Copyright Regulation for AI-Generated Images Legal Approaches in Indonesia and the United States

Made Doni Darma Dananjaya Raharja[1*], Ida Ayu Sadnyini,[2] Michael Angelo[3]

[1,2,3] Faculty of Law, Universitas Pendidikan Nasional, Denpasar, Indonesia.

: donidarma250@gmail.com
Corresponding Author*

Abstract

Introduction: *The background of this research addresses the generated image by Artificial Intelligence whether it is protected by copyright, it is based on creating an image is usually created directly by the person, but in this context the image created is made by artificial intelligence.*

Purposes of the Research: *The purpose of this research first to determine the copyright arrangements against images created by artificial intelligence in Indonesia and then to find out related copyright arrangements in the United States related to images generated by artificial intelligence.*

Methods of the Research: *This research uses normative legal research methods, and the approach used is normative legal research on the basis of the vagueness of norms related to images that degenerate by copyright including copyright. The approach used in this research is a conceptual approach, statutory approach, analytical approach, and comparative approach.*

Results of the Research: *According to U.S. law, AI can be considered as the entity performing the creation of a work, while the person who instructs AI to carry out the task is protected as the creator. In contrast, in Indonesia, the creator of a work is defined as a human, meaning that AI cannot be called the creator. Regarding the issue of images of individuals used in AI-generated photos, the individuals whose photos are used have the right to receive royalties as a form of recognition for their likeness being used by AI. Therefore, there is a need for regulations that govern the fact that someone cannot sell AI-generated photos without a licensing agreement with the image owner first.*

Keywords: Copyright; AI-Generated; Images.

INTRODUCTION

In today's era of rapid technological advancement, one of the challenges that arise is the presence of AI or artificial intelligence. This issue is crucial to address because AI is an intelligent machine that can be programmed to perform various tasks, such as creating specific images or content. For example, we can use AI to generate an image resembling a public figure like Ariel Peterpan without the consent of the individual whose likeness is being replicated. This raises serious concerns regarding copyright protection and privacy. How can we safeguard individual rights over creations produced by AI? This question becomes increasingly relevant amid the rapid adoption of AI technology across various sectors. [1] AI is a computer system designed with capabilities that closely resemble human intelligence. This technology enables the simulation of intelligence applied to various

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[1] Rr Aline and Gratika Nugrahani, "Pengaruh Teknologi Terhadap Kepemilikan Hak Kekayaan Intelektual," *Sejarah Artikel* 11, no. 2 (2024): 195–204, https://doi.org/10.25105/prio.v11i2.20049.

355 | Made Doni Darma Dananjaya Raharja, Ida Ayu Sadnyini, Michael Angelo. "*Copyright Regulation for AI-Generated Images Legal Approaches in Indonesia and the United States*"

SASI, 30 (4) December 2024: 355 - 368
P-ISSN: 1693-0061, E-ISSN: 2614-2961
Published by: Faculty of Law, Universitas Pattimura

platforms, allowing AI to think and act like humans. A widely recognized example is ChatGPT, which can generate text, song lyrics, or even images based on specific requests. Additionally, AI can make rational decisions to achieve certain goals. The presence of AI offers numerous benefits, especially in completing tasks that require faster execution than if done by humans. AI operates by leveraging big data and computer science. The system absorbs large amounts of labeled data and analyzes it to recognize specific patterns. To achieve this, AI requires a hardware and software foundation to write and train machine learning algorithms. AI's learning model is based on cognitive abilities such as learning, reasoning, and self-correction. However, amidst these numerous benefits, challenges such as copyright protection and the ethical use of this technology must be a primary focus in its development. [2]

The early history of artificial intelligence began in the 1950s, AI started to be recognised as a separate scientific discipline, especially after Alan Turing raised fundamental issues in his article titled "Computing Machinery and Intelligence". Turing introduced the "Turing test", a test to discover whether machines were able to think like humans. In 1956, the Dartmouth College conference in the US was conducted, which marked the official start of AI as a research field. This conference, initiated by John McCarthy, Marvin Minsky, Nathaniel Rochester, and Claude Shannon, discussed the potential for modelling human mental processes with machines.[3] The 1960s and 1970s were characterised by early developments in AI development. The main focus in this period was on high-level language programming and machine learning. In 1969, the first programme capable of playing a chess game, named "ELIZA", was developed by Joseph Weizenbaum at MIT. "ELIZA" used relatively simple programming techniques but showed that machines could produce responses that resembled those of human conversations.[4]

In 1997, IBM's Deep Blue became a pioneer in the world of AI by defeating the then world chess champion, Garry Kasparov, in a chess match. This feat demonstrated significant progress in the development of computers capable of performing complex calculations and strategies, although it was still limited to limited intelligence in a specific domain. IBM's Deep Blue's victory over Garry Kasparov was a moment that marked a remarkable achievement in the history of artificial intelligence. Deep Blue, a supercomputer designed specifically for the game of chess, managed to defeat the then world chess champion, Garry Kasparov, in a highly anticipated match. This victory highlighted the technological advances in the development of computers capable of complex calculations and strategic planning in a short period of time. While this feat shows artificial intelligence can overcome human intelligence in the context of a chess game, it is important to note that Deep Blue is limited to highly focused intelligence in a specific domain, the game of chess. Nonetheless, this victory gave a major boost to AI development and research, paving the way for further exploration of machines' ability to solve increasingly complex and varied issues.[5]

In the 21st century, AI is having a renaissance of sorts due to advances in deep learning and the use of big data. Deep learning, which uses profound artificial neural network

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[2] Bagus Gede Ari Rama, Dewa Krisna Prasada, and Kadek Julia Mahadewi, "Urgensi Pengaturan Artificial Intelligence (AI) Dalam Bidang Hukum Hak Cipta Di Indonesia," *Jurnal Rechtens* 12, no. 2 (2023): 209–24, https://doi.org/10.56013/rechtens.v12i2.2395.

[3] Nicolas Petit, "Law and Regulation of Artificial Intelligence and Robots: Conceptual Framework and Normative Implications," *Working Paper*, no. March (2017): 1–31.

[4] Ubaydullayeva Anna, "Artificial Intelligence and Intellectual Property: Navigating the Complexities f Cyber Law," *International Journal of Law and Policy* 1, no. 4 (2023): 1–8.

[5] Ubaydullayeva Anna.

architectures to extract patterns from big data, has enabled major achievements in facial recognition, natural language processing, and other applications that require complex data analysis. The development of this technology has been fuelled by major tech companies such as Google, Facebook, and Amazon, which have invested huge resources in AI research and the development of AI-powered products.[6] For example in 2016, AlphaGo, an AI program developed by DeepMind, achieved a historic milestone by defeating the reigning world champion of Go, Lee Sedol. This victory marked a significant advancement in artificial intelligence, showcasing its ability to learn complex strategies and adapt to unpredictable situations in a game renowned for its vast possibilities and strategic depth. Go is a board game with more possible board configurations than there are atoms in the observable universe, making it a daunting challenge for AI due to the immense computational and strategic complexity involved. AlphaGo utilized deep neural networks and machine learning techniques to analyze countless past games, developing an intuitive understanding of Go's principles and tactics.[7] During the match with Lee Sedol, AlphaGo demonstrated innovative and creative moves that surprised both experts and spectators alike, showcasing AI's capacity not only to mimic human thought but also to transcend it in certain domains. This achievement highlighted the potential of AI to tackle complex real-world problems beyond traditional game playing, such as optimizing logistical operations, advancing medical diagnostics, and enhancing scientific research.[8]

In Indonesia in particular, AI is becoming very popular when in social media AI can process with well-known public figures such as Jokowi, Prabowo doing funny dances that have never happened in the real world, all because of AI technology. AI as technology is very developed rapidly allows everything to be possible such as in the future there may be no film producers, songwriters, or painters, because everything can be replaced by AI.[9]

Copyright protection is an important thing and regulated in Indonesia by law, Law 28 of 2014 on Copyright governs it. Article 40 paragraph (1) letter f of Law Number 28 Year 2014 on Copyright has described that images are objects protected by this Law. This leads to a relevant question regarding artificial intelligence (AI) that is capable of automatically generating images and creative content. While AI may create works that fulfil the criteria of originality and creativity, the issue arises as to whether such works merit the same legal protection as works created by humans. Currently, copyright law in Indonesia generally recognises that human-generated works, including artworks, images, and other creative works, are automatically protected from the moment they are created in tangible form. However, clarity regarding the legal status of works produced by AI is still a matter of debate, especially in the context of who is considered the actual creator of the work: either the AI as a tool or the AI programmer as the intellectual creator.

The description above shows that AI can create works including images. This research aims to analyse and compare the copyright law arrangements in the context of images created by AI in Indonesia and the United States. The comparison of copyright

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[6] Mireille Hildebrandt, "The Artificial Intelligence of European Union Law," *German Law Journal* 21, no. 1 (2020): 74–79, https://doi.org/10.1017/glj.2019.99.

[7] Azamat Xudaybergenov, "Toward Legal Recognition of Artificial Intelligence Proposals for Limited Subject of Law Status," *International Journal of Law and Policy* 1, no. 4 (2023): 1–8, https://doi.org/10.59022/ijlp.55.

[8] Bart Verheij, "Artificial Intelligence as Law: Presidential Address to the Seventeenth International Conference on Artificial Intelligence and Law," *Artificial Intelligence and Law* 28, no. 2 (2020): 181–206, https://doi.org/10.1007/s10506-020-09266-0.

[9] Cantika Aulia, Egi Nugraha, and Raja Benhard, "Copyright Responsibilities of Artificial Intelligence in the Digital Age," *Indonesia Law Reform Journal* 3, no. 2 (2023): 145–54, https://doi.org/10.22219/ilrej.v3i2.26042.

arrangements between Indonesia and the United States is based on the United States is innovative in the transformation of law, especially in the field of technology such as AI.

Research that examines artificial intelligence has been conducted by previous researchers, such as Bagus Gede Ari Rama et al. (2024) which focuses on the urgency of regulating artificial intelligence in Indonesian copyright. The focus of the study focuses on how the development of technology is growing rapidly and artificial intelligence can create images and other works of art so that rules are needed.[10] Further research was conducted by Zaldy Salim Mhd et al. (2023) who analysed the reform of the Copyright Law in the era of artificial intelligence. The reform in the study needs to regulate artificial intelligence, this is based on the fact that AI has the potential to infringe on other people's copyrights, because only by generating images, the image is created on command even though the photos created belong to other people. Further research Nur Jamilah et al. (2024) which specifically analyses the effect of artificial intelligence on copyright. The study examines artificial intelligence in creating copyrighted works performed on the Bing Image Creator web, as an AI that can create images.[11] Of the three previous studies above, the research specifically aims to analyse (i) copyright regulation of images created using AI and (ii) legal comparison with the United States against images created by AI. Therefore, this research is original by the author.

METHODS OF THE RESEARCH

This paper uses normative legal research methods focusing on the vagueness of the norms listed in Article 40 paragraph (1) letter f of Law Number 28 of 2014 concerning Copyright that images are protected by copyright, the vagueness of the norm here is found in the matter of the creator is AI whether it remains protected under the Copyright Act, the approach used in this research is a conceptual approach, statutory approach, analytical approach and comparative approach[12]. Primary legal materials are sources of law derived from legislation or regulations that address specific legal issues. In this study, the primary legal material used is Law No. 28 of 2014 concerning Copyright, which does not yet provide detailed provisions regarding copyright in Artificial Intelligence. Secondary legal materials are supporting resources for primary legal materials, which may include articles, books, and journals. This study also utilizes tertiary legal materials, such as dictionaries.Legal material search techniques using document study techniques and study analysis techniques using qualitative analysis.[13]

RESULTS AND DISCUSSION

A. Image Generated Process Through AI Using Canva Web

To generate AI images using Canva, the steps can be outlined in detail to ensure the process can be followed easily and effectively. First of all, it is necessary to have a Canva account. If you don't have one, visit the Canva website and create an account by filling in the required information. After logging in, you will be directed to the Canva dashboard. a) On the dashboard, click the "Create a design" button. You will be given options to choose

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[10] Gede Ari Rama, Krisna Prasada, and Julia Mahadewi, "Urgensi Pengaturan Artificial Intelligence (AI) Dalam Bidang Hukum Hak Cipta Di Indonesia."

[11] Nurjamilah et al., "Pengaruh Kecerdasan Buatan Terhadap Hak Cipta (Analisis Karya Kreatif Yang Dihasilkan Dari Bing Image Creator)," *Jurnal Hukum Dan HAM Wara Sains* 3, no. 01 (2024): 77–83.

[12] I Made Pasek Diantha, *Metode Penelitian Hukum Normatif Dalam Justifikasi Teori* (Jakarta: PT. Karisma Putra Utama, 2016).

[13] Jonaedi Efendi and Prasetijo Rijadi, *Metode Penelitian Hukum Normatif Dan Empiris*, Edisi Kedu (Jakarta: Penerbit Kencana, 2022).

the type of design you want to create, such as "Custom dimensions" to set your own size or choose from available templates. Choose the type of design that best suits the purpose of creating AI images; b) After selecting the design type, you will enter the Canva editor. The next step is to add basic elements such as background, text, and other decorative elements. Use the tools available on the left panel to do this. For example, click on "Background" to select a background colour or a background image that is already provided; c) Now, it's time to integrate AI elements into your design. Canva provides an extensive library of images, including AI images. Use the search box at the top of the left panel and type in keywords such as "AI" or "Artificial Intelligence". This will display a wide selection of AI images that you can choose from and add to your design; d) After selecting the images you are looking for, add them to the design by clicking on them. There are options that allow resizing, moving the position, or adjusting the effect using the editing tools available in Canva. Make sure to adjust all elements to match your creative vision;[14] e) During the editing process, don't forget to save changes frequently. Canva automatically saves work frequently, but you can also click the "Save" button in the top right corner of the screen to make sure you don't lose the image; f) When the design is complete, the last step is to download or share the design. Click the "Download" button at the top right of the screen to select the file format you want (e.g. PNG, JPG, or PDF). If you want to share it online, you can also use Canva's "Share" option to send a link or invite collaborators; g) It is important to remember that this process can be customised to suit individual needs and preferences. Canva offers extensive flexibility in creating designs, including the use of various AI elements to achieve unique and interesting visual results. By following these steps, it is possible to create AI images that fulfil project or creative needs with Canva efficiently.[15]

B. Regulation of Generated Images By AI From United States Perspective

The United States Copyright Office (USCO) does not recognise the existence of non-human creators, no matter how smart an AI might be. It is based on the 1976 US Copyright Act (and the earlier 1790 and 1909 Acts) stating that copyright ownership "vests initially in the author or creator of the work," maintaining focus on the definition of creator in § 101 of the US Copyright Act, which contains all other definitions under the Act. Nevertheless, in 1956 when Klein and Bolitho tried to register a computer-generated song titled Push Button Bertha, the USCO rejected it out of hand, instructing them that no one had ever registered music written by a machine. In 1973, this was reinforced into USCO practice, so that copyright ownership should essentially remain with humans-this precedent then became USCO jurisprudence to this day.[16]

Whereas the USCO does not have direct legal support for their policy, federal courts have taken a seemingly consistent view in interpreting the statute. It is based on the Federal Court's decision in Community for Creative Non-Violence v. Reid, the Supreme Court defined the creator as the party who creates a work, clarifying that the creator must be the person who translates an idea into a fixed and tangible expression. Furthermore, in the court's decision in Uranti Foundation v. Maaherra, the United States Court of Appeals for the Ninth Circuit limited creation to the first human being who conceives, selects,

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[14] Cameron Adams Melanie Perkins, Cliff Obrecht, "Use AI Generated Images," Canva.com, 2024, https://www.canva.com/help/ai-image-generation-apps/.

[15] Melanie Perkins, Cliff Obrecht.

[16] Gulyamov Said et al., "Adapting Legal Systems to the Development of Artificial Intelligence: Solving the Global Problem of AI in Judicial Processes," *International Journal of Cyber Law* 1, no. 4 (2023): 4.

Made Doni Darma Dananjaya Raharja, Ida Ayu Sadnyini, Michael Angelo. "*Copyright Regulation for AI-Generated Images Legal Approaches in Indonesia and the United States*"

coordinates, and organises a work. Finally, in Aalmuhammed v Lee, the United States Court of Appeals for the Ninth Circuit made it clear that copyright ownership of a work of authorship as a whole recognises only the person as the creator.[17]

Since 1965, the USCO was faced with an issue relating to the question of computer- or machine-generated (AI) creation processes, but the issue was eventually dismissed altogether. Within that year, several people attempted to register works that were at least partially authored by computers. To address this issue, Congress established the National Commission on New Technological Uses of Copyrighted Works (CONTU) to study the impact of new technologies on the US Copyright act, including the creation of works by computer systems.[18] CONTU's final report, published in 1978, directly concluded that it was unlikely for works to be created independently by computers because: a) Computers are no more than passive tools of creation; b) There is no reasonable ground to believe that computers are capable of making the necessary creation contributions to works produced through their use. This conclusion appears to be based on the same reasoning that courts have generally applied to copyright: The "inventive essence" required for copyright is essentially missing from computer systems, and such capabilities are unique only to humans.[19]

In another case, though not directly involving AI systems, the Naruto v Slater case (the "Monkey selfie" case) is instructive in understanding how courts are currently examining the question of whether non-human creators can claim copyright protection. Further, Photographer David J. Slater who was in Indonesia taking wildlife pictures at the time, accidentally had a 6-year-old male monkey named Naruto pick up his camera and "snap" some pictures of him.[20] Interestingly, The People for the Ethical Treatment of Animals sued to obtain copyright ownership status for Naruto, but the court, relying on USCO policy and the case law cited above, ruled that Naruto could not be the creator and legal holder of copyright ownership of the selfie.[21] In the United States copyright act of 1976 explains that the so-called creator is a human being this is in accordance with Circular 9, Work-Made-For-Hire Under the 1976 Copyright Act, as for the explanation: "Although the general rule is that the person who creates the work is the creator, there are exceptions to the principle; the exceptions are work made for hire, that is, work prepared by a worker within the scope of his work; or a work specially ordered or commissioned in certain circumstances. When a work qualifies as a work made for hire, the employer, or the commissioning party, is deemed to be the creator."[22] The explanation is clear in terms of contexts such as AI can be said to be the recipient of work from the employer in this context the user who uses the AI to create a copyrighted work, so the only one who can be called the creator is the person who commissions the AI to create a copyrighted work.[23]

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[17] Ubaydullayeva Anna, "Artificial Intelligence and Intellectual Property: Navigating the Complexities f Cyber Law."

[18] Bimo Satria Fajrin Nugroho and Muhamad Adji Rahardian Utama, "Legal Protection of Copyright in the Globalization Era: A Comparison of Indonesia and China," *Journal of Law and Legal Reform* 1, no. 4 (2020), https://doi.org/10.15294/jllr.v1i4.39424.

[19] Amelia Puspita Sari and Dara Manista Harwika, "Legal Liability of Artificial Intelligence in Perspective of Civil Law in Indonesia," *International Journal of Social Science Research and Review* 5, no. 2 (2022): 57–60, https://doi.org/10.47814/ijssrr.v5i2.191.

[20] Carmen O G Castrillon, "Protection of Intellectual Property through Border Measures in the European Union Protection of Intellectual Property through Border Measures in the European Union (∗)," *Aida*, 2012.

[21] Russ Pearlman, "Recognizing Artificial Intelligence (AI)," *Journal Of Law & Technology*, no. 2 (2018).

[22] George Benneh Mensah and Alfred Addy, "Critical Issues for Regulating AI Use in Mental Healthcare and Medical Negligence," *Journal of Law* 1, no. 1 (2024): 1–16, https://doi.org/10.13140/RG.2.2.30853.97768.

[23] Ekinia Karolin Sebayang, Mahmud Mulyadi, and Mohammad Ekaputra, "Potensi Pemanfaatan Teknologi Artificial Intelligence Sebagai Produk Lembaga Peradilan Pidana Di Indonesia," *Locus Journal of Academic Literature Review* 3, no. 4 (2024): 317–28, https://doi.org/10.56128/ljoalr.v3i4.311.

The reason it is considered that copyright is only for humans is that copyright is a legal concept that rewards individuals for their original works. Creativity is often considered an expression of human uniqueness and the ability to produce works of art, literature, or other innovations. Artificial intelligences, while able to produce 'impressive' works, do not possess creativity in the same sense as humans. They are more the result of calculations and algorithms than creative expression.[24]

Some of the arguments regarding granting moral rights and copyrights to humans hinge on their ability to perceive and understand the world in a way that is different from non-human entities.[25] Humans have a unique capacity to feel emotions, compassion, and have deep subjective experiences.[26] This is often considered as a basis for granting them greater moral protection compared to artificial intelligence which has no consciousness or subjective experience, so that is the basis why only humans can be recognised as creator subjects to their works of creation, this is in accordance with the reward theory that the creator or inventor who produces a creation or invention must be protected and must be rewarded for his efforts to produce an invention or creation. This explains that humans feel the appreciation of these intellectual works so that they deserve to be protected.[27]

C. Regulation of Generated Images By AI From Indonesia Perspective

Images generated by AI are the objects of copyright works, which are protected under Copyright Law No. 28 of 2014. AI or Artificial Intelligence is a computer characterised by solving cognitive problems commonly associated with the intelligence of humans, such as learning, creating, and recognising images. An explanation of AI can be found in the Merriam Webster Dictionary. According to Merriam Webster Dictionary, AI is defined as the capability of computer systems or algorithms to imitate intelligent human behaviour. [28]

The images generated by AI in this research are images as a form of creativity produced by the ideas of a person. Cambridge Dictionary explains that an image is "a painting or drawing to represent an object or person, which can be made manually by painting as a paint or photo as a photography"[29], These explanations tell it that what is meant by an image can be divided into two, either a painting, which is a work made by painting to represent a particular object or subject, or a photo which is the result of photography of a particular object or subject. The explanation of the image tells us that clearly the image produced by AI is an image as an object of intellectual property protected by copyright.[30] Copyright law in Article 40 letter f has explained the protected creation whether it is carving, drawing, calligraphy, sculpture, collage, sculpture, or visual art. We know that the copyright law Article 1 number 1 explains that what is meant by copyright: "Copyright is the exclusive right of the creator which arises automatically based on declarative principles after a work is realized in real form without reducing restrictions in accordance with statutory

[24] Harry Surden, "Artificial Intelligence and Law Enforcement," *Georgia State University Law Review* 35, no. 4 (2019): 225–54, https://doi.org/10.1007/978-3-030-32361-5_10.

[25] Yudhi Priyo Amboro, "Prospek Kecerdasan Buatan Sebagai Subjek Hukum Perdata Di Indonesia," *Law Review* XXI, no. 2 (2021): 193–217.

[26] Stanley Greenstein, *Preserving the Rule of Law in the Era of Artificial Intelligence (AI)*, *Artificial Intelligence and Law*, vol. 30 (Springer Netherlands, 2022), https://doi.org/10.1007/s10506-021-09294-4.

[27] Hary Abdul Hakim, Chrisna Bagus Edhita Praja, and Sung Ming-Hsi, "AI in Law: Urgency of the Implementation of Artificial Intelligence on Law Enforcement in Indonesia," *Jurnal Hukum Novelty* 14, no. 1 (2023): 122–34, https://doi.org/10.26555/novelty.v14i1.a25943.

[28] Merriam Webster Dictionary, "Artificial Intelligence," Merriam Webster Dictionary, 2024, accessed July 16 2024

[29] Cambridge Dictionary, "Picture," Cambridge Dictionary, 2022, accessed on july 16 2024

[30] Endang Purwaningsih and Irfan Islami, "Analisis Artificial Intelligence (Ai) Sebagai Inventor Berdasarkan Hukum Paten Dan Hukum Islam," *Jurnal Ilmiah Galuh Justisi* 11, no. 1 (2023): 1, https://doi.org/10.25157/justisi.v11i1.8915.

provisions." Explanation regarding copyright seen from the perspective of the image object protected by copyright. When viewed from the normative perspective of the creator, Article 1 number 2 Copyright law defines the creator as: "a person or group of people who individually or together produce work that has distinctive and personal characteristics."

In this case, a person in Indonesian civil law is understood as a rights holder, or legal subject. Furthermore, Subekti explained that basically every human being can be considered a bearer of rights from birth until he dies. However, not all rights holders can be considered competent before the law.[31] Humans, for example, can only be considered competent after reaching adulthood, 21 years. Indonesian positive law recognizes that legal subjects are (i) natural persons, and (ii) legal entities. In the Indonesian Copyright Law (Article 1 number 27) it is clearly stated that a "person" can be an individual (human) or a legal entity. Both have the capacity to bear rights and become legal subjects.

In terms of "distinctive and personal" characteristics, the Copyright law basically does not explain further how these characteristics. In this case, an approach will be used to cases related to Copyright law in Indonesia, and only succeeded in finding limited explanations about "typical and personal" characteristics.[32] For example, in the Banjarnahor case against PT Holcim in 2015, the court at the Judicial Review stage determined copyright ownership of a computer program by asking the disputing parties about how the computer program (software) works. The plaintiff is the only one who can explain how the software works. Meanwhile, respondents could not explain how the program worked. Therefore, the court determined that the plaintiff had "distinctive and personal" characteristics of the software. Therefore, in this case the Plaintiff was finally determined to be the creator of the software. Furthermore, in the case "Government of the Republic of Indonesia v. Arifin" in 2016, the characteristic "distinctive and personal" is considered as long as the creation is truly the result of someone's thoughts or ideas, which is realized in a concrete and original form, and such a creation is only known by its creator.[33]

Referring to the above ruling, the characteristics of "distinctive and personal" are very closely related to the creator's knowledge of his creation. Furthermore, the test of whether a work is distinctive and personal in this case is carried out by testing whether the person claiming copyright for the work has knowledge of the work itself. In the case of copyright disputes over software, "distinctive and personal" characteristics are attributed to people who know how to make the software work. Or, in the case of the creation of an image, for example, there are "distinctive and personal" characteristics given to people who can explain the process of creating the image—but that is not necessarily to be attributed to those who only have knowledge of the image.[34]

Based on current Copyright law, AI cannot be considered the creator of a creation because it is not a person and does not have special and personal characteristics that can be

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[31] Indra Padillah Akbar and Asep Sarifudin, "Legalitas Kecerdasan Buatan (Artificial Intelligence) Sebagai Subjek Hukum Pemegang Hak Paten," *NUSANTARA: Jurnal Ilmu Pengetahuan Sosial* 11, no. 2 (2024): 779–88, http://jurnal.um-tapsel.ac.id/index.php/nusantara/article/view/14217/0%0Ahttp://jurnal.um-tapsel.ac.id/index.php/nusantara/article/download/14217/8507.

[32] M. Khoirul Wahid Azmi, Abdul Rokhim, and Benny K. Heriawanto, "Legality and Legal Protection of Visual Art Works Produced through Artificial Intelligence," *Dinamika Jurnal Ilmiah Hukum* 30, no. 1 (2024): 9041–59, https://jim.unisma.ac.id/index.php/jdh/article/view/23614/17668.

[33] Nadia Intan Rahmahafida and Whitney Brigitta Sinag, "Analisis Problematika Lukisan Ciptaan Artificial Intelligence Menurut Undang-Undang Hak Cipta," *Jurnal Pendidikan Dan Konseling* 4, no. 6 (2022): 9688–96.

[34] Rafly 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): 1–16, https://doi.org/10.11111/dassollen.xxxxxxx.

362 | Made Doni Darma Dananjaya Raharja, Ida Ayu Sadnyini, Michael Angelo. "*Copyright Regulation for AI-Generated Images Legal Approaches in Indonesia and the United States*"

SASI, 30 (4) December 2024: 355 - 368
P-ISSN: 1693-0061, E-ISSN: 2614-2961
Published by: Faculty of Law, Universitas Pattimura

associated with the creation. Therefore, the most interesting thing to discuss in this case is that Indonesia's Copyright law was changed to accommodate the existence and creative work of AI. With regard to copyright ownership, the first and most important thing to decide is whether UUHC will grant copyright to AI. In terms of the "distinctive and personal" characteristic requirement, if it is still understood that only the creator can explain how a creation works, then AI cannot be considered the creator of a creation. Therefore, this research proposes a second alternative improvement. Furthermore, this improvement aims to connect the AI creators who produce the work with the people who have made the most significant contributions to that work. This attribution then gives copyright ownership to humans which can explain how AI is able to produce a creation. In fact, this kind of approach has been adopted by the UK for computer-generated work. It is also stated that in the case of the work being generated by a computer, the author is the person who makes the arrangements necessary for the creation of the work (UK CDPA 1988, s. 9 (3)). Thus, this provision does not provide copyright for AI. Instead, the provision actually grants copyright to the person who has the "necessary arrangements" for the creation of a work. The term "necessary" here is not clearly defined, but opens up broader possibilities for people to be recognized as creators of AI-generated work. It could be the programmer who builds the AI or even the person who trains and runs the AI program. Because the creation of AI-generated work can involve many parties, the law must be clear in providing parameters for the people who make the most significant contributions.

The process of creating or generating a person's photo through Artificial Intelligence (AI) without consent can lead to significant harm, particularly in terms of intellectual property rights. Intellectual property rights encompass the protection of intellectual creations, including a person's image or visual identity, which carry both moral and economic value. When AI is used to generate someone's photo without their permission, the identity or personal characteristics that should be the exclusive rights of the individual are exploited without proper compensation or recognition. This constitutes a direct violation of the individual's intellectual property rights.

In this context, a person's visual identity can be considered part of Related Rights as regulated under copyright law. If someone's image is used for commercial purposes or other goals that benefit third parties, the individual depicted in the image should have the right to receive royalties or compensation. Unauthorized use of their image not only causes financial harm but also moral harm, as the individual loses control over their own representation. This violates the fundamental principles of intellectual property protection, which aim to provide recognition and reward to those who contribute creatively or add value to a work.

Another significant concern is the potential misuse of AI-generated images. Photos created without permission can be used in inappropriate contexts, damaging reputations, or even defaming the individual. In some cases, such images may be utilized for manipulative purposes, such as deepfakes, which pose a high risk of personal and professional harm. This underscores the growing importance of recognizing intellectual property rights to protect individuals from technological exploitation.

Given these risks, it is essential for developers and users of AI technology to prioritize respect for intellectual property rights. Ensuring that any use of a person's visual identity has their explicit consent is a critical step toward maintaining fairness, ethics, and legality

in the application of AI technology. In determining who makes the most significant contribution to the creation process, it is also necessary to determine which contribution is considered more significant for the creation generated by AI. It can also be given in the initial process of creating AI, or when AI is fed by data to be learned and processed. In this case, the most significant contribution to the initial process of creating AI will give copyright ownership to an AI-generated creation to the programmer who created the AI. The main reason is that without the initial process of AI creation, the next stage will not be achieved.[35] On the other hand, the most significant contribution can also be attributed to the data feeding stage; where AI is integrated by data, and it learns to generate new creations after studying its data. This stage can also be considered an important stage because it serves the main process of producing a creation. In this case, the copyright ownership will be associated with the person who provided the data and carried out the programming process.[36]

Every individual whose likeness is used as a result of an image generated by Artificial Intelligence (AI) is entitled to royalties under the provisions of Article 80 of Law No. 28 of 2014 concerning Copyright. This article stipulates that the copyright holder or related rights owner has the right to grant a license to other parties through a written agreement. Such an agreement allows the licensee to perform specific acts as regulated in Article 9 paragraph (1), Article 23 paragraph (2), Article 24 paragraph (2), and Article 25 paragraph (2) of the Copyright Law.[37]

In the context of using AI-generated images, if an individual's likeness is reproduced or utilized by other parties, that individual may be considered the owner of related rights since the reproduction is intrinsically linked to their identity or distinctive features. Based on Article 80 paragraph (3), the execution of a license agreement must include the obligation of the licensee to provide royalties to the copyright holder or related rights owner for the duration of the license period.[38]

This provision underscores the importance of respecting the rights of individuals involved, including in works generated by AI. The determination of the royalty amount is carried out through a licensing agreement that adheres to prevailing industry practices and prioritizes fairness. Thus, in the arrangement of royalties for AI-generated images, there must be an equitable agreement between the party utilizing the image and the individual featured in the image. This not only provides legal protection for the individual but also ensures that the use of AI technology aligns with ethics and fairness in copyright law.[39]

Furthermore, individuals whose likenesses are used in AI-generated outputs are entitled to recognition, in line with Reward Theory, which emphasizes the significance of acknowledging intellectual creations produced by inventors, creators, or designers. Reward Theory is based on the principle that any creative effort resulting in innovation, design, or ideas deserves appreciation as a form of compensation for the effort, time, and expertise

[35] Maulana Reyza Alfaris Rahmadi Indra Tektona, Nuzulia Kumala Sari, "Quo Vadis Undang-Undang Hak Cipta Indonesia : Perbandingan Konsep Ciptaan Artificial Intelligence Di Beberapa Negara," *Universitas Jember*, no. 37 (2021): 285–305.

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[37] Kelvin Chendrawan and Nathaniel Hardynatha, "Legal Analysis on The Digital Works Generated by Artificial Intelligence Under the Indonesian Copyright Law," *Anthology: Inside Intellectual Property Rights* 2, no. 1 (2024): 270–83.

[38] Nugraha Pranadita, Agus Rahayu, and Lili Adi Wibowo, "The Effect of Work Creation Law on the Five Forces of Competition Related to the Formulation of Competitive Strategies According to Michael E. Porter," *Advances in Economics, Business and Management Research* 220, no. 1 (2022): 491–96, https://doi.org/10.2991/aebmr.k.220701.090.

[39] Paarth Naithani, "Regulating Artificial Intelligence under Data Protection Law: Challenges and Solutions for India," *Indian Journal of Law and Justice* 14, no. 2 (2023): 436–54.

invested.[40] In the context of AI-generated works, even though the image is produced by technology, the identity of the individual used as the basis of the creation remains a crucial element of the creative process. Therefore, recognition of the individual's contribution is not only just but also consistent with principles of respect for personal rights. Such recognition may take the form of royalties, credit, or other acknowledgments reflecting the intellectual value and creativity inherent in the subject of the work. By granting such recognition, individual rights are protected, and ethical, responsible innovation in the use of AI technology is encouraged.[41]

In the explanation above, it is known that images are objects protected by copyright, but the subjects protected by copyright in Indonesia are still humans, because the image was not created automatically without a person ordering the AI. People who control AI according to Indonesian regulations are only humans who can be protected as a copyright context, this is in accordance with Article 1 point 2 of the Copyright law.[42] So the AI is legally protected in the context of the person who ordered the AI to become an image. In the context of AI as ordered by humans, it is not a legal subject related to copyright, on the basis that Copyright law was created to protect not only the material aspects of the creator of a work but also the morals of that work, AI is known to be only a program based on the theory of moral appreciation as part of the rights obtained by creators, and AI do not have these morals, so AI that creates a work does not receive legal protection, while humans who command the AI are legally protected as creators.[43]

CONCLUSION

According to U.S. law, AI can be considered as the entity performing the creation of a work, while the person who instructs AI to carry out the task is protected as the creator. In contrast, in Indonesia, the creator of a work is defined as a human, meaning that AI cannot be called the creator. Regarding the issue of images of individuals used in AI-generated photos, the individuals whose photos are used have the right to receive royalties as a form of recognition for their likeness being used by AI. Therefore, there is a need for regulations that govern the fact that someone cannot sell AI-generated photos without a licensing agreement with the image owner first.

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365 | Made Doni Darma Dananjaya Raharja, Ida Ayu Sadnyini, Michael Angelo. "*Copyright Regulation for AI-Generated Images Legal Approaches in Indonesia and the United States*"

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Published by: Faculty of Law, Universitas Pattimura

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