


Legal Protection of Works Produced by Artificial Intelligence

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Abstract

Introduction: The development of Artificial Intelligence-based technology in the digital era has implications for human life, one of which is law. One of the interesting legal issues to study related to artificial intelligence is copyright protection.

Purposes of the Research: This study aims to determine whether creations resulting from artificial intelligence can be classified as intellectual property and to determine whether artificial intelligence can be equated with employees who work based on employment relationships (Works Made for Hire).

Methods of the Research: The research method used by the author is normative. The legal materials used by the author are primary legal materials that are authoritative in the form of laws and regulations, secondary legal materials, namely legal materials that support primary legal materials, namely literature studies (journals and books), and Tertiary (mass media, legal dictionaries, journals, and the internet). The materials obtained were then analyzed using a qualitative descriptive method, namely by analyzing legal materials and then systematically arranged to obtain conclusions.

Findings of the Research: The results of the study are 1) showing that the creations produced by AI do not meet the subjective concept of a creation, but meet the objective concept of a creation which therefore could possibly obtain copyright protection. 2) The Works Made For Hire doctrine can be used as a solution, the AI system will be considered an employee. The creation will be allocated directly to the user or programmer, because the AI system is a tool that helps the creator in producing a creation.

Keywords: Legal Protection; Artificial Intelligence; Copyright.

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INTRODUCTION

Intellectual Intelligence is a gift from God Almighty to every human being, a weak being, completely dependent on God. God provides space for humans to develop according to the concepts of independence, independence and creativity created like humans in self-defense (survive) and develop life. The fact that man is God's creation ultimately requires knowledge to understand the process of human interaction with human nature. The beginning of the history of intellectual property has long been associated with the development of human civilization. Human civilization is built on the basis of the development of science and technology.¹ Although there was no legal protection for intellectual property at first, now there is legal protection in the field of intellectual property.² Intellectual property is basically divided into two groups, namely Copyright and

¹ Sukarno Aburaera, dkk. *Filsafat Hukum: Teori dan Praktik*, Jakarta: Prenada Media Group, 2013, p. 3. Quoted in, Anshori, *Gagasan Artificial Intelligence Dalam Penerapan Hukum Di Era 4.0 Perspektif Penyelesaian Perkara Model Restorasi Justice Dan Hukum Progresif*, *Legal Studies Journal*, Lamongan, 2022, p 2.

² Yolanda Simbolon, *Pertanggungjawaban Perdata Terhadap Artificial Intelligence Yang Menimbulkan Kerugian Menurut Hukum Di Indonesia*, Jakarta: Legal Corporate, 2022, p. 247

Industrial Property Rights. However, copyright can actually be divided into two parts, namely Copyright and Neighbouring Rights.³

The history of copyright protection in Indonesia has gone through a long journey, starting from the issuance of Wet Letter 1912 Stb Number 600, then undergoing several changes until the promulgation of Law Number 28 of 2014 concerning Copyright (hereinafter abbreviated as the Copyright Law). Copyright is given to copyrighted works in the fields of science, art, and literature that are produced on the basis of inspiration, ability, thought, imagination, ingenuity, skill, or expertise expressed in tangible form.⁴ The current of globalization has brought significant changes in the order of human life, not only has an impact on the external aspects of life, globalization has also had an impact on the most important aspect of a person's life, namely his intellectual aspect. Psychological changes, bringing society to a more modern life with various developments in information technology, showing a world without borders, without space and without time, can increase productivity and efficiency.⁵ Recent advances in the use of technologies such as artificial intelligence that rely on learning algorithms are often seen as robotic machines replacing the work typically done by humans. Artificial Intelligence (Next abbreviated AI) or what we commonly call Artificial Intelligence developed rapidly in the 1980s, causing permanent changes in the attitudes and practices of Creators in creating creative products.⁶ The use of technological tools in various fields of art, literature, and science is not a new phenomenon. Various computer programs and AI systems have been used by humans as tools to create works of art for a relatively long time.⁷

According to Article 1 number 3 of the Constitution of the Unitary State of the Republic of Indonesia in 1945 which states that: "The State of Indonesia is a State of Law so that the Implementation of the State is based on the provisions and regulations of the applicable laws and regulations". Article 28 Paragraph (1) of the Copyright Law states that: "Copyright is the exclusive right of the creator, which arises by itself declaratively after the work comes into force in a certain year in a certain form without prejudice to the limitations arising from the provisions of the Law." Article 9 paragraph (1) of the Copyright Law states that: "everyone is prohibited from publishing works, duplicating works in all their forms, translating works, adapting, arranging or transforming works, distributing works or copies of performance works and renting works." Furthermore, Article 9 paragraph (2) of the Copyright Law relates that: "Every person who exercises economic rights as referred to in paragraph (1) is obliged to obtain the permission of the creator or copyright holder." Article 9 paragraph (3) of the Copyright Law reads that: "Any person without the permission of the Creator or Copyright Holder is prohibited from Reproducing and/or Commercially Using the Work". Article 12 paragraph (1) of the Copyright Law stipulates that: "Every person is prohibited from making Commercial Use, Reproduction, Announcement, Distribution, and/or Communication of the Portrait made by him for the purpose of advertising or

³ Hukum Online. (2023, Jun 12). 7 Jenis Kekayaan Intelektual dan Perlindungannya. *Hukumonline.com*. Jun, 2023. <https://www.hukumonline.com/berita/a/jenis-jenis-kekayaan-intelektual-lt62490bb8ddca2/>.

⁴ Edi Wijaya, Analisis Penggunaan Algoritma Breadth First Search dalam Konsep Artificial Intelligence, *Jurnal Time II*, Jakarta, 2013, p 36, Quoted in, Bernard dan Matt Ward. *Artificial Intelligence in Practice*, Jakarta: Elex Media Komputindo, 2021, p.12.

⁵ Amboro, F. Y. P., & Komarhana, K. Prospek Kecerdasan Buatan Sebagai Subjek Hukum Perdata Di Indonesia, *Law Review*, Jakarta, 2021, p.172. Quoted in, Muhammad Tan Abdul Rahman Haris, Tantimin, Analisis Pertanggungjawaban Hukum Pidana Terhadap Pemanfaatan Artificial Intelligence Di Indonesia, *Jurnal Komunikasi Hukum*, Batam, 2022, p. 307.

⁶ Budiharto Widodo and Suhartono Derwin. *Artificial Intelligence Konsep dan Penerapannya*, Penerbit Andi, Yogyakarta, 2014, p. 120. Quoted in, Shabrina F. Ghazmi, Urgensi Pengaturan Artificial Intelligence pada Sektor Bisnis Daring di Indonesia, *Jurnal Hukum Lex Generalis*, Malang, 2021, p 803,

⁷ *Ibid*, p. 175.

commercial advertising without the written consent of the person photographed or his heirs."

AI is a computing ability that includes a series of computer-controlled algorithms to generate the information necessary for decision-making where data management is carried out effectively and accurately.⁸ At first glance, the use of artificial intelligence as a tool to create works of art does not cause copyright problems, such as Microsoft Word used to write essays, and digital technology used to take pictures. However, the current artificial Artificial Intelligence system is not only used as a tool to make the work easier for humans. Today's modern artificial intelligence systems rely on machine learning and neural network technology, which are capable of automatically creating artwork, simulating human intelligence.⁹ Copyright ownership of works created using Artificial Intelligence does not seem to be a problem at first glance, because programs are just a tool to support the creative process. However, with the latest type of AI, computer programs are no longer a tool to support human work, but in fact Artificial Intelligence is able to work and create innovations, where decisions about creative execution are made without human intervention. Humans here only play the role of programmers who enter data and enter algorithms, and their entire role is AI that processes commands and creates the execution of those commands in real form (output).

This is certainly a problem because the role of intelligence is the most dominant in creating creativity.¹⁰ On that basis, it can be said that AI is the creator of a work, but regulations related to works created by AI have not been mentioned in the Copyright Law. Therefore, in Indonesia, the protection of creations resulting from human intelligence in the form of science, art, and literature is subject to and protected by Law Number 28 of 2014 concerning the Copyright Law.¹¹ At first glance, this does not seem to cause problems for creators, but if the Copyright Law applied in Indonesia is faced with the existence of AI which is currently widely used, several problems will arise related to system protection.¹² Indeed, the Copyright Law only grants copyright to works created by one or more creators, while provisions that protect works derived from AI are not contained in copyright documents in Indonesia. The use of AI to create innovations in the fields of science, art, and literature is becoming more and more common, making things more complicated. In fact, as time goes by, AI has further improved its ability to create creative works and further blurred the distinction between human-created artworks and works created by AI.¹³

The presence of increasingly rapid technological developments at this time, which then has an impact on products created with AI, certainly makes Indonesian laws late because

⁸ Zulfikar Hardiyansah. (2023, Sept 23). Artificial Intelligence: Pengertian, Jenis, Contoh, serta Kelebihan dan Kekurangannya Kompas.com. Sept, 2023. <https://tekno.kompas.com/read/2023/11/23/16150017/artificial-intelligence--pengertian-jenis-contoh-seerta-kelebihan-dan?page=all>.

⁹ Jaya, F., & Goh, W. Analisis Yuridis Terhadap Kedudukan Kecerdasan Buatan Atau Artificial Intelligence Sebagai Subjek Hukum Pada Hukum Positif Indonesia, *Supremasi Hukum*, Jakarta, 2021, p. 11. Quoted in, Disemadi, H. S, Urgensi Regulasi Khusus dan Pemanfaatan Artificial Intelligence dalam Mewujudkan Perlindungan Data Pribadi di Indonesia, *Jurnal Wawasan Yuridika*, 2021, p. 199,

¹⁰ Mengenal Artificial Intelligence: Teknologi yang akan Mengubah Kehidupan Manusia. Ditsmp. kemindikbud. Jun, 2023. <https://ditsmp.kemdikbud.go.id/mengenal-artificial-intelligence-teknologi-yang-akan-mengubah-kehidupan-manusia/>.

¹¹ Mengenal Artificial Intelligence: Teknologi yang akan Mengubah Kehidupan Manusia. Ditsmp. kemindikbud. Jun, 2023. <https://ditsmp.kemdikbud.go.id/mengenal-artificial-intelligence-teknologi-yang-akan-mengubah-kehidupan-manusia/>.

¹² Kusumawati, R., Kecerdasan Buatan Manusia (Artificial Intelligence); Teknologi Impian Masa Depan, *ULUL ALBAB Jurnal Studi Islam*, Jakarta, 2008, p.274. Quoted in, Sihombing, E. N., & Syaputra, M. Y. A. Implementasi Penggunaan Kecerdasan Buatan dalam Pembentukan Peraturan Daerah, *Jurnal Ilmiah Kebijakan Hukum*, Bandung, 2020, p. 434.

¹³ Surden, H. *Artificial intelligence and law*, Jakarta: Kencana Prenadamedia Group, 2019, p. 75. Quoted in, Bagus G. A. R., Dewa Krisna Prasada & Kadek J. M., Urgensi Pengaturan Artificial Intelligence (Ai) Dalam Bidang Hukum Hak Cipta Di Indonesia, *Jurnal Rechtsens*, Jember, 2023, p.209,

they have not paid attention to regulations related to products created with AI.¹⁴ Based on the description above, we know that works created using AI still raise questions, especially whether the works can be classified as intellectual property, considering the rapid development of technology, AI can create innovations in the fields of science, art and literature by relying on learning algorithms to create a work. There needs to be legal certainty regarding the status of creations and it is important to know who is entitled to creations generated by Artificial Intelligence,¹⁵ of course, this raises concerns if AI innovations are used commercially by various parties, so that it can harm programmers and investors who have worked hard and invested funds to develop the system¹⁶ Artificial Intelligence. All problems that arise with works created with AI because there are no other provisions in the Copyright Law regarding works created with AI.

METHODS OF THE RESEARCH

Based on the problems studied, the researcher uses the Normative Juridical Research Type, which is research on legal rules, norms, and principles based on laws and regulations, which are related to the problem to be researched. The collection of legal materials in this study is carried out through library research, namely by conducting research on books, journals and other online documents as a means to obtain primary legal materials, secondary legal materials and tertiary legal materials. And the statue approach, known as the juridical approach, is research that focuses on legal products. and conceptual approach, which is the research of legal concepts such as legal institutions, legal functions, legal sources, and so on. This legal theory consists of three levels, or levels, of general concept legal theory, the dogmatic legal science level, which focuses on juridical technical law, and the legal philosophy level, which focuses on the basic concepts of law.¹⁷

RESULTS AND DISCUSSION

A. Inventions Generated by Artificial Intelligence

Until now, there is no universally accepted definition of AI. However, based on the opinions of experts Haag and Keen, the definition of artificial intelligence is a field of study that is related to capturing, modeling, and storing human intelligence in an information technology system so that the system can facilitate the decision-making process that is usually carried out by humans.¹⁸ Then based on the opinion of John Mc Charty, AI is a part of computer science by modeling human thought processes and designing machines to be able to imitate human behavior.¹⁹

AI is a field of computer science that is specifically aimed at creating software and hardware that can fully mimic some functions of the human brain or a branch of computer science that studies intelligent behavior automation.²⁰ Basically AI learns how to make machines do jobs like humans even better than humans. In order for machines to be intelligent (act as well as humans), machines are also provided with knowledge, so that they

¹⁴ Sudikno Mertokusumo. *Mengenal Hukum Suatu Pengantar*, Yogyakarta: Cahaya Atma Pustaka, 2010, p. 89. Quoted in, Choirunisa Nur Fitriani. Implementasi Artificial Intelligence (AI) Dalam Pembentukan Peraturan Perundang-Undangan Di Indonesia, *Jurnal Publikasi Ilmu Hukum*, Jakarta Selatan, 2024, p. 225,

¹⁵ Lindsey, Tim et.al, eds (2002). *Hak Kekayaan Intelektual, Suatu Pengantar*. Bandung: Asian Law Group Pte Ltd, p. 135.

¹⁶ Rachmadi Usman (2003). *Hukum Hak atas Kekayaan Intelektual edisi Pertama*, Bandung: Alumni, p. .12.

¹⁷ Bahder Johan Nasution, *Metode Penelitian Ilmu Hukum*, Bandung: Mandar Maju, 2008, p. 92.

¹⁸ Victor Amrizal dan Qurrotul Aini (2013). *Kecerdasan Buatan*, Jakarta: Halaman Moeka Publishing, p. 2.

¹⁹ Muhammad Dahria (2008). *Kecerdasan Buatan (Artificial Intelligence)*. *Jurnal SAINTIKOM*, p. 5.

²⁰ Victor Amrizal dan Qurrotul Aini, *Op Cit*, p. 10.

have the ability to reason. There are two parts needed in artificial intelligence:²¹ 1) Knowledge Base, containing facts, theories, thoughts, and relationships with each other; 2) Interference Motor (Interference Engine), the ability to draw conclusions based on knowledge and experience.

The application of AI has evolved over the past few decades, and it is actively enabling people and businesses to achieve the unthinkable. Actually, the application of AI is not limited to a certain number of industries or the number of applications, but it has actually existed in our daily lives. Here's an example of how to apply it:²² 1) Object recognition such as, open a mobile phone with face identification (Face Id); 2) Speech recognition/voice detection. Voice assistants are the best examples of AI in real life such as, Google Assistant, Alexa, or Siri; 3) Electronic payment; 4) Interlingual Translation; 5) Product recommendations and easy search on e-commerce, etc.

Such rapid developments, AI has penetrated our lives. AI is a field of computer science dedicated to developing machines that will be able to mimic and perform the same tasks that humans do. Modern applications such as voice recognition, chess playing robots, table tennis and playing music have made the dreams of these researchers come true. However, according to philosophy, AI is considered to be divided into two major types, namely Weak AI and Strong AI (Work AI and strong AI).²³ The "weak AI" system is not fully autonomous and is not "intelligent", because it is only a means to help humans, related to the input process until the output is based on humans.

So it can be concluded that there is no problem with copyright protection of works produced by "weak AI" because human involvement (programmers) have direct control over the output system. For example, Microsoft Word is used by someone to create a novel, it is clear that the copyright to the novel is given to that person who uses Microsoft Word to type and express his ideas not the system.²⁴ Strong AI in the sense of AI that is able to "think" like humans. The phrase that says that "strong AI" is able to think, it is because AI is developed based on machine learning methods that are able to work and draw conclusions based on input data. This is a problem because AI here seems to have thinking abilities that should only be possessed by humans. Basically, a "powerful AI" system that is able to process input data to produce outputs in the form of creations, causing the relationship between humans and outputs to be further.²⁵

The development of "powerful AI" is the reason why AI has emerged as a huge influence on the development of society. The "powerful AI" system has the potential to be very useful in many areas of society and it is expected that it will do more work that humans cannot or do in the future. An example of a strong AI apart from Project The Next Rembrandt is a UK-based Music Company called Juke Deck that produces music using artificial neural network technology and provides these Artificial Intelligence-generated pieces of music to its customers for various purposes, such as background music in business events and games. AI systems that rely on artificial neural networks generate music by learning from examples

²¹ Muhammad Dahria, *Op Cit*.

²² Digital Bisnis (2021, March 14). 10 Aplikasi Penerapan Teknologi AI dalam Kehidupan Sehari-hari, *Digital Bisnis*. March, 2021. <https://digitalbisnis.id/10-aplikasi-penerapan-teknologi-ai-dalam-kehidupan-sehari-hari/>.

²³ Strephonsays (2020, June 12). Perbedaan AI yang kuat dan AI yang lemah, *Strephonsays*. June, 2020. <https://id.strephonsays.com/strong-ai-and-vs-weak-ai-11573>.

²⁴ *Ibid*

²⁵ *Ibid*

of classical music pieces and generating complete musical compositions in response to given inputs without human input.²⁶

In addition, Christie's auction house auctioned the first artwork created by Artificial Intelligence in October 2018, where Artificial Intelligence worked using an algorithm equipped with a dataset of 15,000 portraits painted between the 14th and 20th centuries, after which the algorithm created a new image based on the input entered and the painting was estimated to be worth around 8,000 to 11,500 US dollars.²⁷ The examples above are some examples of AI with a "Strong Artificial Intelligence" system. Powerful Artificial Intelligence is able to produce artworks in almost all fields that are entitled to copyright. This is what needs to be considered regarding the status of works produced by AI, whether the works produced by AI are entitled to be classified as copyrights, taking into account the current rapid development of technology, it is likely that the number of works produced by AI will increase in the future.

B. Legal Protection of Works Produced by Artificial Intelligence Reviewed from Law Number 28 of 2014 concerning Copyright

The law protects a person's interests by allocating a power to act in the context of those interests.²⁸ According to Philipus M Hajdon, legal protection is the protection of dignity and dignity, as well as recognition of human rights owned by legal subjects based on legal provisions. This means that legal protection is carried out using legal means aimed at protecting the dignity and dignity of each legal subject. Law does not only think of human beings as subjects of law, but law still creates fictitious constructions that are accepted, treated and protected like human beings who are called legal entities.²⁹ Based on the explanation above, it can be seen that those who are recognized as legal subjects are human beings and legal entities. If it is seen that the position of AI is still often debated, because its position is not a legal subject so that the creation of artificial intelligence is questionable whether it will receive legal protection. Moreover, in the Berne Convention in Article 2 number 6 which stipulates that:³⁰ "The works mentioned in this Article shall enjoy protection in all countries of the Union. This protection shall operate for the benefit of the author and his successors in title". Based on this Article, the author can draw the conclusion that copyright protection must be carried out for the benefit of the creator.

Copyright is an exclusive right, in which the copyright in a work (in the fields of science, art, and literature) restricts other parties in terms of the use of the work. Although it is not mentioned directly, it is explicitly that Intellectual Property, especially in the field of Copyright, is a "creation of mind" which means a human work that is born from the outpouring of energy, karsa, creation, time, and cost.³¹ In addition, the thing that supports that the Creator must be a legal subject is marked by Article 1 number 3 of the Copyright Law which stipulates that "The Creator is a person or several people who individually or jointly produce a distinctive and personal work.

Regarding the period of protection of the economic rights of a work in the Copyright Law, the period depends on the work. Article 58 of the Copyright Law stipulates that for

²⁶ Jukedeck Music (2018, May 22). Our History. *Jukedeck Music*. <https://www.jukedeck.com/about..>

²⁷ Christie Summer, A Collaboration Between Two Artist One Human One Machine. Christies. www.christies.com/features/a-collaboration-between-two-artists-one-human-one-machine.

²⁸ Satjipto Rahardjo (2014). *Ilmu Hukum*, Bandung: Citra Aditya Bakti, p. 66.

²⁹ Philipus M Hadjon (1987). *Perlindungan Bagi Rakyat di Indonesia*, Surabaya: Bina Ilmu, p 39.

³⁰ Berne Convention Article 2 (6). Protection of Literary and Artistic Works (as amended on September 28, 1979).

³¹ Henry Soelistyo (2011). *Hak Cipta Tanpa Hak Moral*, Jakarta: Rajawali Pers, p. 52.

works such as books, works of fine art, songs, and others, the validity period of the creator's economic rights to a work is valid during the life of the Creator and continues for 70 (seventy) years after the Creator dies, starting from January 1 of the following year while the Protection of Copyright on Works as owned or held by a legal entity is valid for 50 (fifty) years from the first time it is done announcement. While for works such as photography in Article 59 of the Copyright Law stipulates that the protection period is 50 years, the exception for applied works of art is only 25 years.

The period of copyright protection in the Copyright Law is longer than the period stipulated in the Berne Convention, where the period of protection is valid during the life of the Creator and 50 (fifty) years after the death of the Creator, while for photography, the Bern Convention sets a minimum limit of protection of 25 years from the year the photograph was made, and for cinematography, the minimum limit is 50 years after its first performance, or 50 years after its making if the film has never been shown within 50 years of its creation. In essence, each member state is free to determine the period of protection related to copyright so that the period in the Indonesian Copyright Law is different from the provisions of the Bern Convention. Basically, the limitation on the period of copyright protection is so that there is a balance between the conception of property rights and the social function of the work.

It is hoped that the limitation of the copyright period will not be controlled for a long period of time in the hands of the creator. So that with the end of the limitation on the term of copyright protection, the work becomes public property so that it can be enjoyed by the wider community as an embodiment of the principle that every right has a social function.³² If Articles 58 and 59 of the Copyright Law are associated with works produced by Artificial Intelligence, then it can be concluded that the Copyright Law in force in Indonesia has not accommodated the provisions related to works produced by Artificial Intelligence. The existence of the phrase "the death of the creator" shows that the lawmaker at the time of formulating this law views that the creator of a work is a human being. This phrase then causes ambiguity, because AI is not a living thing that can die, and does not have the ability to think like humans. The use of artificial intelligence has long been used as a tool for creating works of art by creators, but current technological developments continue to move further and further into the realm of works produced by AI, where AI not only helps in the creation process but can produce works autonomously. As in the previous explanation it has been explained that AI can create a song, make news, and produce a painting that is exactly like a famous painter by relying on artificial neural network learning based on existing input data where AI "learns itself" based on existing databases of work to combine and produce a creation in the field of science, art, and literature.

The role of AI that we are discussing in the current discussion is none other than minimizing the role of AI system users, such as just pressing a button on the AI system, training algorithms, and providing input data for the AI system. All human actions, in this case the use of the AI system are only helpful while the one that plays the biggest role is the AI system, where this AI system is independently responsible for producing a creation, so that a creation made by the AI system cannot be predicted from a human point of view,

³² OK Saidin (2015), *Aspek Hukum Hak Kekayaan Intelektual (Intellectual Property Rights)*, Jakarta: Rajawali Press, p. 22.

because they depend on the system and not on the humans behind it.³³ This is the reason that until now AI has not received protection in the Indonesian Copyright Law.

In the absence of human intervention related to the creativity of outputs, then the question arises whether outputs produced independently by AI are eligible for copyright protection. If we see that the creations produced by Artificial Intelligence are very similar to works made by humans or are completely indistinguishable from creations produced by humans, then it can be said that these creations produced by AI must have the same status as works made by humans regardless of how the production method is. However, with the absence of regulations that regulate the protection of creations produced by AI, it can be said that it does not have legal force.

Although AI that relies on machine learning and neural network technology is able to produce unpredictable outputs, AI is still tied to the input that has been determined by humans behind the machine. AI systems ultimately do not make their own choices, but they do what humans have planned. No matter how advanced the AI system was, without humans behind the machines, they wouldn't produce anything. The lack of human input in the works produced by AI is the reason that the creations of works produced by AI have not received copyright protection.

C. Views of Various Countries Regarding The Legal Protection of Creations Produced by Artificial Intelligence

Until now, there is still no common perception in various countries regarding legal protection for creations produced by AI. In the United States, the requirements for human involvement in a creation can be examined through the case of a photograph taken by a monkey that is at the center of a copyright claim in the famous monkey selfie case in the United States (The Monkey Selfie Case). The case began in 2011, when Slater visited the Tangkoko Nature Reserve, North Sulawesi, Indonesia. A macaque monkey named "Naruto" then took Slater's camera and took a selfie of himself laughing. Naruto's selfie was later published by Slater in a book titled *Wildlife Personalities* and eventually caused legal problems from the animal loving group People for the Ethical Treatment of Animals (PETA), in which case People for the Ethical Treatment of Animals argued that the copyright in the photo belonged to the monkey as the creator because the monkey took the photo without anyone's help.

The case was ultimately dismissed by a U.S. district court on the grounds that the concept of authorship under the U.S. Copyright Act did not accommodate the inclusion of non-human animals as creators and that their creations had no legal standing. Meanwhile, the copyright of Naruto's selfie photo cannot be given to Slater because it is not Slater who took it. Naruto's selfie was eventually categorized in the public domain and could not obtain copyright protection.³⁴ Although the case is about animals as creators and not specifically about AI as creators, it can be analogous to a conclusion that US courts have held that copyright authorship can only be granted to humans. It can therefore be concluded that the US courts will not accept the work and provide protection for the work produced by AI, in the Australian Copyright Act is clearly seen from Article 32 paragraph (1), which essentially affirms that the creator of a work contained in science, art, and literary works is a qualified

³³ Massimo Maggiore (2017). *Artificial Intelligence, Computer-Generated Works, and Dispersed Authorship: Spectres that are Haunting Copyright*. Leexe Legal Expertise, p. 2.

³⁴ Kompas (2011, June 01). Akhir Cerita Naruto Sang Monyet Indonesia Pengambil Selfie, *Kompas.com*. <https://tekno.kompas.com/read/2018/04/24/19250047/akhir-cerita-narutosang-monyet-indonesia-pengambil-selfie>.

person at the time the work is made. A human being must contribute to a work that will be protected by copyright. Specifically, in the case of *Telstra Corporation vs Phone Directories Company*, the Full Federal Court of Australia clarified that a work must come from a person as the creator who must use "independent intellectual effort".³⁵

Similar rules apply in most continental European jurisdictions. At the European Union level, works produced using AI are not expressly protected by copyright law. Article 2 (1) of the EU Copyright Law states that "the creator is a natural person or several persons who have created a work, or where the law of a Member State permits, a legal person appointed as a rightholder by law". On the other hand, the United Kingdom's Copyright Act allows copyright to be granted in computer-generated works. This provision states that the author of a computer-generated work is considered to be "the person who makes the arrangements necessary for the creation of a work", in this case the human being is only considered as the person who makes the necessary arrangements for the creation of the work to be carried out, in this case it is assumed that some form of creative intervention is carried out by the human being.³⁶

Similar provisions exist in Ireland, Hong Kong, India, and New Zealand. Although the UK's provisions on computer-generated work have been tested in court, it has the potential to be applied to Artificial Intelligence-generated works. Similar to computer-generated works, Artificial Intelligence-generated works are generated by algorithms, in the case of Artificial Intelligence-generated works, natural persons or legal entities are involved in making the necessary arrangements for the creation of the work (e.g. developing software, training it with selected data sets, etc.). The same thing regarding creations produced by AI has also been tested in Chinese courts. In *Feilin vs Baidu*, the Beijing Court ruled that reports generated by Artificial Intelligence are not protected by copyright. However, despite this, the court advised that they do not fall into the public domain and cannot be freely reused by anyone, in early January 2020, the existence of jurisprudence that had been sent by the Shenzhen Court, ruled that the press article created by Artificial Intelligence named Dreamwriter was protected by copyright with the consideration that the article met the legal requirements to be classified as a work and therefore Eligible for copyright protection.³⁷ Based on various state views, related to creations produced by AI shows that the problem related to the ownership of creations produced by AI in practice has not yet had a single solution.

D. Status of Inventions Generated by Artificial Intelligence

As previously explained, Intellectual Property is an exclusive right granted by the state to a person, several persons or legal entities in holding power and using and obtaining economic benefits from the intellectual property produced. Practically, intellectual property can be interpreted as a material right arising from a work produced using the work of the brain, a thinking ratio that is beneficial to many people, namely having economic value to the work produced. The word intellectual is attached to wealth because the right arises as a result of the brain's struggle with the consideration of rational intelligence and emotional

³⁵ Alexandra George (2014). Reforming Australia's Copyright Law: An Opportunity to Address The Issues of Authorship and Originality", *The University of New South Wales Law Journal*, p. 942- 943

³⁶ Senja Assinen (2018). European Union Copyright Protection for AI-Generated Works, Book of Law and Information Society, University of Turku, Finland, p. 2

³⁷ Paul Sawers (2020, Jan 10). The Machine Making sense of AI, Chinese court rules AI-written article is protected by copyright, *Venture Beat*. Jan, 2020. <https://venturebeat.com/2020/01/10/chinese-court-rules-ai-written-article-is-protected-by-copyright/>.

intelligence.³⁸ Thus, we can conclude that intellectual property requires the ability to think rationally by using logic that is balanced with the work of the heart (consciousness) which gives birth to wisdom in producing a work. Although the Artificial Intelligence program is able to produce a creation, the process of producing the creation is still based on input data and the ability of algorithms to process input data, so that the ability of AI still cannot be considered as personal awareness, in producing a creation, there needs to be intentions, emotions, personal awareness of the creator, and aesthetic judgment, which these things cannot be possessed by the Artificial Intelligence program.

As explained above, intellectual property is a material right. If examined further, the definition of rights is a demand for rights that can be legally enforced by a person to another party.³⁹ Then to the creations produced by AI, it is automatic that Artificial Intelligence does not have the ability to think and act like humans. Artificial Intelligence systems cannot fight for their rights in court in the event of a violation.

Regarding the legal status of a work produced by AI whether it is classified as a work, it is first necessary to look at the basic conditions required to receive copyright protection. Copyright protection will basically be given to original copyrighted works or originality, manifested in a tangible form, and meet the elements of creativity. If a work does not have these three components, then it cannot be categorized as a work. 1) Originality (originality): Original or common originalitas which means that a work must come from the author and the work must be original in the sense that it must involve an original thinker or inventive.⁴⁰ Authenticity basically shows that the work is not a copy or imitation of another creator's work but is the original work of the creator. A work will be protected when it meets the requirements of the originality of a work. 2) Embodied in a tangible form: A new work gets copyright protection when the work is embodied in a tangible form, in the sense that the work is not just an idea that is in the head, but must be in a tangible medium. Ideas without being realized in a tangible form cannot be copyrighted, while the representation of an idea is protected by copyright, in this case if we look at the works produced by Artificial Intelligence, it needs to be realized in a tangible form. Especially the works produced by The Next Rembrandt are clear physical paintings and embodied in tangible media so that we can conclude that the work qualifies to be embodied in a tangible form; 3) Creativity: The last requirement is that the creation requires creativity in order to meet the requirements to be classified as a creation. It is important that a creation created by the creator has a creative spark. This requirement of creativity raises big questions for creations created by AI. Basically, the definition of creativity is not found in the Copyright Law. The definition of creativity depends on how creativity is defined. If creativity is defined in terms of human consciousness, then creation as a result of AI can never be said to meet the creative

³⁸ OK. Saidin, *Op Cit*, p. 11

³⁹ Rahmi Jened Parinduri Nasution (2013). *Interface Hukum Kekayaan Intelektual dan Hukum Persaingan (Penyalahgunaan HKI)*, Jakarta: Rajawali Pers, p. 32

⁴⁰ Khrishna Ariani & Amirudh Hariani (2011). Analyzing "Originality" in Copyright Law: Transcending Jurisdictional Disparity", *IDEA-The Intellectual Property Law Review*, London, p. 509.

requirements, no matter how sophisticated an AI system is and how good the creation produced by AI is.⁴¹

It is basically difficult to determine exactly where the elements of creativity in works created by AI where creativity includes intentions, emotions, aesthetic judgments, values, personal awareness, and morals, where these things cannot be mastered by algorithms as the basic system of Artificial Intelligence.⁴² Basically, for the creations produced by AI, humans here play the role of only programmers, and the AI system obediently follows the orders according to the algorithm given to the AI system. Artificial Intelligence basically only does what it is told to do. This means that it indirectly implies that the creativity that exists in the AI system lies in the ability to do something unexpected. For example, in the case of The Next Rembrandt, humans only play a role by pressing the buttons of the Artificial Intelligence system, training algorithms, or providing input data for the AI system. Meanwhile, the Artificial Intelligence system is independently responsible for the creation of its creations. The creations made by AI are the result of creative choices made by AI systems and cannot be predicted from a human point of view, because they depend on the system and not on the humans behind AI. If a creation made by this AI system cannot be predicted by humans, then it can be said that the creation made by AI can meet the creative requirements.

Based on the above explanation, it can be concluded that the AI system can meet the requirements of originality, manifested in a real form, and creativity. Therefore, creations produced by AI systems may meet the requirements to obtain copyright protection. However, the problem is when facing subjective problems with a creation, because the work is not created by humans but is the result of an AI system. The work does not meet the subjective concept of being able to be protected by copyright because the creator is not a person as stated in Article 1 number 2 of the Copyright Law. When a brain is created by artificial intelligence, the creator is not the result of the Intelligent System of Voyage. Works created by AI do not meet the subjective concept of a creation. However, the works fulfill the objective concept of a creation that therefore may obtain hak protection. Although the algorithm or a set of programming languages that support the process of working AI is created by humans and related to this programming will be given its own protection, but regarding AI that is able to produce a creation is a separate problem. AI that is able to produce a work can be said that this Artificial Intelligence is the creator of a work. Although basically until now it still causes a lot of debate.⁴³ Therefore, based on the above two theories, the works produced by AI are not considered as works that will obtain copyright protection based on these theories.

If the works produced by AI can provide benefits to many people, then providing protection for works produced by AI with copyright can increase the creation of works produced by AI in serving the interests of society. If the works produced by Artificial

⁴¹ Annemarie Bridy (2012). Coding Creativity: Copyright and the Artificial Intelligent Author, Stanford Technology Journal Law Review, California, p. 9

⁴² *Ibid*, p. 20

⁴³ Dwi Lestari Indah Sari (2019) Orisinalitas Karya Cipta Yang Dihasilkan Oleh Kecerdasan Buatan (Artificial Intelligence) Ditinjau Dari Undang-Undang Nomor 28 Tahun 2014 Tentang Hak Cipta, *Jurnal Hukum, Program Studi Ilmu Hukum, Fakultas Hukum, Universitas Brawijaya, Jawa Timur*, p. 12.

Intelligence are beneficial to society and are the same as works produced by humans, the works produced by AI must be protected, because as time goes by, the AI system is getting more sophisticated, the quality and quantity of works produced by AI are also increasing. Creations produced by AI can provide great advantages in the fields of science, technology, and also in the creative field.⁴⁴ The importance of providing copyright protection for works produced by AI, due to the growing trend of globalization that brings life in the all-digital era. Moreover, if the work produced by AI is not protected but the work made by humans receives copyright protection, it will cause law enforcement problems related to the protection of the work. It is often difficult to prove whether a creation was produced by an AI system or produced by a human. This will make the court require a lengthy and expensive procedure to evaluate the origin of each creation of what is indeed produced by humans, as it will certainly require technical expertise and detailed information in relation to the production process.

CONCLUSION

Creations generated by AI cannot be directly classified as copyright on behalf of AI itself, as AI is not recognized as a copyrighted legal subject. Instead, copyright ownership of AI-generated works depends on who has control over the AI, whether it's the developer, the user, or the company providing the AI technology. Thus, current copyright law still requires that copyright to AI works be granted to humans or legal entities that play a role in creating or operating the AI system that produces the work.

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⁴⁴ Senja Assinen, *Op Cit*, p. 48

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