

## Issues and Possibilities in Regulating Artificial Intelligence (AI) Related To Copyright in Indonesia



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**ABSTRACT:** This paper discusses the challenges and opportunities of regulating artificial intelligence (AI) and its implications for copyright, with a focus on the Indonesian context. Internationally, the United States and the European Union have begun to develop AI regulations, although they are not yet fully comprehensive. Indonesia, while lacking detailed regulations, has developed a National Strategy for Artificial Intelligence 2020-2045 to guide the development of this technology. Key challenges include regulatory ambiguity, insufficient protection of personal data, and ethical issues. Copyright in Indonesia, under Law No. 28 of 2014, provides automatic protection for works that are original and embodied in tangible form. In the context of works created by AI, there are two views: first, AI works cannot be copyrighted because they lack personal characteristics and human creative process; second, AI works can be copyrighted because of their ability to create complex works and as an incentive for AI users. This article concludes that the government needs to rewrite copyright law to accommodate AI works, given their potential as a significant source of innovative and creative works.

**KEYWORDS:** AI Regulation, Copyright Law, Indonesia, Ethical Issues, National Strategy for Artificial Intelligence

### I. INTRODUCTION

The phenomenon of globalization arising from the rapid development of social, economic, and especially technological aspects, such rapid development cannot be stopped. The effects of globalization can be felt in various aspects of life, even globalization has also changed the role of the nation. It needs to be adapted to the new realities emerging in the world. Globalization will only succeed if the nation continues to play an active role in it and adapt to new realities (Prasetya, 2022)

In facing this new reality, it must also be followed by legal reform or the development of regulations, but against the pace of globalization, the law has not been able to balance itself against the pace of globalization, resulting in the law being very slow in responding to globalization, it is necessary in order to maintain a balance in complex relationships within an unlimited scope, as well as to determine how the rights attached to each person and their obligations. In the development of globalization, especially entering the quarter of the 21st century, technology is developing very quickly, which is very visible at this time is the development of artificial *intelligence (AI)* technology or can be called artificial intelligence very rapidly. Airlangga Hartarto as the Coordinating Minister for Economic Affairs of the Republic of Indonesia strongly encourages the development of industrial technology 4.0 which provides an opportunity for the Indonesian state to be interconnected with other countries through the help of computer technology. The resulting combination of *Internet of Systems*, *Cyber-Physical*, and *Internet of Things (IoT)* enables smart factories to become a reality (Fauzi, 2023)

*Artificial intelligence (AI)* technology is a man-made system or technology that is capable of imitating human actions and has the ability to think like humans in carrying out certain tasks (Fahrudin, 2018). *AI* itself has been introduced since 1956 by John McCarthy, an American computer expert and computer scientist. McCarthy used the term "Artificial Intelligence" in a scientific conference at Dartmouth College, New Hampshire, United States. During the conference, McCarthy and several other scientists discussed how to create machines that could think and act like humans. At first, *AI* was only used as a tool to solve complex math and logic problems such as in chess games.

The use of *artificial intelligence (AI)* is now very diverse, ranging from: Language Processing: *AI* is used to develop systems that can understand various languages; Image Processing: *AI* is used to develop systems that can classify images of objects; Robotics: *AI* is used to develop robots that can move and act independently; Data Processing: *AI* is used to develop systems that can process and analyze large and complex data, even to the point of utilization: *Intelligent Personal Assistants: AI* is used to develop intelligent personal assistants such as *Siri*, *Google Assistant*, and *Alexa*; *Machine Learning: AI* is used to develop systems that can learn from data and improve themselves; *Natural Language Processing: AI* is used to develop systems that can understand and communicate with humans using human language; and *Computer Vision: AI* is used to develop systems that can recognize and

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process images, such as facial recognition and object recognition. In everyday life, we often do not realize that we are accustomed to using *AI* in the form of *Search Engines*, when using *Search Engines* often display relevant topic suggestions to help users. These suggestions do not appear randomly, but are the result of user data analysis performed by search engines using data processing technology with artificial intelligence (*AI*)

In this rapid pace and progress of technology, its impact on human life cannot be ignored. From the development of technology as it is today, it has both positive and negative impacts on human life (Yudoprakoso, 2019). So that in its utilization it is necessary to pay attention so that the impact brought by this rapid technological development is in a positive direction, even though there is often a utilization that is deemed inappropriate even to the point of misuse of *AI*. In its current development, *AI* is also utilized in the creation of works. This very fast and rapid development becomes a problem when it is not matched by the development of laws or regulations, the rapid progress of digital technology opens up great opportunities for progress. However, it should also be realized that digital technology brings significant challenges, especially in designing appropriate regulations to govern it (Parlementaria). The lack of regulations governing *AI* is a question mark as to what the legal position of *AI* is, there was even a debate as to whether an *AI* can be called a separate legal subject, so with the various questions and challenges that exist over the development of *AI*, clearer and more detailed regulations are needed, ensuring that *AI* is used properly and responsibly, preparing a coherent *AI* regulatory framework, and a legal review of the role of *AI* as a deterrent to violations (Qur'ani, 2019). In addition, the development of Artificial Intelligence technology also requires an appropriate ethical approach to ensure that the technology is used correctly and responsibly and does not violate existing ethical values.

As technology continues to advance, the art world is also undergoing a significant transformation. Today, works of art are not only conventionally produced by humans, but also involve the role of technology. The development of technology has led to the emergence of artificial intelligence or *AI*, which is often used in the creative process. *AI* assistance is not uncommon in creating more realistic, aesthetic, and quality artworks. In addition, *AI* can also be a source of inspiration for artists in creating amazing works (Jamilah, 2024). Artificial intelligence that is often used in producing works here such as *Chat GPT*, *Chat Bot*, to *AI Art Generator*, even software development companies in the creative field of design, one of which is Adobe. Inc also adds *artificial intelligence* features in one of its products.

Through Art Generator, an *AI* program can generate images from text data inputted by users, which is often referred to as *AI Text to Image*. This process allows users to generate images with certain models, styles, colors, and criteria determined through the text they provide. A wide variety of images can be generated according to the user's wishes, which can then be selected and downloaded. Even *Art generators* that use *artificial intelligence (AI)* can not only create an image but can now even create a video / *AI Text to Video*. Not only art generators are complex systems, simpler ones such as *Chat GPT* are used to serve as virtual assistants that can help users with a wide variety of tasks and questions, from providing information, giving advice, performing tasks such as composing text, translating, or even having discussions on certain topics. It is designed to be a flexible tool and can be used in a variety of contexts, from education and work to entertainment and research in text form.

In such a complex manner of utilizing *AI* in the creation of works whether in the form of writings, images, or even videos, the question arises regarding copyright claims or other rights to works produced through *AI* by users. Humans as users here are individuals who use their minds and creativity to create something new and continue to innovate. The result of such creations gives rights known as Intellectual Property (*IP*). According to the Journal of Intellectual Property Law in Indonesia, David I Bainbridge defines Intellectual Property as rights arising from individual creations with the source of creativity, with the aim of supporting individual life and having economic value. It is concrete in the field of Science and Technology. This definition confirms that Intellectual Property is an appreciation of human intellect, which produces works that need to be legally protected because of its creative and explorative process that involves hard work both in mind, physical, and mental.

Intellectual Property is born from human thinking and produces various innovations that are beneficial to human life. In conclusion, *IP* is a legal right that protects creative products that have economic value, originate from individual intellectual creativity, and are regulated within the framework of intellectual property. Copyright is a component of Intellectual Property that includes exclusive rights that are automatically granted to the creator in a concrete form, in accordance with the declarative principle, without depending on the limitations set forth in certain legal regulations, as described in Article 1 paragraph (1) of Law Number 28 of 2014 concerning Copyright (Awatari, 2020).

Copyright provides protection to works that have been realized in a real form and have originality, so it is not the result of plagiarism from the work of others. The work can be in the fields of literature, art, and science, as long as it has economic value. However, if the work is only an idea without being realized in a form that is accessible to others, copyright does not apply.

Copyright has two aspects, namely moral rights and economic rights. Moral rights include the right to include the creator's name in the work as well as the right to alter or control the work. Moral rights are inalienable, even after the copyright protection period has expired, and remain with the creator during his or her lifetime. Economic rights, on the other hand, include the right to reproduce and publish the work as well as provide economic value that can be utilized (Silvana, 2023). Moral rights are a non-transferable part of copyright, so they remain with the creator of the work forever or are part of the creator's personal integrity. This

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means that the creator has control over how his or her work is used and attributed, and retains the right to be recognized as the creator, even after the copyright has expired.

Meanwhile, the economic rights attached to copyright indicate that the work has economic value and can be utilized for financial gain. Economic rights include the right to reproduce and publish the work, which allows the copyright owner to control the use and distribution of the work for economic gain. This underscores that the difference between moral rights and economic rights in the context of copyright, where moral rights are non-transferable and relate more to the integrity of the creator, while economic rights can be utilized for economic gain.

### II. PROBLEM STATEMENT

Based on the above description, 2 (two) main problems can be drawn that will be discussed in this paper:

1. How does the existing legal regulation in Indonesia relate to the development of AI and what are the challenges facing the development of AI in Indonesia?
2. How does the use of AI affect the copyright of a work as regulated by the Copyright Law?

### III. RESEARCH METHOD

In this study, based on problems above the author aims to explore these issues based on Scientific research to solve social problems often involves a scientific approach, such as using the normative juridical method. This method focuses on analyzing the law by internally examining legal norms as the object of research (Jonaedi, 2018). The normative juridical method is used to provide legal argumentation when there is ambiguity, uncertainty, or normative problems. Another explanation states that this method plays a role in maintaining a critical perspective of law-based science as a discipline that has normative or unique characteristics (Diantha, 2016). This method approach utilizes two types of legal sources: primary and secondary. Primary legal materials include all written rules enacted by the state, such as articles or laws. On the other hand, secondary legal materials used in this research include book literature, articles, opinions, and research made by legal experts. normative juridical method utilizes various legal sources, both primary and secondary, to support the analysis and argumentation in the research. Primary legal sources provide a strong legal foundation, while secondary legal sources provide additional contributions in the form of thoughts and views from legal experts as well as the results of related research.

### IV. RESULT AND DISCUSSION

#### A. Regulations related to Artificial Intelligence (AI) Technology and Challenges to the Development of AI Technology in Indonesia

The regulation of Artificial Intelligence in the international arena has been the subject of discussion since several years ago, Some countries that have started discussing rules regarding Artificial Intelligence are as follows:

##### 1. United States:

In February 2019, the White House issued an Executive Order on AI, directing federal agencies to promote AI innovation and develop appropriate regulations for the technology. Artificial Intelligence (AI) regulation in the United States has been a topic of increasing concern and discussion in recent years. As AI technology advances and becomes more integrated into various aspects of society, policymakers and lawmakers have recognized the need for a regulatory framework to address its potential risks and ensure responsible development and deployment.

To date, however AI regulation in the United States is still in its infancy, and there is no comprehensive federal law specifically addressing AI regulation. However, there are laws and regulations that touch on certain aspects of AI, such as privacy, security, and anti-discrimination. In addition, various federal agencies have been actively involved in exploring AI policies and issuing guidelines.

##### 2. European Union:

The European Union has issued several regulations relating to Artificial Intelligence, including the *General Data Protection Regulation (GDPR)* and the *Ethics Guidelines for Trustworthy AI*. And even in April 2021 the Council of the European Union has proposed Regulation Of The European Parliament And Of The Council Laying Down Harmonized Rules On Artificial Intelligence (*Artificial Intelligence Act*) And Amending Certain Union Legislative Acts. and on June 14, 2023 by the European Parliament *Artificial Intelligence Act (AI Act)* was passed. The existence of this AI act is to ensure that Artificial Intelligence (AI) systems used in the European Union are safe, transparent, traceable, non-discriminatory, and environmentally friendly. AI systems must be supervised by humans, not automation, to prevent potentially harmful outcomes.

In Indonesia, there is currently no regulation that specifically regulates Artificial Intelligence technology in a clear and detailed manner. However, currently, AI is still regulated in the Electronic Information and Transaction Law No. 11 of 2008 or its amendment Law. No. 19 of 2016 by seeing that Artificial Intelligence is understood to be the same as Electronic Agents as stipulated in Article 21 of the ITE Law. In facing the challenges of regulating Artificial Intelligence technology in Indonesia, it is necessary to make it easier for the public to understand the existing regulations and ensure that Artificial Intelligence technology is used

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correctly and responsibly, although the Indonesian government continues to strive to regulate the use of Artificial Intelligence technology.

One of the steps taken is the establishment of the National Strategy for Artificial Intelligence 2020-2045 by BPPT (Agency for the Assessment and Application of Technology) in collaboration with government agencies, national agencies / institutions, universities, industry, associations and communities in the field of artificial intelligence. Which is Stranas KA is a national policy guide that leads to the development of Artificial Intelligence (AI) technology. The use of AI is expected to increase company productivity, optimize the use of labor, and stimulate innovation in various fields (Strategi Nasional Kecerdasan Artifisial 2020-2045).

Although in Indonesia there is no regulation that regulates clearly and in detail about Artificial Intelligence, the Indonesian government is clearly taking approaches to adopt this artificial intelligence technology, this is also done to be able to face the challenges that arise from the development of Artificial Intelligence Technology in various sectors of society, including challenges in the legal field, among others, as follows:

1. The lack of clarity and detailed provisions regarding the use of artificial intelligence technology may lead to legal uncertainty and potential misuse by irresponsible parties (Qur'ani, 2019).
2. Inadequate protection of personal data is an important issue. The use of artificial intelligence technology can enable the collection and processing of large amounts of personal data, so there is a need for regulations that protect the privacy rights of individuals (Hari, 2021).
3. The ethical challenges that arise in connection with the use of artificial intelligence technology need to be considered so that the technology does not have a negative impact on society and the environment (Qur'ani, 2019).
4. In terms of the utilization of AI technology, it is unclear how the rights arising from the use of AI in the process of creating copyrighted works.

### B. The Effect of the Use of AI in the Creation of a Work on the Copyright of a Work

Before entering the discussion of how the effect of the use of *Artificial intelligence* in the creation of a copyrighted work on the copyright of a work needs to be understood in advance about how the concept of intellectual property, in writing *The Philosophy of Intellectual Property* by Justin Hughes, can be taken understanding of the concept of intellectual property and its comparison with physical property. Intellectual property is defined as rights associated with ideas or intellectual works, such as copyrights, patents, trademarks, and trade secrets. While physical property is related to ownership of physical objects, such as land and goods (Hughes, 1988).

There are several important points that can be underlined in the explanation of *What Counts as Intellectual Property?* Intellectual property has a more egalitarian nature than physical property. This is because intellectual property can be acquired by anyone who has a unique idea or work, regardless of their social background or wealth. Intellectual property has a certain time limit, which is different from physical property that can be inherited permanently. This time limit gives intellectual property an aspect of social neutrality and allows for the development of a more dynamic society. There are limitations to intellectual property rights, including in terms of *fair use* and use for research or educational purposes. Although intellectual property has limitations, the concept still has great importance in enhancing the progress of science and art, as well as promoting innovation and the creation of new works. Thus, the understanding that can be drawn from the description is that intellectual property is the rights associated with ideas or intellectual works, which have a certain time limit and are regulated by law to promote innovation and the creation of new works in society.

In the same paper there are 2 (two) theories or philosophical justifications introduced about how the concept of *intellectual property*, especially such as copyright, namely *Lockean Justification* and *Hegelian Justification* (Hughes, 1988), briefly the two theories can be explained as follows:

#### i. Lockean theory:

The Lockean theory of property, first put forward by John Locke, emphasizes that individuals have a natural right to own and use property, be it physical or intellectual property. Locke argued that the right to property arises from individual effort, i.e. through hard work and personal endeavor. In the context of copyright, Lockean theory is used to justify a creator's exclusive right to his or her own work, which is acquired through personal effort and contribution to the creation process.

#### ii. Hegelian theory:

The Hegelian approach to property, which is based on the philosophy of Georg Wilhelm Friedrich Hegel, emphasizes that property is a manifestation of individual will and personality. Hegel viewed property as a way for the individual to actualize himself and to recognize himself as a unique individual. In the context of copyright, the Hegelian approach leads to the understanding that copyright is not only about exclusive rights to works, but also about self-expression and recognition of the creator.

Furthermore, it will be discussed how the concept of copyright according to the legislation in force in Indonesia, namely in Law (UU) No. 28 of 2014 on Copyright states Copyright is the exclusive right of the creator that arises automatically based on the declarative principle after a creation is realized in real form without reducing restrictions in accordance with the provisions of the legislation.



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The declaratory principle in copyright states that the moment a work is created and expressed in a concrete form, the copyright on that work is automatically protected. This means that the creator does not need to register his work or record it officially to get copyright protection. Copyright protection is granted since the work is created and realized in a real or documentable form. In other words, copyright is granted to the creator directly and automatically since the moment of creativity is realized in an accessible work. This principle provides legal certainty for creators and encourages innovation and creative expression without burdening them with a complicated registration process.

The creator's creation arises from the thought process and creativity of the creator (Simatupang, 2021). A work must be an original work. This means that the work must be produced by a person who recognizes the work as his or her own, and must not be a copy of another work (Alwi, 2018). If an author has used a high degree of knowledge, skill, and expertise in creating his or her work, it is considered sufficient to satisfy the originality requirement necessary for the work to be protected. In this context, "originality" refers to the uniqueness and distinctiveness of a work, which means that the work is the result of the creator's original thought and expression, rather than a mere imitation or copy of someone else's work. So if a creator has applied a high level of knowledge and expertise in the process of creating his work, then the work is considered to have sufficient originality to merit copyright protection. This emphasizes the importance of individual contribution and innovation in the creation of works worthy of protection by copyright law.

Based on the descriptions above related to the concept of *Intellectual Property*, especially regarding copyright on a work, then how is the copyright on works created using *AI*, the work produced with *AI* here is not something that *AI* itself creates a work but a work created based on commands or *prompts*, which refers to the arrangement of a list of ideas in the form of sentences for a theme to the *AI* system. The term was originally known as the opposite of a computer interface, which is a command line that asks a human to respond. However, the term Prompt is now a verb rather than a noun as it was before. Prompts are used in *AI* systems to initiate or fill in messages and request answers or information from the *AI* system by the user.

In copyright, there are two requirements that must be met in order for a work to be considered a creation, namely originality and fixation. This originality requirement is explained in Article 1 paragraph (2), which states that the creator is an individual or group who individually or jointly creates something that has certain personal and unique characteristics. The word "personal" here indicates that a work must have a uniqueness that comes from the individual, and this uniqueness is only owned by humans. This means that the work must reflect the unique personality and expression of its creator, which cannot be replicated identically by another person or by an algorithm or machine (Faisal, 2023). And the condition of Fixation is the process of self-expression in a tangible form or in this case in the form of a work. The creator of a work and the *AI* user who gives orders to *AI* to create a work may be equalized as a person or individual who has personal characteristics as a human being. However, works created using *AI* cannot fulfill the element of personal characteristics and uniqueness because although the command given to *AI* is from a human being, the creation process or the fixation process is only based on the command given to *AI* and not necessarily produced by *AI* in accordance with the expression of the user.

In Indonesian law, copyright is an exclusive right that includes moral rights and economic rights. This means that a work that does not qualify as a creation will not have any special rights in it. For example, an image generated by Bing Image Creator using artificial intelligence (*AI*) cannot be considered a creation protected by copyright. While there may be an initial idea on which the image is based, but since there is no direct implementation done by a human being as a tangible form of creating the image artwork, the image cannot be claimed as a protected creation (Jamilah, 2024).

In the context of intellectual property rights, a protectable work is one that has been realized, not just an idea. Thus, while *AI* can generate images based on the ideas fed into it, the most fundamental shortcoming is the lack of a human creative role in the creation process. Copyright grants protection to creative expressions created by humans as a result of their thoughts, imagination, and skills, and not mere ideas or concepts that have not been realized in tangible form by human action. However, this cannot be confirmed just yet because this is just an analysis by looking at how a copyright is recognized according to the applicable regulations, and there is no regulation that regulates in detail about *AI*, especially also related to copyright on works created with *AI*.

On the other hand, there is a school of thought that states that *AI* can be categorized as a subject in its own right, and it is believed that it is better to give the exclusivity and economic benefits of *AI* to someone than to no one at all (Tektona, 2021). The emergence of this argument underlines that the development of *AI* technology is advancing, which allows *AI* to create works with a higher level of complexity and quality. As a result, there is a question of how copyright and economic rights should be applied to such *AI*-generated works, as it is undeniable that new technological advancements can become an economic opportunity for those who can capitalize on them (Achmadi, 2024).

Proponents of this view argue that granting exclusive rights to individuals who use *AI* to create works may encourage further investment and development in *AI* technology. It may also provide incentives for individuals or companies to use *AI* in their creative processes, with the expectation that they will obtain exclusive rights to the works produced by the *AI*. However, there are still questions and debates related to the legal recognition of *AI* as legitimate creators. One of the main issues is that *AI* does not have human-like will or consciousness, making it difficult to establish moral rights or attribute creative expression to non-human entities.

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So it can be understood that the copyright on works created by AI there are 2 (two) views can be categorized as follows:

*First*, that works created using AI cannot be copyrighted because:

- Lack of Personal Characteristics and Uniqueness: Copyright is granted to works that have certain personal and unique characteristics that reflect the individual expression of the creator. Although the command or prompt to create the work is given by a human, the process of creation is largely done by the AI without any significant creative contribution from the human. Therefore, the resulting work may not have the distinctiveness or uniqueness that reflects the personal expression of the creator.
- Limitations of the Creative Process: In the context of creating works with AI, the creative activity is more a result of algorithms and data processing rather than the unique creative expression of humans. While AI can produce works that look original, the process is dependent on the algorithms and datasets used, not on human creative thinking. The resulting works may be more akin to replications or variations of the data that the AI has learned than the result of human creative imagination.
- Limitations of Fixation: One of the conditions for obtaining copyright is that the work must be fixed in a tangible form. In the context of AI, while the work may be generated in digital or physical form, the process of its creation does not necessarily involve the same process of fixation as a work created by a live human being. Fixation in the context of AI is more related to algorithm implementation and model building, rather than to creative expression associated with the process of creating artwork.

*Second*, works created using AI can be copyrighted based on:

- AI's Ability to Create Complex Works: The development of artificial intelligence (AI) technology has enabled AI to create works of increasing complexity and quality. AI can produce works that look original and have artistic or creative value, such as music, paintings, or writing.
- Incentivizing and Rewarding AI Users: Granting copyright to works produced by AI can incentivize individuals or companies to use AI technology in their creative processes. Exclusive rights to AI-generated works can encourage further investment and development in AI technology, as the owner of the work will have an economic interest in utilizing AI to create marketable works.
- Recognition of AI Technology Contributions: Recognizing copyright in works produced by AI also recognizes the contribution of AI technology in creating works that have artistic or creative value. This can encourage further development in the field of artificial intelligence and reward the achievements of AI technology in creating works that have social and economic impact.

With the advancement of computer capabilities, especially in terms of artificial intelligence (AI), the government must realize that humans are no longer the only source of innovative and creative works. Therefore, it is important for the government to be able to accommodate the works and consider redrafting the copyright law or providing changes or additional articles that can accommodate the issues of moral rights, economic rights, and the protection period for AI creations in the future.

## V. CONCLUSIONS

The development of artificial intelligence (AI) technology presents challenges and opportunities in terms of regulation and copyright. In the United States and the European Union, AI regulations are evolving, while in Indonesia, there are no regulations that specifically regulate AI in detail. Indonesia has established a National Strategy for Artificial Intelligence 2020-2045 to guide the development of AI, although legal challenges remain, such as regulatory vagueness and personal data protection. Copyright law, under Law No. 28 of 2014, provides automatic protection for works embodied in a tangible and original form that reflects the personal characteristics of the creator. In the context of works created by AI, there are two views: first, AI works cannot be copyrighted due to the lack of personal characteristics and the limitations of the human creative process; second, AI works can be copyrighted due to the ability of AI to create complex works and the incentives for AI users. The government needs to consider recognizing AI contributions and redesigning copyright law to accommodate AI works in the future, as AI can be a significant source of innovative and creative works.

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