

# Jurnal Media Hukum

Vol. 13 Nomor 1, Maret 2025

Doi: 10.59414/jmh.v13i1.756

## The Ethical Challenges in Copyright AI Creativity

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### Article

#### Kata kunci:

Perlindungan Hukum;  
Tantangan Etika; Hak  
Cipta; Kreativitas;  
Kecerdasan Buatan

#### Keywords:

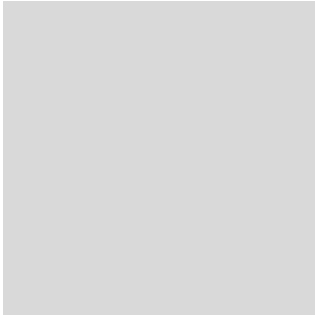
Legal Protection; Ethical  
Challenges; Copyrights;  
Creativity; Artificial  
Intelligence.

### Abstrak

Di era kemajuan teknologi yang pesat ini, ditandai dengan munculnya Kecerdasan Buatan (Artificial Intelligence/AI), status hukum terkait karya yang dihasilkan oleh AI memicu perdebatan yang signifikan. Pertanyaan yang muncul adalah: Apakah karya-karya ini layak mendapatkan perlindungan hukum?. Penelitian ini menggunakan metode penelitian hukum normatif, dengan mengacu pada peraturan perundang-undangan yang relevan. Berdasarkan temuan, AI tidak dapat dianggap sebagai subjek hukum yang memiliki hak dan kewajiban, karena AI hanyalah produk teknologi buatan manusia. Oleh karena itu, karya yang dihasilkan oleh AI tidak memenuhi kriteria untuk perlindungan hak cipta, yaitu fiksasi, orisinalitas, dan minimalitas kreativitas. Di Indonesia, perlindungan hak cipta diatur dalam Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta, yang menyatakan bahwa karya yang dihasilkan oleh AI dapat didaftarkan untuk perlindungan, asalkan memenuhi standar orisinalitas dan adanya kontribusi kreatif dari manusia. Dengan kata lain, karya AI dianggap tidak memenuhi syarat untuk perlindungan hukum karena asal-usulnya dari intervensi mesin, tanpa adanya unsur kreativitas manusia yang memadai. Namun demikian, perlindungan hukum terhadap AI dapat diarahkan kepada pemilik atau pencipta AI itu sendiri, bukan pada karya yang dihasilkan. Dengan cara ini, hak cipta atas karya AI dialihkan kepada individu atau entitas yang memiliki peran kreatif dalam menciptakan teknologi AI yang digunakan untuk menghasilkan karya tersebut.

### Abstract

In this era of rapid technological advancement, marked by the emergence of Artificial Intelligence (AI), the legal status surrounding AI-generated works sparks considerable debate. The question arises: do these creations warrant legal protection? This study employs a normative legal research method, drawing upon statutory regulations. Findings indicate that AI cannot be deemed a legal subject with rights and obligations, as it is a product of human-made technology. Consequently, AI-generated works do not meet the criteria for copyright protection, namely fixation, originality, and minimal creativity. Indonesia addresses copyright protection under Law Number 28 of 2014, stipulating that AI-generated works can be protected through



*registration, provided they meet standards of originality and human creative contribution. This essentially renders AI creations ineligible for legal protection, as they originate from machine intervention. However, legal protection for AI can be circumvented by directing it towards the owner and creator of the AI itself, rather than its resultant works.*

## INTRODUCTION

The rapid development of technology in the era of the Fourth Industrial Revolution is undeniable.<sup>1</sup> This era is characterized by a surge in technological advancements, leading to the emergence of unprecedented phenomena not seen in previous industrial revolutions.<sup>2</sup> The increasing role and utilization of technology across all sectors have given rise to a new technology known as Artificial Intelligence (AI). The concept of AI itself dates back to 1956, formulated by John McCarthy, Marvin Lee Minsky, Herbert Alexander Simon, Allen Newell, and Edward Albert Feigenbaum during a meeting at Dartmouth.<sup>3</sup> Over the years, AI has undergone rapid development, with capabilities in the 2000s such as face recognition, voice recognition, and large-scale data analysis. The European Parliament defines AI as a system that exhibits behavior simulating intelligence, including the ability to collect, process, analyze, interpret its environment, and take certain autonomous actions,<sup>4</sup> thereby mimicking human intelligence.

In Indonesia, the presence of AI is relatively new, and to date, there are no specific regulations governing it. Therefore, AI is currently equated with electronic agents.<sup>5</sup> Article 1 (8) of Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Electronic Information and Transactions (referred to as the ITE Law) defines an Electronic Agent as a device of an Electronic System created to perform an action on certain Electronic Information automatically conducted by a Person. Despite the lack of specific regulations, AI is still utilized because it can simplify human daily life. Its evolving capabilities assist humans in various fields, such as aiding medical teams in more accurate diagnoses and faster

<sup>1</sup> David Tan, Ampuan Situmeang, and Hari Sutra Disemadi, "(UN)LOCK AND (UN)LOADED: REGULATING 3D-PRINTED FIREARMS IN THE OPEN-SOURCE ERA AFTER THE 2013 HYSTERIA," *Masaryk University Journal of Law and Technology* 17, no. 2 (2023): 149-95, <https://doi.org/10.5817/MUJLT2023-2-1>.

<sup>2</sup> Endang Irawan Supriyadi and Dianing Banyu Asih, "Implementasi Artificial Intelligence (AI) Di Bidang Administrasi Publik Pada Era Revolusi Industri 4.0," *Jurnal RASI* 2, no. 2 (2020): 12-22, <https://doi.org/https://doi.org/10.52496/rasi.v2i2.62>.

<sup>3</sup> Bina Nusantara, "Sejarah Singkat Tentang Kecerdasan Buatan (Artificial Intelligence)," n.d.

<sup>4</sup> Liubov Maidanyk, "Artificial Intelligence and Sui Generis Right: A Perspective for Copyright of Ukraine," *Justice in Eastern Europe* 3, no. 11 (2021): 144-54, <https://doi.org/10.33327/AJEE-18-4.3-n000076>.

<sup>5</sup> Zahrashfa PM and Angga Priancha, "Pengaturan Hukum Artificial Intelligence Indonesia Saat Ini," n.d.

drug development, assisting financial professionals in analyzing sophisticated data for market predictions and fraud detection, aiding the manufacturing industry in optimizing production processes and equipment maintenance, and assisting artists in the creation of works.<sup>6</sup>

In essence, AI generates works of art for both visual and musical realms using algorithms trained on pre-existing data, thereby producing artworks resembling those crafted by human hands. One such artist utilizing AI assistance in creating paintings is Denny JA. Renowned as a painter, he has successfully produced over 200 paintings aided by AI technology,<sup>7</sup> positioning himself as a pioneering figure in Indonesia's art scene with his initiative "Towards a New Art Form: AI-assisted Painting".<sup>8</sup> The emergence of artists harnessing AI, as exemplified by Denny JA, is underscored by the discourse permeating social media platforms discussing AI-driven paintings. Advocates contend that AI-empowered artworks offer not only novelty but also innovation, ushering artists into uncharted territories amid the era of the Fourth Industrial Revolution. Furthermore, Denny JA's proactive engagement includes organizing exhibitions to showcase his AI-infused paintings, notably at the International Minangkabau Literacy Festival in 2023.<sup>9</sup>

Not only utilized by artists, but the general public can also harness the sophisticated features offered by AI. For instance, the photo editing application "PicsArt" showcases capabilities to transform text into images with AI assistance, as well as to edit or replace objects within a photo with AI support. The creation of a painting by an individual falls within the realm of artistry, where each work of art bears its creator. Considering Indonesia's participation in the ratification of the TRIPs Agreement, thereby necessitating the protection of Intellectual Property (IP) rights,<sup>10</sup> a creator is entitled to assert ownership over their creation as stipulated in Article 4 of Law Number 28 of 2014 concerning Copyrights (hereinafter referred to as the Copyright Law), which states, "Copyright is an exclusive right consisting of moral rights and economic rights", encompassing all rights delineated within the Copyright Law. However, amidst the advent of the Fourth Industrial Revolution, which has facilitated the creation of paintings through AI technology, the concept of authorship extends beyond human creators to include AI technologies. This raises significant questions regarding the ownership of copyright in AI-generated works. Moreover, by employing AI in the creation of paintings, it is the AI, not the artist, that

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<sup>6</sup> Maksum Rangkuti, "Mengenal Artificial Intelligence (AI) : Pengertian, Sejarah, Kegunaan Dan Contoh Penerapannya," n.d.

<sup>7</sup> Emil Kristanti, "Menelusuri Jejak Denny JA Dalam Mengaplikasikan Teknologi AI Pada Seni Lukis Para Maestro," 2023.

<sup>8</sup> Denny JA, "Menuju Jenis Seni Baru : Lukisan Dengan Artificial Intelligence," 2023.

<sup>9</sup> Hernowo Anggie, "Denny JA Perkenalkan Lukisan Artificial Intelligence, Curi Perhatian Di Pameran Karya Seni IMLF," 2023.

<sup>10</sup> Sigit Nugroho, "Pembatasan Hak Eksklusif Pemegang Hak Kekayaan Intelektual (Perspektif Keadilan Sosial)," *Al' Adl : Jurnal Hukum* 15, no. 2 (2023): 404-22, <https://doi.org/http://dx.doi.org/10.31602/al-adl.v15i2.9683>.

exercises creativity.<sup>11</sup> AI's capacity to generate images based on existing data, potentially resulting in resemblances to others' works, poses a risk of copyright infringement and subsequent harm to AI users. Presently, there exists no legislation governing AI utilization or legal protection for AI-generated works. Therefore, specialized regulations are imperative to ensure legal certainty, in accordance with Article 28 Paragraph 1 of the Constitution of the Republic of Indonesia of 1945, which mandates, "Every person is entitled to recognition, guarantees, protection, and legal certainty in a fair manner, as well as equal treatment before the law".<sup>12</sup> This issue demands immediate attention from the government, considering the rapid pace of technological advancement in contemporary times.

Prior research on AI-generated copyright has been conducted by various scholars in Indonesia. Some studies suggest that AI-created works remain eligible for protection provided they involve human collaboration, yet concerns persist regarding potential violations of the moral rights of AI inventors, as AI owners cannot claim full ownership of inventions produced solely by AI.<sup>13</sup> Richard Jatimulya Alam Wibowo further corroborates this notion in his research, contending that due to ethical concerns, the debate surrounding AI creations warrants careful consideration of both moral and economic rights in copyright protection.<sup>14</sup> Additionally, other studies indicate potential legal repercussions, both criminal and civil, for developers or owners of AI that incorporate others' creations as input data for their AI's development.<sup>15</sup> Building upon preceding studies addressing AI-authored works, this research's novelty lies in its emphasis on defining the creativity inherent in AI-generated works and examining Indonesia's copyright laws concerning AI's presence. It also explores the incorporation of Hong Kong's AI copyright regulations into Indonesia's legal framework, a topic not previously explored in existing literature.

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<sup>11</sup> Gerald Spindler, "Copyright Law and Artificial Intelligence," *IIC - International Review of Intellectual Property and Competition Law* 50 (2019): 1049–51, <https://doi.org/https://dx.doi.org/10.18196/iclr.v5i2.17927>.

<sup>12</sup> Indonesia, "Undang-Undang Dasar Negara Republik Indonesia Tahun 1945," n.d.

<sup>13</sup> Nadia Intan Rahmafida and Whitney Brigitta Sinaga, "Analisis Problematika Lukisan Ciptaan Artificial Intelligence Menurut Undang-Undang Hak Cipta," *Jurnal Pendidikan Dan Konseling* 4, no. 6 (2022): 9688–96.

<sup>14</sup> Richard Jatimulya Alam Wibowo, "Ciptaan Dan Invensi Hasil Kecerdasan Buatan Dalam Perspektif Hak Cipta Dan Paten," *Jurnal Ilmiah Kebijakan Hukum* 17, no. 3 (2023): 269–88, <https://doi.org/http://dx.doi.org/10.30641/kebijakan.2023.V17.269-288>.

<sup>15</sup> Ari Juliano Gema, "Masalah Penggunaan Ciptaan Sebagai Data Masukan Dala Pengembangan Artificial Intelligence Di Indonesia," *Technology and Economics Law Journal* 1, no. 1 (2022): 1–17.

## RESEARCH METHOD

This research employs a normative legal research method. Normative legal research involves examining legal principles, rules, and frameworks to address specific issues, in this case, the regulatory gaps concerning Artificial Intelligence (AI) from the perspective of Law Number 28 of 2014 on Copyrights in Indonesia. The approaches utilized include the statutory approach and the conceptual approach. The data analyzed in this study is secondary data, comprising legal materials such as Law Number 28 of 2014 on Copyrights in Indonesia and the Cap. 528 Copyright Ordinance of Hong Kong. The analysis technique applied is a qualitative analysis method, which interprets and evaluates legal documents to provide comprehensive insights into the subject matter <sup>16</sup>.

## RESULT AND DISCUSSION

### Concepts of Creativity in Artificial Intelligence Creations

Creativity within the realm of AI can be defined as the system's ability to generate novel, meaningful ideas, concepts, or solutions. It encompasses the processes of idea generation, exploration of vast design spaces, and the capacity to discover innovative solutions to complex problems. Essentially, AI serves as a tool for individuals in creative sectors to enhance innovation in their creations.<sup>17</sup> While the outcomes of AI are reliant on existing data, it plays a pivotal role in fostering original ideas from the artists themselves. AI is likened to a brush that evolves autonomously, capable of delving deeper into information while remaining wholly subservient to the creativity of the artists who employ it.<sup>18</sup>

In general, creativity can be said to comprise three components: novelty (innovative creative ideas), quality (the attractiveness of ideas), and relevance (ideas pertinent to the context).<sup>19</sup> The creation of artwork using AI technology can manifest in various forms, such as Image Segmentation, focusing on extracting existing images to create new characteristics, Image Enhancement, concentrating on upgrading image quality from low to high, Face Attribute Manipulation, altering aspects of facial images, and numerous other evolving methods of creation.<sup>20</sup> These methods often employ creative algorithmic techniques, involving varying degrees of

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<sup>16</sup> Hari Sutra Disemadi, "Lenses of Legal Research: A Descriptive Essay on Legal Research Methodologies," *Journal of Judicial Review* 24, no. 2 (November 2022): 289–304, <https://doi.org/10.37253/jjr.v24i2.7280>.

<sup>17</sup> Nantheera Anantrasirichai, "Artificial Intelligence in the Creative Industries : A Review," *Artif Intell Rev* 55, no. 1 (2021): 589–656, <https://doi.org/https://doi.org/10.1007/s10462-021-10039-7>.

<sup>18</sup> Philippe Esling and Ninon Devis, "Creativity in the Era of Artificial Intelligence," in *JIM Conference*, 2020, 1–12, <https://doi.org/https://doi.org/10.48550/arXiv.2008.05959>.

<sup>19</sup> James C. Kaufman and Robert J. Sternberg, *The Cambridge Handbook of Creativity*, 1st ed. (New York: Cambridge University Press, 2010).

<sup>20</sup> Dwina Satrinia, Reza Ramadani Firman, and Trimalda Nur Fitriani, "Potensi Artificial Intelligence Dalam Dunia Kreativitas Desain," *Journal of Informatics and Communications Technology (JICT)* 5, no. 1 (2023): 159–68, <https://doi.org/10.52661>.

human intervention.<sup>21</sup> Human intervention is unlikely to be eradicated in the utilization of AI for artistic endeavors. However, there exists a concept known as Deep Learning, a subset of data science and AI, characterized by minimal human intervention due to its ability to engineer features autonomously.<sup>22</sup>

In creating a distinctive and original work, AI faces limitations due to its heavy reliance on trained data, which, if inadequate, can lead to erroneous decisions in creating a work.<sup>23</sup> While copyright law does not explicitly define what constitutes the uniqueness of a work, it often refers to “substantial parts” or substantial similarity, as exemplified in Article 44 of the Copyright Law, which states, “The use, taking, duplication, and/or alteration of a creation and/or related rights product in whole or in part that is not considered a violation of Copyright if the source is mentioned or included in full...”, indicating that the phrase “substantial parts” refers to the most important and distinctive parts that characterize a creation. In cases where there are similarities between an AI-generated work and another person’s work, a judge can use the principle of substantial similarity to establish similarity between two works deemed to be similar. However, this principle is less effective because there is no definitive rule for determining what constitutes “substantial parts” of a work.<sup>24</sup>

Regarding the protection of copyright for AI-generated works, the development of Legal Protection Theory can be applied. Legal interests in this context are interpreted as managing the rights and interests of individuals, thus law has the highest authority to determine the interests of individuals that need to be regulated and protected.<sup>25</sup> Legal protection arises from legal provisions and all legal regulations provided by society, which essentially represent the agreement of that society to regulate behavioral relationships between members of society and between individuals and the government, which is considered to represent the interests of society.<sup>26</sup> Satjipto Rahardjo also provides a perspective on Legal Protection as providing shelter for human rights (HAM) that are infringed upon by others and this protection is given to society so that they can enjoy all the rights given by the law.<sup>27</sup> Additionally, Phillipus M. Hadjon also defines legal protection for the people as a preventive and repressive government action. Preventive legal protection aims to prevent disputes, directing government actions to be cautious in

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<sup>21</sup> AIContentfy Team, “AI vs Human Creativity : Which One Will Win?,” AIContentfy, n.d.

<sup>22</sup> Amazon, “Apa Perbedaan Antara Machine Learning Dan Deep Learning,” n.d.

<sup>23</sup> Iqbal Kamal Zaki, “Tidak Semua AI Bisa Membantu : Menyadari Batasan Dan Tantangan,” Vokasi Sigap, 2023.

<sup>24</sup> Nuzulia Kumala Sari, Ayu Citra Santyaningtyas, and Anisah, “Orisinalitas,” *Jurnal Ilmiah Kebijakan Hukum* 17, no. 3 (2024): 2023, <https://doi.org/http://dx.doi.org/10.30641/kebijakan.2023.V17.365-384>.

<sup>25</sup> JH. Sinaulan, “Perlindungan Hukum Terhadap Warga Masyarakat,” *Ideas : Jurnal Pendidikan, Sosial, Dan Budaya* 4, no. 1 (2018): 79–84.

<sup>26</sup> Satjipto Rahardjo, *Ilmu Hukum* (Bandung: Citra Aditya Bakti, 2002).

<sup>27</sup> Rahardjo.

decision-making based on discretion, while repressive protection aims to prevent disputes, including their handling in the judiciary.<sup>28</sup> These concepts of legal protection theory can be used to analyze and provide legal protection to AI-generated works.

### **Protection of Copyrights for Artificial Intelligence Works**

The fundamental principles of copyright found in the Intellectual Property Module created by the Directorate General of Intellectual Property are divided into 3 (three), including automatic copyright protection, exclusive rights encompassing moral and economic rights, and the distinction between creator and copyright holder.<sup>29</sup> Automatic Copyright Protection arises based on declarative principles provided that it meets the copyright criteria: the idea must be manifested in a tangible form, there must be a specific form of creation, and the creation must be original. Furthermore, the creator holds exclusive rights in the form of moral rights as regulated in Article 5 of the Copyright Law which states: "Moral Rights as referred to in Article 4 are rights inherent in the Creator's person to: a, Always include or not include their name on copies relating to the use of their work for the public; b, Use their alias or pseudonym; c, Modify their creation in accordance with societal norms; d, Modify the title and sub-title of the creation; and e, Maintain their rights in the event of distortion, mutilation, modification, or any act that may harm their dignity or reputation."

From the exposition of the aforementioned article, it can be understood that the application of moral rights in copyright protection aims to ensure that the creator of the work receives recognition and acknowledgment, and the enforcement of moral rights also serves as legal assurance for a work.<sup>30</sup> Meanwhile, Economic Rights are stipulated in Article 8 of the Copyright Law which states: "Economic Rights are the exclusive rights of the creator or copyright holder to obtain economic benefits from the creation". It is understood from the explanation of moral and economic rights above that the rights recipients reap numerous benefits from their efforts in creating a work. Although the creator is considered the copyright holder, economic rights can be transferred to others, making them the copyright holders. The positions of the Creator and the Copyright Holder can be depicted as follows:

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<sup>28</sup> Rahardjo.

<sup>29</sup> Kementerian Hukum dan Hak Asasi Manusia Direktorat Jenderal Kekayaan Intelektual, "Modul Kekayaan Intelektual Tingkat Dasar Bidang Hak Cipta" (Jakarta, 2020).

<sup>30</sup> Yosman Leonard Silubun and Marlyn Jane Alputila, "Youtube Youtube Dan Hak Cipta : Legalitas Hak Moral Dalam Cover Music Atas Hasil Karya Pemuda Merauke," *Jurnal Restorative Justice* 5, no. 1 (2021): 66–77.

**Table 1.** The Depiction of the Creator and Copyrights Holder’s Position

Creator	Copyrights Holder
Inherent rights are moral rights because they are eternal	The managed rights are economic rights
The Moral Right Cannot Be Transferred	The copyright holder can commercialize a creation

**Source:** Basic Level Intellectual Property Module in the Field of Copyright

Regarding the presence of AI, given the progress of technological development as outlined earlier, AI has ventured into the realm of copyright due to its association with the creative works produced by AI technology itself. The Indonesian government has not explicitly regulated AI in the Copyright Law, but Article 1(2) of the Copyright Law stating, “The author is a person or several people who individually or collectively create a distinctive and personal creation.” The use of the terms “a person” and “several people” indicates that the author is a legal subject. In other words, the terms Creator and/or Copyright Holder essentially refer to biological human individuals, not non-human entities such as AI.<sup>31</sup> Supported by Indonesia’s national policy on AI implementation, in the form of the Indonesian National Artificial Intelligence Strategy 2020-2045 (Stranas AI), a collaboration between the Minister of Research and Technology and the Agency for the Assessment and Application of Technology, which states that AI cannot be considered a legal entity with rights and obligations because AI itself is a product of human-made technology.<sup>32</sup> Stranas AI serves as a reference for ministries, institutions, local governments, and other stakeholders in carrying out activities that require AI technology. Furthermore, AI creations do not meet the criteria for copyright as previously mentioned, namely fixation, originality, and minimal creativity.<sup>33</sup> AI creations are not considered original works because their creations adopt the works of others that have been previously inputted as data into the AI system.

Various countries around the world, as of 2023, are in the process of regulating AI, such as Australia, the UK, China, the EU, and France.<sup>34</sup> Although some of these countries have sought to prevent legal loopholes by designing new regulations, there is also Hong Kong, which has long regulated computer-generated copyright. The term “computer-generated” is known as AI in today’s era.<sup>35</sup> In this

<sup>31</sup> Tasya Ramli et al., “Artificial Intelligence as Object of Intellectual Property in Indonesian Law,” *The Journal of World Intellectual Property* 26, no. 2 (2023): 142–54.

<sup>32</sup> Badan Pengkajian dan Penerapan Teknologi, “Strategi Nasional Kecerdasan Artifisial Indonesia 2020-2045,” 2020.

<sup>33</sup> Sentra HKI LPPM Universitas Negeri Yogyakarta, *Buku Panduan Permohonan Hak Kekayaan Intelektual Hak Cipta* (Yogyakarta, 2017).

<sup>34</sup> Muhammad Razi Rahman, “Sejumlah Negara Berloma Atur AI, Ini Daftarnya,” 2023.

<sup>35</sup> Ingrida Veiska, “Protection of Computer-Generated Works in The Era of New Technologies,” *IAES International Journal of Artificial Intelligence* 10, no. 1 (2021): 234–43.



study, Hong Kong is taken as an example for Indonesia in creating its regulations regarding AI copyright. The relevant copyright law in Hong Kong is the Cap. 528 Copyright Ordinance<sup>36</sup> (Hong Kong Copyright Law), which fundamentally never mentions the phrase “AI works,” but in Article 11(3) of the Hong Kong Copyright Law, it is stated that “In the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken,”<sup>37</sup> which means that in the case of literary, dramatic, musical, or artistic works generated by computer or computer-generated, the author is considered to be the person who undertakes the necessary arrangements for the creation of the work. Furthermore, Hong Kong also adheres to the doctrine of Work Made for Hire, which states that a worker commissioned by an employer is not the creator, but the employer is the creator.<sup>38</sup> Thus, the legal objective of justice has been achieved for an artist who creates a work even with the assistance of AI. Therefore, the regulation of copyright for AI works in Hong Kong has achieved the legal objective where legal certainty is obtained because there is no legal vacuum regarding AI creations debated about the ownership of their copyright because there is already an answer to this polemic.

### **Challenges & Ethical Implications in Determining Copyright for AI Works**

The emergence of AI has brought to light that creativity is not solely a human endeavor. AI systems are practically unpredictable, rational, autonomous, capable of data aggregation, evolving, communicative, efficient, and accurate.<sup>39</sup> A notable application of AI in art is exemplified by the painting “The Next Rembrandt” in 2016. This painting, in a three-dimensional print, was created solely from data originating from Rembrandt’s works, using deep learning algorithms and facial recognition techniques. The project utilized a complete image collection from 346 Rembrandt paintings. As a result, the project was awarded as a successful example of utilizing artificial intelligence in art.<sup>40</sup>

The current issue in the application of AI in art lies in ethical challenges. AI ethics involve moral principles that govern human behavior in the development,

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<sup>36</sup> Syifa’ Silvana and Heru Suyanto, “Reformulasi Pengaturan Hak Cipta Karya Buatan Artificial Intelligence Melalui Doktrin Work Made For Hire,” *Jurnal Kertha Semaya* 12, no. 1 (2023): 3094–3112.

<sup>37</sup> Hong Kong, “Cap. 528 Copyright Ordinance,” n.d.

<sup>38</sup> Silvana and Suyanto, “Reformulasi Pengaturan Hak Cipta Karya Buatan Artificial Intelligence Melalui Doktrin Work Made For Hire.”

<sup>39</sup> Rahmadi Indra Tektona, Nuzulia Kumala Sari, and Maulana Reyza Alfaris, “Quo Vadis Undang-Undang Hak Cipta Indonesia : Perbandingan Konsep Ciptaan Artificial Intelligence Di Beberapa Negara (Quo Vadis Indonesian Copyright Law : Comparison of Artificial Intelligence Creation in Several Countries),” *Jurnal Negara Hukum : Membangun Hukum Untuk Keadilan Dan Kesejahteraan* 2, no. 2 (2021): 285–305.

<sup>40</sup> VML Worldwide, “JWT’s ‘The Next Rembrandt’ Wins Two Grand Prix and an Innovation Lion at Cannes,” 2016.

production, and use of AI technology.<sup>41</sup> This includes considerations of data privacy, AI's impact on jobs, superintelligence potential, and other ethical implications. Over the past five years, discussions on AI ethics have evolved into significant political and public debates,<sup>42</sup> with many national and international initiatives attempting to address these challenges through the publication of ethical principles, the establishment of new standards, and the formation of advisory or national policy bodies. When discussing the ethical challenges in determining copyright for AI-generated works, several issues arise. Firstly, there is a question of who should own the copyright to works created by AI, whether it is the original creator who developed the algorithm or the party using and training the AI. Additionally, there are concerns about how to apply the concept of fairness in determining copyright for AI works, considering that human and AI contributions may vary in the creation of these works. This is part of a broader discussion about responsibility and legal rights in the context of AI technology development, highlighting the complexity of adapting existing ethical frameworks to encompass new developments in technology.

The ethical implications surrounding the determination of copyright generated by AI involve profound considerations encompassing various aspects, including justice and recognition of creativity. It is elucidated that AI ethics herein pertain to fairness and acknowledgment of contributions, explicating the importance, from another standpoint, of the fair recognition of AI-created works, be it bestowed upon the AI owner, developer, or legal subjects or entities involved in the creation process, akin to the concept of legal protection theory. Additionally, AI ethics are intertwined with safeguarding human creativity. It is imperative to note that ensuring copyright also protects human creativity and innovation may entail limitations or regulations governing AI's role in creating copyright-protected works.

Copyright constitutes a form of intellectual property rights automatically granted to creators upon the creation of their works. Copyright provides inherent protection to works in the fields of science, arts, and literature produced by creators. Two primary requirements must be met to obtain copyright: originality and tangibility. Originality asserts that the work genuinely originates from the creator's mind or creation, while tangibility indicates that copyright only protects the expression of ideas, not the ideas themselves. However, concerning works generated by AI, the allocation of copyright to AI creators remains an unresolved issue in copyright law. The Copyright Act does not provide specific provisions regarding this matter, resulting in a legal vacuum that needs addressing. Clarification in copyright regulations for AI-generated works is crucial to provide

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<sup>41</sup> Keng Siau and Weiyu Wang, "Artificial Intelligence (AI) Ethics : Ethics of AI and Ethical AI," *Journal of Database Management* 31, no. 2 (2020): 74–87, <https://doi.org/10.4018/JDM.2020040105>.

<sup>42</sup> MM. Dr. Budi Raharjo, S.Kom., M.Kom., *Teori Etika Dalam Kecerdasan Buatan (AI)* (Semarang: Yayasan Prima Agus Teknik, 2023).

clarity regarding who should rightfully hold copyright, whether it be the AI creator, AI developer, or other involved entities.<sup>43</sup>

Legal protection for AI creations has become a primary focus in addressing the complexity of their legal status.<sup>44</sup> Despite copyright laws not being fully aligned with artificial intelligence developments, there is potential for economic rights recognition for creators or rights holders involved. To meet legal protection standards, AI creations must demonstrate originality, creativity, and be embodied in a material format interpretable by humans.<sup>45</sup> This underscores the importance of adjusting copyright regulations to accommodate technological advancements and provide legal clarity for automatically generated AI works. In Indonesian copyright law, AI-generated works can be protected by registering them, but they must still meet originality standards and have a human creative contribution. Machines producing works without human intervention do not receive legal protection. Although AI is not considered a creator under the law, copyright can be granted to parties contributing to the creation of AI works, such as AI owners, AI users, or both, in proportion to their contributions.

Challenges in determining AI-generated copyright also affect several aspects, such as copyright being protection provided to safeguard creative works and creativity. When AI is involved, it affects the elements of creativity and originality of the creative work itself. Moreover, the challenge extends from the standpoint of ownership, determining which legal subjects can be granted copyright protection over the works, whether it be the AI owner or even the data owner used to train the AI's success and skills. Additionally, regarding the expansion of criteria for copyright related to whether copyright is sufficient to handle works produced by AI in a different manner than humans. The challenge of AI's presence in copyright industries is a new form of challenge that then becomes a question of what kind of legal protection and to whom for the copyright works produced by AI. This is because, as inspired by Fitzgerald,<sup>46</sup> Satjipto Rahardjo's theory related to legal protection states that law aims to integrate and coordinate various societal interests because within them are interests, and then protection of those interests can be done by limiting various interests on the other side.<sup>47</sup> As the concept of interests here relates to the interests of specific parties such as AI data owners or developers or companies that own AI. The theory of legal protection is used to protect every party that has rights to themselves against the control of ownership including the copyright works produced by AI.

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<sup>43</sup> Rony Sandra Yofa Zebua et al., *Fenomena Artificial Intelligence (AI)* (Padang: PT. Sonpedia Publishing Indonesia, 2023).

<sup>44</sup> Muhammad Khoirul Wahid Azmi, "Legalitas Dan Perlindungan Hukum Terhadap Karya Seni Visual Yang Dihasilkan Melalui Artificial Intelligence" (Universitas Islam Malang, 2023).

<sup>45</sup> Azmi.

<sup>46</sup> Tim Hukumonline, "Teori-Teori Perlindungan Hukum Menurut Para Ahli," 2022.

<sup>47</sup> Rahardjo, *Ilmu Hukum*.

Applying the “work made for hire” doctrine in the regulation of AI-generated works holds significant potential in addressing the legal complexities surrounding such creations and fostering investment in AI technology development to produce novel and innovative works.<sup>48</sup> To confront these challenges, Indonesia needs to reformulate its copyright regulations by clarifying the concept of “authorship” in the context of AI and implementing the “work made for hire” doctrine while ensuring that copyright is granted only for works reflecting human creativity. The application of this doctrine will impact Indonesia’s Copyright Law, including the notions of originality and fixation of works, expansion of the definition of “authorship,” regulation of AI-generated works under the Copyright Law, and clarification of rights and obligations of AI creators as copyright holders. By adopting this doctrine, Indonesia can provide legal certainty, fairness, and societal benefits in the utilization and advancement of AI technology.

## CONCLUSION

The National Strategy for Artificial Intelligence in Indonesia 2020-2045 delineates that AI cannot be deemed a legal entity with rights and obligations due to its status as a product of human-made technology. Consequently, it is asserted that AI-generated works cannot be subject to copyright, as they do not meet the criteria of fixation, originality, and minimal creativity. AI creations do not qualify as original works since they adopt pre-existing works previously inputted into the AI system. The conundrum posed by AI pertains to the ethical challenges associated with its current artistic applications. AI ethics entail moral principles governing human behavior in AI technology development, production, and usage, encompassing considerations of data privacy, AI’s impact on employment, superintelligence potential, and profound deliberations on various facets, including justice, sustainability, and creativity appreciation. In the context of copyright law in Indonesia, works produced by AI may be protected by registering them, albeit with the prerequisite of meeting originality standards and human creative contribution. This effectively means that the concept of AI creations obtaining legal protection for their existence is nullified. However, this issue can be navigated by attributing copyright to parties contributing to the AI creation, such as AI owners, users, or both, in proportion to their contributions. This mirrors the doctrine of “Work Made For Hire” practiced in jurisdictions like Hong Kong, where a worker commissioned by an employer is not considered the creator; instead, the employer is deemed the creator. Thus, the legal protection pivots not on the resulting work but on the ownership and creators of the AI itself.

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<sup>48</sup> Silvana and Suyanto, “Reformulasi Pengaturan Hak Cipta Karya Buatan Artificial Intelligence Melalui Doktrin Work Made For Hire.”

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