



COPYRIGHT HOLDERS OF AI-GENERATED WORKS IN INDONESIAN COPYRIGHT LAW

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ABSTRACT

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In the area of copyright, the advancement of artificial intelligence (AI) technology has created new legal challenges, notably with regard to the protection and status of works created by AI systems. AI is capable of producing works that appear original and complex, but its legal status as a creator is still debated because AI is not a legal subject that has a will and legal responsibility. This research method uses legal research with primary and secondary legal materials as a reference. This study aims to examine the legal status of AI-generated works and determine who should be recognized as the copyright holder under Law Number 28 of 2014 on Copyright, considering the absence of explicit regulation regarding AI-generated creations. Conclusion of this study are based on copyright principles such as declarative, constitutive, originality, justice, moral rights, and economic rights which are the main basis for maintaining a balance between protection for human creators and technological progress, and seeing the role of humans in creating works produced through the assistance of AI in the form of designing, directing, or controlling the creative process, then AI only functions as a tool in the creation process, while copyright recognition remains attached to humans as the main legal subject. In order for Indonesian copyright law to offer efficient, equitable, and consistent protection with the advancement of artificial intelligence-based digital technologies, adaptive regulatory modifications are required.

A. INTRODUCTION

As time goes by, technology becomes increasingly sophisticated, making various human activities simpler and more efficient. However, this progress also presents new challenges, particularly in the area of copyright.

Legal discussions on how works created by Artificial Intelligence (AI) should be protected have arisen as a result of the quick speed of innovation in many sectors, especially in the area of copyright. In other words, AI must be treated as such. In the past two to three years, AI technology has been able to produce works that fall within the scope of copyright, even surpassing, in some cases, human-generated works. This has raised concerns about the possibility of recognizing AI-generated works as subject to copyright.

The Indonesian Constitution of the Republic of Indonesia 1945 Constitution in Article 28 H paragraph 4: "Everyone has the right to have private property rights and such property rights may not be taken over arbitrarily by anyone." Copyright is part of intellectual property rights, which are protected as a form of private property rights. This article serves as a constitutional basis for protecting the economic and moral rights of copyright holders.

Art, literature, music, technology, science, and other facets of human life have all seen profound changes as a result of the advancement of AI technology. The technology known as AI is intended to imitate human intelligence and carry out jobs that are normally completed by humans.¹ AI is a computer system capable of learning from data, processing that knowledge, and applying it to solve various problems. With its rapid development in various fields, AI is now an increasingly important topic in legal discourse. What legal status can AI be granted as a copyright subject? Copyright stems from creative activities that originate from human thought.² Copyright arises from human ideas, concepts, and intellect, expressed in works in the fields of science, art, and culture that benefit society and have economic value.³

Copyright has several main principles underlying its existence. The economic principle asserts that works resulting from human creativity have economic value worthy of protection.⁴ The principle of justice emphasizes the need for legal protection for works, giving creators full control over the use of their works. The cultural principle highlights the role of works in the development of science, art, and literature to improve the quality of life of society and the nation.⁵ Meanwhile, the social principle emphasizes the balance

¹ Okky Chahyo Nugroho, "Tanggung Jawab Negara dalam Penanganan Tindak Pidana Perdagangan Orang," *Jurnal Penelitian Hukum De Jure* 18, no. 4 (2018): 543.

² Muchtar Anshary Hamid Labetubun, "Aspek Hukum Hak Cipta Terhadap Buku Elektronik (E-Book) Sebagai Karya Kekayaan Intelektual," *Sasi* 24, no. 2 (2019): 138.

³ Niru Anita Sinaga, "Pentingnya Perlindungan Hukum Kekayaan Intelektual Bagi Pembangunan Ekonomi Indonesia," *Jurnal Hukum Sasana* 6, no. 2 (2020): 144.

⁴ Fitria Mayangsari, "Kemelekatan Hak Ekonomi Ahli Waris Terhadap Karya Dari Pencipta Yang Telah Meninggal Dunia," *Jurnal Globalisasi Hukum* 2, no. 2 (2025): 188.

⁵ Kaleb E. Simanungkalit, Tanggapan C. Tampubolon, Leben Panggabean, Ipan Sihite, and Berliana Simanjuntak, "Pentingnya Kearifan Lokal: Meningkatkan Kualitas Kurikulum Merdeka dengan Karya Sastra," *Jurnal Basicedu* 8, no. 2 (2024): 1447.

between the interests of individual creators and the interests of the wider community. These values are consistent with Law Number 39 of 1999 about Human Rights and Article 28D paragraph 4 of the Republic of Indonesia's 1945 Constitution, which both guarantee each citizen's right to self-improvement and legal protection for their intellectual property.

As social beings, humans excel in the ability to think, create, and express new ideas. In the arts, humans are gifted with the ability to produce works that reflect their thoughts and feelings. Artists and creators deserve recognition to stay motivated to create new and better works. The process of creating works requires not only skill but also a high level of time, energy, and dedication. This also applies in the field of technology, where humans continue to produce new, unprecedented discoveries. Therefore, copyright protection is crucial as a form of appreciation for human effort and creativity.⁶

However, advances in AI have created a new phenomenon: this technology is capable of producing works independently, without direct human intervention. This situation has given rise to legal uncertainty, particularly regarding copyright protection. In Indonesia, the Copyright Law does not explicitly regulate the legal status of works generated entirely by AI. As a result, works generated through AI are potentially vulnerable to unauthorized use, which can harm the economic rights of human creators. Meanwhile, several countries have faced similar cases, such as the dispute between NVIDIA, a popular US technology company that faced a lawsuit for alleged AI copyright infringement from three authors in 2024. AI startups Udio and Suno were sued for AI copyright infringement by major global music labels, including Warner Records, Universal Music Group, and Sony Music. In 2023, the Beijing Internet Court issued a ruling in China's first AI copyright infringement case. A citizen named Li filed a lawsuit against Liu for alleged AI image copyright infringement.⁷

The AI system works through Stable Diffusion, where AI records all the data (database) obtained and then, with instructions, produces new creations. It is still possible for AI to obtain legal recognition in the future, provided it meets several criteria. First and foremost, artificial intelligence products must contain elements of human intellect, not just machine-generated creations. Second, AI products must be original, not duplicated, and third, they must already exist in publicly accessible digital form, not just prototypes or abstract concepts. Finally, AI products must be protected like works of art by

⁶ Ujang Badru Jaman, Galuh Ratna Putri, and Tiara Azzahra Anzani, "Urgensi Perlindungan Hukum Terhadap Hak Cipta Karya Digital," *Jurnal Rechten: Riset Hukum dan Hak Asasi Manusia* 3, no. 1 (2021): 10.

⁷ Hesti Dinalia, "3 Contoh Kasus Pelanggaran Hak Cipta AI Yang Pernah Terjadi," Mebiso Wiki, August 12, 2025. <https://mebiso.com/wiki/pelanggaran-hak-cipta-ai/>, Accessed on August 10, 2026.

Intellectual Property Rights. By fulfilling these four main requirements, creators or rights holders related to AI works can claim their economic rights.⁸ While AI cannot be classified as a legal subject, AI can be classified as a legal object, in this case, the creative work produced through AI technology.⁹

Although previous studies have examined AI-generated works primarily from the perspective of recognizing such works as copyrightable subject matter, they have not adequately addressed the unresolved legal issue of determining the rightful copyright holder when AI autonomously produces original and complex creations. Existing research tends to emphasize the protection of AI-generated outputs as objects of copyright without comprehensively analyzing the legal relationship between human creators, AI developers or platform owners, and AI users within the framework of Indonesian Copyright Law. This gap has become increasingly significant as the absence of explicit legal regulation creates uncertainty over copyright ownership and the distribution of economic and moral rights. Therefore, this study fills that gap by examining the legal status of AI-generated works and identifying the appropriate copyright holder based on the principles of justice, humanity, and the provisions of Law Number 28 of 2014 on Copyright.

From the background, it can be concluded that previous research only focused on AI products that need to be made copyright objects, in fact there is a conflict between copyright holders and owners of AI applications or programs because of AI's ability to produce original and complex creations, a legal debate has arisen regarding who has the right to be the copyright holder for the work by looking at the values of justice and humanity.

B. RESEARCH METHODS

This study employs normative legal research¹⁰ using a statutory approach and a conceptual approach. The research relies on secondary data consisting of primary and secondary legal materials in the form of legislation, legal doctrines, scholarly literature, and other relevant legal documents. These legal materials are analyzed qualitatively through legal interpretation and doctrinal analysis using analytical and prescriptive methods¹¹ to formulate legal arguments concerning the status of AI-generated works and copyright

⁸ Raffly Nauval Fadillah, "Perlindungan Hak Atas Kekayaan Intelektual Artificial Intelligence (AI) dari Perspektif Hak Cipta dan Paten," *Das Sollen: Jurnal Kajian Kontemporer Hukum dan Masyarakat* 2, no. 2 (2024): 3.

⁹ Bagus Gede Ari Rama, Dewa Krisna Prasada, and Kadek Julia Mahadewi, "Urgensi Pengaturan Artificial Intelligence (AI) Dalam Bidang Hukum Hak Cipta Di Indonesia," *Jurnal Rechts* 12, no. 2 (2023): 210.

¹⁰ Peter Mahmud Marzuki, *Penelitian Hukum* (Jakarta: Kencana Prenada Media Group, 2011), 20.

¹¹ E. H. Mamdani, and N. Baaklini, "Prescriptive Method for Deriving Control Policy in a Fuzzy-Logic Controller," *Electronics Letters* 11, no. 25-26 (1975): 625.

ownership, particularly from the perspectives of moral rights and economic rights.

C. RESULTS AND DISCUSSION

1. Artificial Intelligence is Part of Computer Programs

To answer who is the copyright holder of the products produced by AI, we first need to map whether AI is an object of copyright, as regulated in Law Number 28 of 2014 about Copyright (UUHC), which then determines who owns the products produced by AI.

Indonesia has ratified the formation of the World Trade Organization (WTO) through Law Number 7 of 1994 about the Ratification of the Agreement Establishing the World Trade Organization (State Gazette of the Republic of Indonesia Number 57 of 1994). Trade-Related Aspects of Intellectual Property Rights is one of the WTO regulations that Indonesia is required to abide by. (TRIPs)

Trade-Related Aspects of Intellectual Property Rights, Article 10, Computer Programs and Compilations of Data

- a. Computer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1971).
- b. Compilations of data or other material, whether in machine readable or other form, which by reason of the selection or arrangement of their contents constitute intellectual creations shall be protected as such. Such protection, which shall not extend to the data or material itself, shall be without prejudice to any copyright subsisting in the data or material itself.

This article's goal is to establish computer programs as literary works covered by copyright under the 1971 Berne Convention, regardless of whether they are in source code or object code. This protection places computer programs on a par with literary works because they contain elements of creativity and intellectual expression from their creators.¹² Meanwhile, compilations of data or other materials, including those in digital or machine-readable form, also receive copyright protection if the selection or arrangement of their contents reflects intellectual creativity. However, this protection only applies to the structure or method of arrangement, not to the content of the data itself, and does not remove any copyright that may already exist in the data or materials used.

In the context of copyright law in Indonesia, Law Number 28 of 2014 about Copyright expressly includes computer programs as one of the types of protected creations as stated in Article 40 paragraph (1) letter s. This

¹² Amelia Nofianti, and Simona Bustani, "Perlindungan Terhadap Pencipta Aplikasi Cxm (Studi Putusan Nomor 60/Pdt. Sus-Hak Cipta/2020)," *Reformasi Hukum Trisakti* 4, no. 2 (2022): 249.

regulation confirms that computer programs are seen as intellectual works in the fields of science, art, and literature that have originality and creativity value. Legal protection for computer programs is intended to respect and protect the moral rights and economic rights of their creators, both individuals and legal entities, for works produced through the ability to think and mastery of technology. Thus, any use, duplication, or distribution of computer programs without permission from the copyright holder is considered a violation of the law and can be subject to sanctions in accordance with applicable laws and regulations.

In general, a computer program is a set of instructions or commands written in a particular language and executed by a computer to perform a particular function or task.¹³ In the legal sense, especially according to Article 1 number 9 of Law Number 28 of 2014 about Copyright, a computer program is defined as a set of instructions realized in the form of language, code, scheme, or other form which when combined with media that can be read by a computer will be able to make the computer work to perform a particular function or achieve a particular result. In other words, computer programs are the result of human intellectual work in the field of information technology which has originality and creativity value, so that it can be protected as a creation in the category of written works under the Copyright regime.

Computer programs include various forms of creation and components related to the software's working system,¹⁴ including, first, Source Code, which is a series of instructions or commands in a programming language that can be read by humans and is the basis of a program. Second, Object Code is the result of compiling source code in binary or machine language form that can be executed directly by a computer. Third, Program Structure, Sequence, and Organization, including logic, workflow, and system design that demonstrates the creativity and intelligence of the creator. Fourth, User Interface. Fifth, Visual or interactive elements that allow users to interact with the program. In some cases, this aspect is also protected if it meets the requirements of originality. Sixth, Technical Documentation and User Manuals Include explanations or guidelines for using computer programs, which can also be considered separate written works.

Computer programs are automatically protected as works of copyright as soon as they appear in a physical form; registration is not required. However, registration is still recommended to provide authentic proof of copyright ownership in the event of a dispute. Copyright protection for

¹³ Agung Rizky Jamas, Destri Anggraeni, M. Aziz Nur Mubarak, and Didik Aribowo, "Perangkat Lunak Komputer," *Jurnal Sains dan Teknologi* 2, no. 2 (2023): 94.

¹⁴ Budi Agus Riswandi, "Hukum Dan Teknologi: Model Kolaborasi Hukum Dan Teknologi Dalam Kerangka Perlindungan Hak Cipta Di Internet," *Jurnal Hukum Ius Quia Iustum* 23, no. 3 (2016): 345.

computer programs is automatically granted once the program appears in a medium or other tangible form.¹⁵ Computer programs can also have high economic value, so their protection includes moral rights (recognition as the author) and economic rights (the right to reproduce, adapt, sell, or license).¹⁶

The goal of artificial intelligence (AI), a subfield of computer science and technology, is to develop computers that can replicate human thought and behavior.¹⁷ AI is intended to give robots the ability to learn, reason, identify patterns, make decisions, and solve issues on their own without the need for human guidance.

In general, AI works through complex algorithms and the use of large amounts of data to train the system to recognize certain patterns. AI systems can gradually enhance their performance depending on experience and fresh data they are given through a process known as machine learning. Deep learning is one sophisticated type that uses artificial neural networks to simulate how the human brain functions.¹⁸

Creators of AI programs, which are computer programs as defined by the Copyright Act, are entitled to legal protection that automatically arises when the AI program is published. Additionally, artificial intelligence (AI) can be used to create products in a variety of fields, including computer vision, natural language processing, speech recognition, recommendation systems, industrial automation, virtual assistants, intelligent navigation systems, and data-driven medical diagnoses. Who is the copyright holder?

2. Who is the Copyright Holder for Works Using AI?

Because it governs the legal relationship between persons or legal entities about the ownership and use of creations or innovations, intellectual property rights (IPR) can be classified as a component of private law.¹⁹ The basic nature of IPR is to grant exclusive rights to creators, inventors, or copyright owners over the intellectual works they produce. This indicates that IPR focuses on protecting private interests, not directly the public interest. In practice, disputes arising in the IPR field are generally resolved through civil

¹⁵ Afifah Kusumadara, "Perlindungan Program Komputer Menurut Hukum Hak Kekayaan Intelektual," *Jurnal Hukum & Pembangunan* 33, no. 3 (2017): 384.

¹⁶ Hari Sutra Disemadi, and Novi Wira Sartika Zebua, "Perlindungan Hukum Bagi Anak Selaku Pemilik Kekayaan Intelektual di Indonesia," *Mahkamah: Jurnal Kajian Hukum Islam* 6, no. 1 (2021): 32.

¹⁷ Yudo Devianto, and Saruni Dwiasnati, "Kerangka Kerja Sistem Kecerdasan Buatan Dalam Meningkatkan Kompetensi Sumber Daya Manusia Indonesia," *InComTech: Jurnal Telekomunikasi dan Komputer* 10, no. 1 (2020): 20.

¹⁸ Yudo Devianto, and Saruni Dwiasnati, "Kerangka Kerja Sistem Kecerdasan Buatan Dalam Meningkatkan Kompetensi Sumber Daya Manusia Indonesia," *InComTech: Jurnal Telekomunikasi dan Komputer* 10, no. 1 (2020): 23.

¹⁹ Inge Kalista Hikmasari, H. Yuhelson, and Bernard Nainggolan, "Perlindungan Hukum Kepada Pencipta Lagu Yang Diumumkan Tanpa Seizin Pencipta," *Jurnal Multidisiplin Indonesia* 2, no. 9 (2023): 2946.

mechanisms, such as lawsuits for damages or termination of rights violations, thus further emphasizing its position within the realm of private law.

From a legal perspective, the basis for classifying IPR into private law can be seen from several legal provisions. Article 28C paragraph (1) and Article 28D paragraph (1) of the 1945 Constitution of the Republic of Indonesia guarantees everyone the right to develop themselves and obtain legal protection for their works and creations. From a civil law perspective, Article 499 of the Civil Code (*KUHPerdata*) states that objects include everything that can be the object of property rights, including rights that are intangible objects (intangible property) such as copyrights, patents, and trademarks.²⁰ Law Number 28 of 2014 about Copyright, emphasizes that these rights are personal, transferable, inheritable, and licensed. Therefore, substantially IPR is part of private law that regulates property rights over intangible objects and legal relationships between legal subjects in civil law.

All nations are welcome to ratify the Berne Convention, which is the oldest international agreement pertaining to copyright. Indonesia ratified the Berne Convention through Presidential Decree Number 18 of 1997. with reservations (requirements) on Article 33 paragraph (1). The Berne Convention, which was first issued in 1886 and then underwent several improvements and corrections from year to year, has three basic principles, namely: First, the concept of national treatment states that works that come from one of the participating nations—that is, works created by citizens of those nations—are entitled to the same copyright protection as works created by citizens of those nations. Second, the automatic protection principle, which states that legal protection must be granted immediately and without any requirements (must not be conditioned upon compliance with any formality). Third, the principle of independence of protection, which states that legal protection is granted without relying on the laws of the creator's own nation.²¹

Berne Convention Article 1 [Establishment of a Union] FN2 "The countries to which this Convention applies constitute a Union for the protection of the rights of authors in their literary and artistic works". Based on the Berne Convention, member states have a duty to protect authors. Therefore, it is necessary to define who an author is. According to the legal dictionary, an author is one who produces, by his own intellectual labor applied to the materials of his composition, an arrangement or compilation new in itself.²²

²⁰ Andini Setiani Umar, "Kedudukan Hak Cipta Sebagai Hak Kebendaan dan Eksekusi Jaminan Fidusia Atas Hak Cipta," *Demokrasi: Jurnal Riset Ilmu Hukum, Sosial dan Politik* 1, no. 3 (2024): 29.

²¹ Eddy Damian, *Hukum Hak Cipta Menurut Beberapa Konvensi Internasional, Undang-Undang Hak Cipta 1997 dan Perlindungannya Terhadap Buku Serta Perjanjian Penerbitannya* (Bandung: PT. Alumi, 1999), 25.

²² Henry Campbell Black, *Black's Law Dictionary* (Minnesota: West Publishing Co., 1968), 34.

"One who" in Indonesian is defined as a person or someone. Or in other words, an author is defined as someone who produces a work through their intellectual labor applied to their creation, resulting in a new arrangement or compilation.²³ Thus, an author in this context means a person or someone who creates a work with their own intellectual abilities.

Annex 1c Agreement on Trade-Related Aspects of Intellectual Property Rights, Part I General Provisions and Basic Principles, Article 1 Nature and Scope of Obligations number 3. Members shall accord the treatment provided for in this Agreement to the nationals of other Members. 1 In respect of the relevant intellectual property right, the nationals of other Members shall be understood as those natural or legal persons that would meet the criteria for eligibility for protection provided for in the Paris Convention (1967), the Berne Convention (1971), the Rome Convention and the Treaty on Intellectual Property in Respect of Integrated Circuits, were all Members of the WTO members of those conventions. 2 Any Member availing itself of the possibilities provided in paragraph 3 of Article 5 or paragraph 2 of Article 6 of the Rome Convention shall make a notification as foreseen in those provisions to the Council for Trade-Related Aspects of Intellectual Property Rights (the "Council for TRIPS"). Based on the provisions of Article 1 paragraph (3) of the TRIPS Agreement, it can be concluded that the legal subjects in this agreement include individuals and legal entities who meet the requirements as recipients of intellectual property rights protection according to the international conventions mentioned above.

framework, Article 1 paragraph 2 of Law Number 28 of 2014 about Copyright (UUHC) provides a clear definition of a Creator as a person or several people who individually or jointly produce a creation that is unique and personal (which is able to show its originality and in a tangible form). According to this definition, the creator must be a human being with the capacity to think, create, and bring his ideas to life in a way that the general public can appreciate. Two important elements in the definition, namely direct human involvement and originality, are key in determining who has the right to be recognized as a copyright holder.²⁴

As social beings endowed by God with the ability to think, humans possess the advantage of producing works that possess not only aesthetic

²³ Peter S. Menell, "Intellectual Property: General Theories," *Encyclopedia of Law and Economics* 2 (1999): 129.

²⁴ Reinhart Sebastian Pakasy, Ryan Adhi Pratama, and Hafidz Lukman Hakim, "Implikasi Hukum Penggunaan Artificial Intelligence Mempengaruhi Hak Cipta Karya Tulis Ilmiah," *Jurnal Media Akademik (JMA)* 2, no. 11 (2024): 119.

value but also moral, cultural, and economic value.²⁵ In the process of creation through AI, the human role remains dominant. Humans act as the primary controllers, determining ideas, designing concepts, setting AI work parameters, and selecting final results worthy of publication. Without human creative input, AI simply produces output without direction and purpose. Therefore, human involvement in every stage of creation serves as the legal basis for copyright recognition. The human role in providing ideas, concepts, and controlling AI cannot be reduced to mere use of technology, but rather reflects the creative responsibility inherent in the creator. This creative responsibility has significant legal implications, as copyright is not only an exclusive economic right but also a moral right inherent in the creator and cannot be transferred. In this context, humans who use AI as a tool to realize their work retain moral rights to that work, including the right to be recognized as the creator, and the right to prohibit distortion, mutilation, or other changes that harm their honor or reputation as the creator.

Artificial Intelligence (AI) works through a series of processes that begin with data collection, data preprocessing, model training, and then produce output based on commands or prompts given by the user. During this process, the AI algorithm learns patterns from the prepared data, enabling it to provide predictions, analysis, recommendations, or generate new content according to user requests. Therefore, AI essentially lacks the ability to think or act on its own will, but rather performs computational functions based on models developed through machine learning or deep learning.²⁶

²⁵ Jati Restuningsih, Kholis Roisah, and Adya Paramita Prabandari, "Perlindungan Hukum Ilustrasi Digital Berdasarkan Undang-Undang Nomor 28 Tahun 2014 Tentang Hak Cipta," *Notarius* 14, no. 2 (2021): 959.

²⁶ Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach*, 4th ed. (London: Pearson, 2021), 24.

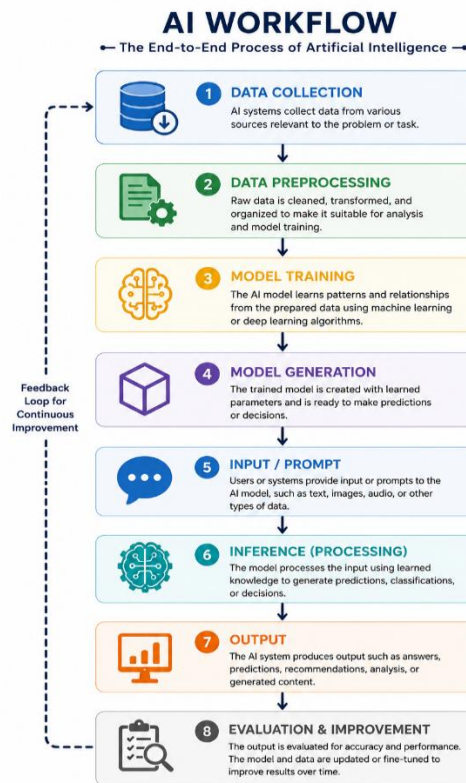


Figure 1. Artificial Intelligence Workflow

Human involvement in AI-assisted creation can be analyzed through several important stages. First, the initial idea or concept formulation stage, where humans determine the theme, style, purpose, and message to be conveyed through the work. Second, the data, algorithm, or instruction setup stage, where humans provide creative input in the form of AI work parameters that will influence the resulting output. Third, the final output selection and editing stage, where humans assess, modify, and establish the AI output into a work ready for publication. These three stages demonstrate that the human role in the creative process involving AI is not merely technical but also substantial, as humans direct, control, and make creative decisions that determine the final form of the work. Thus, human involvement cannot be ignored or replaced by AI, as AI lacks the capacity to make legally binding creative decisions.²⁷

The application of the creator criteria stipulated in the Copyright Law, the elements of creativity and originality that form the basis of copyright protection always originate from human intellectual ability. This application is crucial in works involving AI, because only humans can make substantial creative contributions, whether in the form of formulating ideas, organizing AI

²⁷ Muhammad Nurfalah Setiawan, Riovan Styx Roring, Yeyen Dwi Atma, and Henri Tetiawadi, "Studi Empiris Terhadap Asistensi Artificial Intelligence (AI) Dalam Rancang Bangun Aplikasi," *Digital Transformation Technology* 4, no. 1 (2024): 364.

work instructions, or in determining the final result of the work. If the work is produced entirely by AI without any creative contribution from humans, debate arises regarding its legal status. However, legally, such works cannot receive copyright protection because they do not fulfill the elements of human creation as defined in the Copyright Law. This is in line with the normative approach which emphasizes that copyright is granted not only because of the work, but because the work is a manifestation of human creativity, feeling, and original will. AI does not possess creative power in the legal sense, but only imitates human work processes based on data and algorithms. Therefore, humans' standing as legal beings with copyright is unaffected by the use of AI in the creative process. In fact, in a number of international jurisdictions such as the United States, the District Court, Beryl A. Howell, in the case of *Thaler vs. The Copyright Office*, a court, firmly rejected the recognition of AI as an author, asserting that copyright can only be granted to humans.²⁸ Thaler's attempt to register an AI-generated "creativity engine" called DABUS with the UK was also rejected.²⁹ Additionally, the United States Court of Appeals for the Ninth Circuit's ruling in the case *Uranti Foundation v. Maahera* places restrictions on human production through the coordination, arrangement, selection, and arrangement of creative works.³⁰

All legal consequences arising from the use of AI remain, in principle, inherent to the human or legal entity that develops, operates, or uses the AI system. This view aligns with the concept that AI is an assistive technology whose operations are always under the control and responsibility of humans.³¹ AI does not possess the consciousness, will, or inherent legal responsibility that humans possess. AI merely functions as a tool or technological instrument that operates based on algorithms and data determined by humans. Therefore, even if a work is produced with the assistance of AI, the person who initiates the idea, controls the process, and is responsible for the resulting work remains the recognized creator and copyright holder.

A legal analysis of human creative responsibility in works produced through AI also shows that the existence of this technology does not diminish human rights as creators, but rather expands the means for humans to express

²⁸ Winston Cho, "AI-Created Art Isn't Copyrightable, Judge Says in Ruling That Could Give Hollywood Studios Pause," *The Hollywood Reporter*, August 18, 2023. <https://www.hollywoodreporter.com/business/business-news/ai-works-not-copyrightable-studios-1235570316/>, Accessed on March 30, 2026.

²⁹ Tito Hilmawan Reditya, "MA Inggris Putuskan Penemuan yang Diciptakan AI Tak Bisa Didaftarkan Hak Paten," *Kompas.com*, December 21, 2023. <https://www.kompas.com/global/read/2023/12/21/213100070/ma-inggris-putuskan-penemuan-yang-diciptakan-ai-tak-bisa-didaftarkan-hak>, Accessed on March 30, 2026.

³⁰ United States Court of Appeals for the Ninth Circuit, *United States Court of Appeals for the Ninth Circuit*, <https://www.ca9.uscourts.gov/>, Accessed on March 30, 2026.

³¹ Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach*, 4th ed. (London: Pearson, 2021), 46.

their creativity. AI acts as a tool that accelerates, simplifies, and enriches the creative process, while remaining under human control.³² Therefore, the recognition of humans as creators in works produced through AI is not only in accordance with the provisions of the Copyright Law, but also in line with copyright principles, such as the principle of justice, economics, culture, and social principles.³³ The principle of justice ensures that the creator's rights are legally protected so that they are not harmed by other parties. The economic principle affirms that the work produced has economic value that is worthy of being enjoyed by the creator. The cultural principle emphasizes the importance of works as a means of developing knowledge, art, and culture that benefit society. The social principle makes sure that the interests of the larger community and the individual creator are balanced. These four principles strengthen the argument that humans, not AI, should continue to be recognized as legal subjects holding copyright. Thus, based on the interpretation of Article 1 of the Copyright Law, the creator criteria, and an analysis of the roles and responsibilities of human creativity, it can be concluded that even though AI technology is increasingly sophisticated and capable of producing complex works, copyright recognition must still be granted to humans who use AI as a tool in the creative process. This regulation is not only important to protect the moral and economic rights of creators, but also to ensure that technological advances do not eliminate the fundamental value of human creativity.

3. Legal Protection of Copyright Holders in the AI Context

With the rapid advancement of digital technology, the preservation of human artists' moral and financial rights in relation to works created with the aid of artificial intelligence (AI) is becoming a more significant concern. The two primary aspects of copyright that are specifically protected by Law Number 28 of 2014 regarding Copyright (UUHC) are moral rights and economic rights, both of which are intrinsic to the creator as a legal subject. Moral rights³⁴ as stated in Article 5 of UUHC are inherent, non-transferable, and provide recognition and protection for the creator's integrity regarding the work they create. Meanwhile, economic rights as stated in Article 8 of UUHC give the creator the exclusive right to obtain economic benefits from their creation. In the context of works produced through AI, even though the creative process involves technological assistance, moral rights remain irreplaceable by AI

³² Ida Tejawiani, Nur Sucahyo, Usanto Usanto, and Adi Sopian, "Peran Artificial Intelligence Terhadap Peningkatan Kreativitas Siswa Dengan Menerapkan Proyek Penguatan Profil Pelajar Pancasila," *JMM (Jurnal Masyarakat Mandiri)* 7, no. 4 (2023): 3578.

³³ Jarot Digdo Ismoyo, "Sumber dan Prinsip Hukum Perdata," In *Hukum Perdata: Asas-Asas dan Perkembangannya*, Jambi: PT. Sonpedia Publishing Indonesia, 2024, 25.

³⁴ Henry Soelistyo, *Hak Cipta Tanpa Hak Moral* (Jakarta: Raja Grafindo Persada, 2011), 16.

because AI is not a legal subject with consciousness or identity.³⁵ People who come up with ideas, contribute creatively, and have control over the finished product still retain moral rights, such as the right to be referred to as the creator, the right to preserve the integrity of their invention, and the right to forbid any changes that would harm their reputation. These moral rights are crucial in the AI era because works produced through AI systems can often be manipulated or misused by others without the creator's permission, for example through unacknowledged modification of the AI's output or through unauthorized claims of ownership. Therefore, strengthening the protection of moral rights for human creators must remain a legal priority to prevent the obscuration of the creator's identity in works involving this advanced technology.

In addition to moral rights, economic rights are also crucial aspects that must be protected. Economic rights give authors the sole authority to publish, duplicate, distribute, and permit the use of their creations, including AI-related works.³⁶ In practice, works involving AI often have high commercial value, whether in the form of digital art, music, design, or technological innovation. Protection of economic rights ensures that creators receive a fair financial benefit from the use of these works. However, the implementation of this economic rights protection presents significant challenges, particularly regarding proving ownership of works involving AI. AI, as a tool, has no will, but its presence in the creation process often raises debates about the extent to which human involvement can be considered a substantial creative contribution. This challenge is further complicated when AI works can be generated automatically without significant human intervention. In such situations, certain parties may claim copyright over AI works without a strong basis, while the creators who actually provided the creative input lose the recognition and economic benefits they deserve. Therefore, proving human involvement is a crucial aspect in AI-related copyright disputes. Evidence such as activity logs, instruction parameters, creative process documentation, and even digital metadata from AI output can be used to demonstrate that the work was not entirely machine-generated, but rather the result of human direction, ideas, and control.

³⁵ Zulfikar Riza Hariz Pohan, Muhd. Nu'man Idris, Ramli Ramli, Anwar Anwar, and Jon Paisal, "Sejarah Peradaban Dan Masa Depan Kesadaran Manusia Pada Posisi Ontologis Kecerdasan Buatan (Artificial Intelligence) Dalam Perspektif Alquran: (Kajian Tafsir Ayat-Ayat Filosofis)," *Basha'ir: Jurnal Studi Al-Qur'an dan Tafsir* 3, no. 1 (2023): 30.

³⁶ Wendelina Ernatudera, Arief Syahrul Alam, and Andy Usmina Wijaya, "Tinjauan Yuridis Perlindungan Hak Moral Pencipta Berdasarkan Undang-Undang No. 28 Tahun 2014," *Jurnal Ilmu Hukum Wijaya Putra* 1, no. 2 (2023): 189.

Legally, the protection of economic rights for creators using AI must also address potential violations, such as unauthorized use of works, digital plagiarism, and license violations in the distribution of works. Because it is so simple to acquire and reproduce works online, these infractions are becoming more common in the digital age. For example, the use of AI output by third parties without the creator's consent or without proper attribution can harm the creator's economic and moral rights. In this context, the application of blockchain technology or digital watermarks can be a solution to strengthen copyright protection by providing an authentic, hard-to-remove mark on each work.³⁷ Furthermore, regulations also need to provide clarity regarding the distribution of economic rights when works are produced through collaboration between humans and AI, for example in corporate projects that use AI with specific data or algorithms. Do economic rights rest entirely with the individual creator, or do they also involve the entity providing the AI as a tool? This question requires careful legal interpretation, as copyright under the Copyright Law is principally granted to human creators, but it does not preclude the possibility of a contract governing the distribution of economic rights with the technology provider.

The problem of foreign jurisdiction presents another difficulty for the defense of economic rights. Works generated by AI are often distributed globally through digital platforms, so the potential for copyright infringement is not limited to a single country. Different regulations across countries regarding the legal status of AI works can complicate copyright enforcement. For example, in the United States, courts have ruled that works generated entirely by AI cannot be copyrighted, while in other countries, such as the United Kingdom, there are provisions granting copyright to the party that regulates the operation of the AI.³⁸ In this situation, protecting the economic rights of human creators requires harmonization of international law to avoid legal vacuums that could be exploited by certain parties to commit violations.

Furthermore, moral and ethical aspects also play a crucial role in copyright protection related to AI works. Without industry and public knowledge, legal protection is insufficient to uphold the moral and economic rights of creators. Violations frequently result from both lax law enforcement and a lack of understanding of the significance of upholding copyright. Therefore, ongoing education and outreach regarding copyright are needed, especially in the context of the increasingly widespread use of AI technology. The government, relevant institutions, and creative industry players must

³⁷ Chandra Lukita, "Penerapan Sistem Pendataan Hak Cipta Content Menggunakan Blockchain," *ADI Bisnis Digital Interdisiplin Jurnal* 1, no. 2 (2020): 41.

³⁸ Bintang Maharani M.D., and Muh. Ali Masnun, "Prospek Artificial Intelligence Sebagai Quasi Subjek Hukum: Dinamika Pengaturan Hukum Perdata Di Indonesia," *Jurnal ISO: Jurnal Ilmu Sosial, Politik dan Humaniora* 4, no. 2 (2024): 19.

collaborate to create an ecosystem that supports respect for human copyright, even if the work is produced with the aid of technology.

Thus, the protection of economic and moral rights for human creators in works involving AI is a necessity that must be upheld to maintain a balance between technological progress and respect for human creativity.³⁹ Moral rights guarantee the identity and integrity of the creator, while economic rights ensure that the creator receives fair financial benefits from their work. The challenges of proving ownership and the risk of infringement must be anticipated by strengthening regulations, using supporting technology, and increasing legal awareness in society. Ultimately, although AI makes a significant contribution to facilitating the creative process, the law must still place humans as the primary subject of copyright, in line with the principles of justice, protection, and recognition of human creativity, feelings, and desires that cannot be replaced by machines.

4. Copyright Principles as a Basis for Human Protection in the AI Era

The principles of copyright constitute the legal foundation that determines how the protection of human intellectual works, including works produced with the assistance of Artificial Intelligence (AI), must be implemented to remain in line with the primary objectives of copyright law, namely to provide recognition, protection, and economic benefits to creators.⁴⁰ These principles are crucial in the AI era due to the emergence of debates regarding the ownership status and protection of works involving advanced technology. The first relevant principle is the declarative principle, which states that copyright arises automatically from the time the work is created and realized in a tangible form and published without requiring registration formalities.⁴¹ In the context of works involving AI, this principle emphasizes that copyright remains inherent in humans as legal subjects with creative will, because AI is merely an assistive device that lacks consciousness or the ability to assert its own rights. Therefore, even if the work is created using an AI algorithm, declarative copyright recognition is still granted to the human who initiated, provided the idea, and controlled the creative process. This declarative principle is important because it provides legal certainty that copyright is independent of registration status, so that protection can be

³⁹ Yogesh K. Dwivedi, Nir Kshetri, Laurie Hughes, Emma Louise Slade, Anand Jeyaraj, Arpan Kumar Kar, Abdullah M. Baabdullah, et al., "So What If ChatGPT Wrote It? Multidisciplinary Perspectives on Opportunities, Challenges and Implications of Generative Conversational AI for Research, Practice and Policy," *International Journal of Information Management* 71, no. 1 (2023): 5.

⁴⁰ Nicola Lucchi, "ChatGPT: A Case Study on Copyright Challenges for Generative Artificial Intelligence Systems," *European Journal of Risk Regulation* 15, no. 3 (2024): 605.

⁴¹ Dina Nurusyifa, "Prinsip Deklaratif Dalam Regulasi Hak Cipta Di Indonesia," *UNES Law Review* 6, no. 2 (2023): 6361.

effective immediately from the moment the work is realized, including in digital form produced by AI.

Additionally, both constitutive principle is very important when it comes to copyright protection in the AI era. Unlike the declarative principle, the constitutive principle refers to certain formalities, such as copyright registration, which provide stronger evidentiary power and legitimacy to the ownership of works.⁴² In practice, copyright registration can serve as authentic evidence in disputes regarding the ownership of works involving AI. This is important because AI-based works often create complexities in determining who truly owns the work, especially when human involvement in the creative process is difficult to prove. Therefore, copyright registration can be a legal tactic to improve the position of human producers in facing possible claims from other parties, whether individuals or firms supplying AI technology, even though the Copyright Law adheres to the declarative concept. This constitutive principle also plays a role in providing legal protection across jurisdictions, especially when AI-generated works are distributed globally, making formal proof of ownership crucial in international legal forums.

The third principle of originality is a fundamental principle in copyright law that determines whether or not a work is worthy of legal protection. Originality is defined as a work born from the creator's own abilities, expertise, and creativity, not the result of imitation or copying of the work of another party.⁴³ This principle emphasizes that copyright protection is not granted to ideas or concepts alone, but rather to a tangible form of manifestation that reflects the personality or individual expression of the creator. The provisions of Article 1 number 3 and Article 40 of Law Number 28 of 2014 about copyright, which highlight that copyright arises automatically after a work is realized in a tangible form and possesses originality, represent this idea within the national legal system. Thus, the element of originality differentiates between works that are merely imitations and works that are born from an authentic creative process. A piece of art does not have to be completely original; rather, it must show the creator's intellectual input and individual inventiveness, which gives the piece a distinctive and original personality.

The concept of originality in copyright faces significant difficulties in light of contemporary technical advancements, especially the rise of artificial intelligence (AI). Originality fundamentally requires creativity and personal

⁴² Suyud Margono, "Prinsip Deklaratif Pendaftaran Hak Cipta: Kontradiksi Kaedah Pendaftaran Ciptaan Dengan Asas Kepemilikan Publikasi Pertama Kali," *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 1, no. 2 (2012): 238.

⁴³ Rofi Rofaida, Suryana, Asti Nur Aryanti, and Yoga Perdana, "Strategi Inovasi Pada Industri Kreatif Digital: Upaya Memperoleh Keunggulan Bersaing Pada Era Revolusi Industri 4.0," *Jurnal Manajemen dan Keuangan* 8, no. 3 (2019): 402.

expression from the creator.⁴⁴ Meanwhile, AI operates through algorithms and machine learning that operate automatically based on data and instructions. Therefore, creations generated by AI have sparked legal debate over whether they meet the requirements for originality as defined in Law Number 28 of 2014 about Copyright.

From the perspective of Indonesian positive law, the principle of originality still rests with human creators (natural persons), not with non-human entities like AI. This is because AI lacks consciousness, will, or legal responsibility, which serve as the basis for recognizing it as a legal subject. Therefore, creations produced by AI cannot be considered the original personal expression of the AI itself, but rather of the party who designed, programmed, or instructed the AI system. In practice, this has led to the argument that copyright for works produced by AI should remain vested in humans, the parties most instrumental in the creative process, both as developers and users of AI.

Thus, the principle of originality in the AI era demands reinterpretation to adapt to technological realities without ignoring the basic values of copyright, namely respect for human creativity and expression as the primary source of intellectual creation.⁴⁵

In addition to these three principles, economic rights, as one of the main principles of copyright, must also be thoroughly analyzed in relation to AI works. Economic rights grant creators the exclusive right to obtain financial benefits from their creations, through various means such as publication, reproduction, distribution, licensing, and transfer of rights.⁴⁶ Economic rights are an essential tool in the context of AI works to guarantee that human creators continue to profit financially from the usage of these technologies. However, the implementation of economic rights faces serious challenges when AI output can be mass-replicated and distributed without the creator's permission. For example, digital artwork produced by AI programs can easily be disseminated on the internet without attribution or compensation to the human creator. Therefore, strengthening regulations and effective law enforcement mechanisms are needed to protect human economic rights in AI-based works, for example through special licensing arrangements or the implementation of security technologies such as digital watermarks. These

⁴⁴ Intan Puspita Sari, and Mochammad Calvin Putra Haryadi, "Perlindungan Hukum Terhadap Karya Digital Di Era AI: Analisis Hak Cipta Dalam Konten Yang Dihasilkan Oleh Kecerdasan Buatan," *Jurnal Hukum dan HAM Wara Sains* 4, no. 2 (2025): 259.

⁴⁵ Rahadian Nizar Akbari, and Abshoril Fithry, "Menganalisis Pengaruh Hak Cipta Dalam Gangguan AI Pada Sektor Media," *Prosiding SNAPP: Sosial Humaniora, Pertanian, Kesehatan dan Teknologi* 2, no. 1 (2024): 378.

⁴⁶ Dina Nurusyifa, "Prinsip Deklaratif Dalam Regulasi Hak Cipta Di Indonesia," *UNES Law Review* 6, no. 2 (2023): 6363.

economic rights must also be expanded to accommodate profit-sharing schemes when works involve collaboration between humans and AI provided by third parties, to prevent unfair distribution of economic benefits.

Furthermore, moral rights, as a fundamental principle of copyright, play a crucial role in ensuring that human creators are recognized and respected even when their work is produced with the assistance of AI. Moral rights include the right to be identified as the author (right of attribution), the right to preserve the integrity of the work (right of integrity), and the right to object to alterations that harm the reputation of the creator.⁴⁷ In the context of AI, moral rights are often threatened because AI output can easily be modified, reused, or claimed by others without proper attribution. For example, someone could use an AI work generated based on someone else's creative idea and claim it as their own, thereby obscuring the identity of the true human creator. The protection of moral rights becomes even more significant because AI lacks legal identity, meaning only humans can bear moral rights and responsibility for the work. Therefore, the law must reaffirm that even if AI plays a role in the creative process, moral rights remain non-transferable and are fully vested in the human creator.

Additionally, in the AI era, copyright protection is based on the notion of justice. The justice principle highlights the need for legal protection to balance the public's right to access intellectual works with the interests of producers.⁴⁸ In the context of AI, this principle requires fair protection for human creators without hindering the development of technologies that benefit the public. This means that the law must strike a balance between recognizing human creators while still allowing the use of AI to drive innovation and scientific advancement. For example, open licensing or fair use regulations can be instruments to maintain this balance, allowing the public to utilize AI works for specific purposes without harming human creators.

Overall, the application of these copyright principles provides an important foundation for protecting humans as the primary legal subjects in the AI era. The declarative principle ensures that copyright automatically attaches to humans, the constitutive principle provides additional legitimacy through registration, economic rights guarantee financial benefits, moral rights protect the identity and integrity of creators, the principle of justice maintains a balance of interests. In the context of the increasingly rapid development of AI technology, these principles serve not only as normative guidelines but also as instruments to reaffirm that despite technological developments, humans

⁴⁷ Wendelina Ernatudera, Arief Syahrul Alam, and Andy Usmina Wijaya, "Tinjauan Yuridis Perlindungan Hak Moral Pencipta Berdasarkan Undang-Undang No. 28 Tahun 2014," *Jurnal Ilmu Hukum Wijaya Putra* 1, no. 2 (2023): 191.

⁴⁸ Fathoni, "Paradigma Hukum Berkeadilan Dalam Hak Kekayaan Intelektual Komunal," *Jurnal Cita Hukum* 2, no. 2 (2014): 290.

remain central to copyright legal protection. By strengthening the application of these principles, the law can provide optimal protection for human creators, while simultaneously encouraging the creation of a harmonious ecosystem between human creativity and the use of AI technology.

D. Conclusion

The advancement of artificial intelligence (AI) has introduced significant challenges to Indonesia's copyright protection framework. Under Law Number 28 of 2014 on Copyright, AI cannot be recognized as a legal subject, author, or copyright holder because it lacks legal personality, intent, and legal responsibility. Consequently, originality and meaningful human involvement remain essential requirements for copyright protection. Copyright ownership therefore remains vested in the human creator who contributes ideas, direction, judgment, and control throughout the creative process, while AI functions solely as a technological tool that assists human creativity. This study contributes to the ongoing debate on AI-generated works by clarifying the legal status of AI within Indonesian copyright law and reaffirming the central role of human authorship based on the principles of originality, justice, moral rights, economic rights, and declarative and constitutive protection.

However, this study is limited to a normative analysis of Indonesian copyright law and does not examine the practical implementation of AI-related copyright disputes or conduct a comparative analysis with foreign jurisdictions. Therefore, future research should explore empirical cases and comparative legal approaches to develop a more comprehensive regulatory framework. In addition, policymakers should consider adapting copyright regulations by providing explicit provisions on AI-generated works, the scope of human authorship, and the allocation of rights and responsibilities among creators, users, and AI developers. Such regulatory reforms are necessary to ensure legal certainty, fairness, and effective copyright protection while supporting innovation in the era of AI-based creativity.

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