copyright related to works created by AI technology. Another example is the existence of a Google- owned AI-based application that can create music. As reported by CNN Indonesia, it was revealed that the AI-based application, named MusicLM by Google, has been trained on data from 280 thousand hours of music that has been uploaded to it. Based on this data, MusicLM can create human-like music even without the help of instrumentalists.¹²

Furthermore, regarding legal protection for a work of authorship, Article 1 numbers 1 to 4 of the UUHC stipulate that Copyright is the exclusive right of the creator that arises automatically based on the declarative principle after a creation is manifested in a tangible form without prejudice to limitations in accordance with the provisions of laws and regulations. Subsequently, regarding the creator, it is determined that the Creator is one or more persons who individually or jointly produce a creation that is original and personal.

Regarding the creation, the UUHC states that Creation is any work of authorship in the fields of science, art, and literature that is produced from inspiration, ability, thought, imagination, dexterity, skill, or expertise expressed in a tangible form. Furthermore, regarding the copyright

¹¹ Tus, D. S. A. K. "Economic Rights and Moral Rights of Portrait Copyright Works on Social Media" Jurnal Vyavahara Duta 14, no. 1 (2019): P 12–20.

¹² Puspita, Ratna. 2020 "Deputy Minister of Law and Human Rights: AI Has Implications for Copyright Law." Republika Online. <https://www.republika.co.id/berita/r0ynzg428/wam-enkumham-ai-berimplikasi-terhadap-uuhak-cipta> accessed on March 23, 2024.



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holder, the UUHC states that the Copyright Holder is the Creator as the owner of the Copyright, the party who receives the right

lawfully from the Creator, or another party who further receives the right from the party who received the right lawfully. Subsequently, Article 4 of the UUHC states that copyright is an exclusive right consisting of moral rights and economic rights.

Furthermore, still related to copyright protection, the UUHC also regulates

dispute resolution in Articles 95 to 99 of the UUHC, and the procedure for lawsuits is also regulated in Articles 100 and 101 of the UUHC. Regarding legal remedies that can be taken by the creator or copyright holder in case of a dispute, this is regulated in Articles 102 to 105 of the UUHC. The criminal provisions in case of copyright infringement are also regulated in the UUHC, found in Articles 112 to 120 of the UUHC.

Regarding the use of technology, the UUHC has several provisions that regulate this, such as Article 43 on copyright limitations. Article 43(d) states that the creation and dissemination of copyrighted content through information and communication technology media that is non-commercial and/or benefits the Creator or related parties, or if the Creator does not object to such creation and dissemination. Furthermore, Articles 52 and 53 of the UUHC regulate technological control mechanisms, while Articles 54 to 56 of the UUHC regulate copyrighted content and related rights in information and communication technology. These provisions also regulate the protection of copyright and related rights infringements through information and communication technology-based means. Furthermore, in the evidence process carried out during investigation, prosecution, and examination, it is also permissible to use information and communication technology-based means in accordance with the provisions of laws and regulations.

Based on the explanation regarding the use of technology in the UUHC, there are no provisions in the UUHC that regulate the use of AI in the creation of a work, so it can be said that the UUHC does not recognize a work created through AI technology. If it is said that Article 54 of the UUHC could be a legal basis for the use of AI technology because it relates to the means of production, then it should be further examined that, based on the explanation of the Article in the UUHC, Article



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54 of the UUHC further explains that "means of production and/or data storage based on information technology and/or high technology" include optical discs, servers, cloud computing, secret codes, passwords, barcodes, serial numbers, decryption technology, and encryption technology used to protect Creation.

Therefore, it can be said that Article 54 of the UUHC also does not recognize the term AI or artificial intelligence, making it extremely important to have legal regulations that can guarantee legal certainty regarding the use of AI technology in the creation of a work of authorship or creation. This is because, although based on previous studies as mentioned earlier, AI cannot be classified as a legal subject, AI can be classified as a legal object, in this case, the work of authorship created through AI technology. Also, considering the current development of AI, which can already create its own works of authorship, such as music that can be created by the

Google-made application MusicML, this shows that the regulation of AI in the UUHC in Indonesia is extremely important considering the rapid development of AI and its frequent intersection with copyright. The regulation of AI in the UUHC is extremely important because, from a legal perspective, cases involving AI and intersecting with copyright have already developed in the US.

Based on a news report published by the Kompas daily, there have been several legal cases in the US related to AI and copyright, such as the case of Stability Diffusion AI as software that has copied billions of images from the internet, enabling generative AI devices like Midjourney and DevianArt to produce visual images according to the style of the artist who created the image, and of course, this was done without the permission of the copyright-holding artist. In addition, Stability Diffusion is also facing lawsuits from Getty Images, as it is suspected of intercepting data, including photos and other works of authorship from Getty Images, to fill the AI engine's database.¹³

The legal cases related to AI and Copyright in the US should be used as a consideration for regulating AI in the field of copyright in Indonesia. This is because having regulations related to AI in the UUHC can minimize the possibility of legal cases like those in the US.

¹³ Pratomo, Yudha. January 19, 2023. "Getty Images Sues AI Company, Allegedly Using Images Without Permission to Train Artificial Intelligence." Kompas.com,, <https://tekno.kompas.com/read/2023/01/19/12010047/getty-images-gugat-perusahaan-ai-diduga-pakai-gambar-tanpa-izin-untuk-latih> accessed on March 25, 2024

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3.2. AI as a Legal Subject in the Indonesian Legal System

Although the Copyright Law and previous studies state that AI cannot yet be recognized as a legal subject, this needs further examination. This is because, if we relate it to the provisions of the Civil Code, AI can be categorized as a worker as regulated in Article 1367 paragraph (1) and paragraph (3) of the Civil Code.¹⁴

In relation to this, if we look at one of the theories of legal entities, namely the fiction theory, according to Fredrich Carl Von Savigny, who stated that a legal entity is actually just a creation of the state, which can be said that a legal entity actually only exists in the human imagination. This is further equated with the position of humans as a legal subject.¹⁵

Regarding the fiction theory of Fredrich Carl von Savigny, Hans Kelsen also considers that legal subjects tend to be fictional. Because, if it is assumed that there is a right held by an individual, it means that there is an obligation on the part of another party. Rights can be owned by someone based on objective rules such as laws and not because of the will of the legal subject itself.

Furthermore, this is also supported by another theory concerning legal entities, namely the organ theory proposed by Otto Van Gierke. Van Gierke stated that a legal entity has characteristics that can be compared to humans. Besides that, a legal entity can also have its own will or desire, which is formed through its apparatus, namely the administrators and members of the legal entity, so that the decisions taken by the administrators of the legal entity can be said to be the will of a legal entity.¹⁶

Therefore, based on this view, it can be interpreted that within a legal entity itself, it is like a human who has organs in it. Thus, every legal entity, whatever its form, has an organ that acts for and on behalf of its legal entity.

¹⁴ Amboro, F. L. Yudhi Priyo, and Khusuf Komarhana. 2021 "PROSPEK KECERDASAN BUATAN SEBAGAI SUBJEK HUKUM PERDATA DI INDONESIA [Prospects of Artificial Intelligence As a Subject of Civil Law in Indonesia]." *Law Review*, no. 2 (2021) P 23

¹⁵ Koos, S. "Artificial Intelligence-Science Fiction and Legal Reality." *Malaysian Journal of Syariah and Law* March 20, 2014 P 76

¹⁶ Prasetyo, A 2021 "KEPEMILIKAN TUNGGAL PERSEROAN TERBATAS DALAM UU CIPTA KERJA BERDASARKAN TEORI BADAN HUKUM." *Jurnal Ilmu Hukum: ALETHEA* 5, no. 1 (2021): P 39–54.



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Based on this, it is possible for AI or artificial intelligence to be categorized as a legal entity. In other countries, there has even been recognition of a legal subject outside of humans and legal entities. In 2014, New Zealand, through the Te Urewera Act, recognized the Te Urewera forest as a legal subject. This is stated in Article 11 of the Te Urewera Act. In addition to the Te Urewera forest, New Zealand also recognizes the Te Awa Tupua River as a legal subject in accordance with the provisions of Article 14 of the Te Awa Tupua (Whanganui River Settlement) Act

2017.¹⁷

Besides New Zealand, in 2017 India also recognized the existence of the Ganges River as a legal subject. This is based on the Judgment of Mohd Salim v. State of Uttarakhand and others.¹⁸ Several provisions of these other countries use legal entity theories as previously stated as the basis for considering establishing legal subjects other than humans and legal entities. The legal subject is anything that can have rights and obligations under the law. This is further related to AI. Based on the legal entity theory, namely the fiction theory of Carl Von Savigny, it is possible that AI can be categorized or equated with a legal entity as one of the legal subjects.

From the perspective of copyright, there is the UK which recognizes AI as a creator through the United Kingdom Copyright Act, even though the copyright license is granted to individuals who are considered operators of the AI. English law regulates this in Section 9 (3) of the Copyright, Design and Patent Act (CDPA).

The provision governing the recognition of AI as a creator is adopted by the English legal system based on the concept of Work Made For Hire which originated in the United States.

If this is reviewed again using the theories about legal entities, then it can be said that AI can be equated with a legal entity. Considering, as previously mentioned, that according to the fiction theory proposed by Savigny, it is stated that a legal entity is only a human creation, whose status is equated with humans. This is supported by Van Gierke through the organ theory he

¹⁷ Prabowo, Rian Adhivira, Adi Seno, Fajar Ahmad Setiawan, Unu P. Herlambang, Edho R. Ermansyah, and Gerry Pindonta Ginting. "Can Nature Become a Legal Subject? Reflection on Some Experiences." *Journal of Law & Development* 50, no. 1 (2020): P 71.

¹⁸ Odonnell, E. "Rivers as Living Beings: "Rights in Law, but No Rights to Water?" *Griffith Law Review* 29, no. 4 P 643–668.

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proposed, which states that a legal entity can have a will through the administrators or members of the legal entity.

Furthermore, based on these legal entity theories, which are then juxtaposed with the concept related to copyright, namely the concept of Work Made For Hire, it can be said that AI can be classified as a legal subject. This is because the Work Made For Hire concept recognizes AI as a creator, and the copyright license is then granted to individuals as operators who can be held accountable for the work of authorship produced by AI.

If the accountability for the work of authorship produced by AI is related to the provisions of criminal law, Indonesian criminal law recognizes the doctrine of Vicarious Liability. Criminal liability is also very important to regulate because criminal liability is the main point in criminal law aimed at finding criminal acts. Therefore, a person who commits the crime is also needed, both from the category of intention or negligence. So that every mistake in the form of a bad deed is given a punishment.

The doctrine of Vicarious Liability according to Peter Gillies is the imposition of criminal liability on someone based on a criminal act committed by another person, or based on the fault of another person, or concerning both of these issues. Meanwhile, Smith & Brian Hogan have an opinion regarding Vicarious Liability. Smith & Brian Hogan stated that an employer can be held liable for the actions of his employees,

even though the employer did not make a mistake. However, except in cases of public nuisance or defamation of defamation.

This Vicarious Liability doctrine is adopted from civil law, which is usually known as an unlawful act as the doctrine of respondeat superior. Seeing from this principle, corporations cannot make mistakes only their managers make mistakes as they act for and on behalf of the corporation and carry out acts that benefit the corporation.

Based on the opinions of the experts regarding the Vicarious Liability doctrine, it can be said that in principle, the Vicarious Liability doctrine places responsibility on the employer towards his employees. This is generally referred to as the employment principle. Therefore, if it is related to AI as the creator of a work of authorship, when a criminal act occurs, the operator or members of the legal entity that employs the AI can be held accountable. This will be appropriate if it is juxtaposed again with the concept of Work Made For Hire, considering that

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in the Work Made For Hire concept, AI is seen as a worker whose responsibility is delegated to individuals, namely the operators of the AI.

4. Conclusion

Based on the previous explanation, it can be concluded that Indonesian Copyright Law (UUHC) does not recognize AI as a legal subject. Therefore, under Indonesian Copyright Law, AI cannot be classified as a creator. Considering the massive development of AI currently, it is crucial to establish legal regulations related to AI. The potential for AI to be recognized as a legal subject in Indonesia is substantial. Based on the previous explanation, it can be argued that AI has the potential to be recognized as a new entity in relation to legal subjects, alongside humans and legal entities, which are already recognized as legal subjects in Indonesia. This is because AI can be likened to a legal entity according to legal entity theories and the concept of Work Made For Hire found in US Copyright Law, which could be adopted by Indonesia to accommodate AI as a new entity related to recognized legal subjects in Indonesia. Additionally, the doctrine of Vicarious Liability, which is also used in Indonesia in relation to criminal liability, further supports this potential. Based on the conclusions described in this study, the researcher suggests that there is a need for a specific law regulating AI as a legal subject in Indonesia. This is necessary to avoid legal loopholes and provide clear legal protection for AI. In addition, regulations are needed regarding the responsibilities and obligations of AI, as well as dispute resolution mechanisms involving AI. Furthermore, it is necessary to increase awareness and understanding of AI among the public and stakeholders to optimize the potential of AI effectively.

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