

Legality of Copyright Protection on *Artificial Intelligence* Works

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Abstract. *The advancement of artificial intelligence (AI) technology has brought significant challenges to the legal system, especially regarding copyright protection. The ability of AI to produce works independently raises questions about originality, ownership, and legal responsibility. Existing legal systems are designed to protect human works, so they are not fully prepared to accommodate AI innovation. This article discusses the legal challenges presented by AI works and how the law can adapt to provide adequate protection. Approaches such as expanding the definition of originality, regulating contribution-based ownership, and harmonizing international policies are proposed as solutions. With inclusive regulation and responsive law enforcement, it is hoped that the legal system can maintain a balance between encouraging technological innovation and protecting human creative rights.*

Keywords: *Artificial Intelligence, Copyright, Originality, Ownership, Legal Regulation*

1. BACKGROUND

Copyright is one of the main pillars in the intellectual property protection system that serves to protect human works born of creativity and intellect. Through copyright, creators are granted exclusive rights to control and utilize their work, both morally and economically. In a broader context, copyright also plays an important role in encouraging innovation, providing incentives for creators, and creating a conducive environment for cultural and technological development (Anny & Sugiastuti, 2024).

However, in the era of the Industrial Revolution 4.0, technology is developing rapidly and presenting new challenges in the copyright protection system. One significant development is the emergence of *artificial intelligence* (AI). AI technology is now capable of producing a variety of works, ranging from visual art, music, literature, to software, whose quality can match or even surpass human work. AI works by using complex algorithms and large databases, allowing these systems to learn independently and create something original without direct human involvement.

AI's ability to produce creative works raises various legal issues, especially related to copyright protection. Traditionally, copyright is granted to humans or legal entities that create a work through their intellectual ability and creativity. However, works produced by AI raise the question: can they be protected by copyright? If so, who is considered the copyright holder?

Is the creator of the AI the owner of the technology, the user of the AI who gives instructions, or can the AI itself be considered a legal subject?

In Indonesia, the intellectual property legal system is regulated in Law Number 28 of 2014 concerning Copyright. However, the law has not explicitly regulated works produced by AI. This leads to a legal vacuum that can create uncertainty for the various parties involved. For example, if a work of art produced by AI is used commercially without permission, who has the right to file an infringement suit? This uncertainty is not unique to Indonesia, but has also been debated in countries facing similar technological developments (Dwiastuti, 2024)

In the global context, some countries have begun to examine and adopt different approaches to copyright protection of AI works. In the UK, for example, copyright law provides protection to machine-generated works, but the rights are granted to the party who organized the process of creating the work. Meanwhile, in the United States, there are legal decisions that assert that copyright can only be granted to humans. This difference in approach reflects the complexity of the issues faced in determining the legal status of AI works.

On the other hand, ethical and philosophical considerations also influence this debate. Some legal experts argue that granting copyright to AI may undermine the basic values of copyright based on human creativity. However, if AI is not given legal status, then the incentive to develop this technology may be hampered. Hence, a balance is needed between legal protection of AI works and recognition of human creative contributions.

Research on the legality of copyright protection for AI works has high relevance in Indonesia. With the widespread use of AI technology in various sectors, such as art, education, entertainment, and creative industries, an adaptive and responsive legal framework is needed. In addition, this study is also important to prevent potential legal disputes in the future and ensure the protection of rights for all parties involved in the process of creating AI-based works.

Therefore, this research aims to identify and analyze legal gaps in Indonesia's copyright regulations related to AI works, examine approaches in other countries for comparison, and provide policy recommendations that are in line with national needs and global technological developments. Thus, this research is expected to serve as a foundation for the establishment of a more comprehensive and equitable legal framework in the digital era.

2. THEORETICAL STUDY

Copyright is part of intellectual property that provides legal protection for original works that are realized in tangible form. This right includes two main aspects, namely the moral rights inherent in the creator to remain recognized and maintain the integrity of his work, as well as economic rights that give exclusive authority to the creator to make commercial use of the work. In the Indonesian legal system, copyright protection is regulated by Law No. 28 of 2014 on Copyright, which places humans as the main subject entitled to copyright. However, technological developments, especially in the field of artificial intelligence (AI), present new challenges to this traditional concept.

In legal discourse, there are two main approaches to AI work. The first approach sees AI as a tool or means used by humans. In this view, copyright remains attached to the individual who uses the AI to create the work. The second approach, which is more controversial, considers AI as a self-contained entity that has the capacity to create works independently. This approach raises philosophical and legal questions about whether AI can be recognized as a legal subject, as traditionally, a legal subject is a human or legal entity that has rights and obligations.

In legal theory, this development raises the need to adapt the legal framework to be more responsive to technological change. Progressive Law Theory, for example, emphasizes that the law must be dynamic and able to answer the challenges of the times, including the challenges presented by AI. Meanwhile, Legal Gap Theory explains the importance of new regulations to fill the legal vacuum created by technological developments. Without clear regulations, legal uncertainty can be detrimental to the parties involved, be it the creators of AI technology, users, or the public who enjoy the results of the work.

This theoretical study provides an important framework for analyzing the legality of copyright protection of AI works in Indonesia. By understanding the underlying theories and existing legal approaches, this study can provide relevant recommendations to address existing legal gaps and ensure fairness for all parties. This approach is not only important to protect the rights of creators, but also to encourage innovation and create an adaptive legal framework to face the challenges of the digital era.

1. The article entitled "Construction of Infringement and Copyright Protection of Artificial Intelligence Visual Works" by Ajeng Dania Mada Dewi, et al., discusses the development of artificial intelligence (AI) technology that allows the creation of visual works by AI systems. This phenomenon presents new legal challenges related to copyright infringement and protection. This research evaluates the applicability of

conventional copyright concepts to AI works as well as the need for adjustments to the legal framework. The results show that copyright law needs to be updated to accommodate creation by AI, including the regulation of rights and responsibilities of developers, users, and AI entities (Dewi et al., 2024) .

2. Nadya Dewi Chrisanti and Hariyo Sulistiyantoro's article titled "Analysis of Copyright Legal Protection of Artificial Intelligence Artworks Reviewed in Indonesia, the UK, and Canada" discusses the copyright protection of artificial intelligence (AI) artworks in Indonesia, the UK, and Canada. The research evaluates the legal recognition and protection of AI artworks, including the differences in treatment across the three countries. The UK protects AI artwork for 50 years and Canada for 70 years after the originality test, while Indonesia has not recognized AI artwork because AI is considered a legal object. This research uses normative legal methods with conceptual and comparative approaches, supported by literature studies of primary, secondary, and non-legal materials (Chrisanti & Sulistiyantoro ., 2024)
3. The article entitled "The Legality of Artificial Intelligence as a Legal Subject of Patent Holders" by Indra Padillah Akbar and Asep Sarifudin discusses the position of artificial intelligence (AI) as a legal subject in relation to patents. This research highlights the advancement of AI technology that facilitates human activities, but raises legal issues in intellectual property, especially patents. The main focus is whether AI can be recognized as a legal subject responsible for its legal actions. This research uses positive law-based normative legal methods and literature review as secondary data. The results show the position of AI in the law regarding liability for its legal actions (Akbar & Sarifudin, 2024) .

3. RESEARCH METHODS

This research uses normative legal methods to analyze copyright protection of works produced by artificial intelligence (AI). Using statutory, conceptual, and comparative approaches, this research examines Law No. 28/2014 on Copyright, international principles such as the Bern Convention and TRIPS Agreement, as well as legal concepts related to originality, legal subjects, and the position of AI. Data was collected through a literature study of primary, secondary, and tertiary legal materials, including books, journals, and trusted websites. Qualitative analysis was conducted to identify legal gaps, compare regulations in other countries, and formulate policy recommendations that are adaptive to the development of digital technology.

4. RESULTS AND DISCUSSION

Along with the rapid development of technology, AI is now able to create creative works such as art, music, writing, and even design, which previously could only be produced by humans. This raises a fundamental question: are works produced by AI worthy of copyright protection, and who is entitled to the copyright? Traditionally, copyright is granted to the human individual who is considered to be the creator of the work, but in the case of AI works, the creator is no longer fully identifiable as a human individual. Therefore, one of the main challenges in copyright protection is how to classify AI as a "creator" or as a tool in the process of work creation (Arimbi & Putra, 2024) .

On the one hand, some countries like the United States have explicitly stated that copyright can only be granted to works produced by humans, asserting that AI is merely a tool or means used by humans to create works. On the other hand, countries such as the UK and some EU countries have started exploring the possibility of granting copyrights on AI works to the individuals or entities that develop and operate the technology. This approach assumes that humans retain control over AI, even if it plays a role in the self-creation process.

In the context of Indonesian law, copyright protection is regulated by Law Number 28 of 2014 concerning Copyright. This law grants exclusive rights to creators of works that have originality and can be realized in tangible form. However, the lack of clarity regarding who is entitled to the work of AI is problematic, given that AI is not a recognized legal subject in the Indonesian legal system. Therefore, this discussion will further analyze whether there is a need to revise the existing laws to accommodate technological developments, or whether other approaches can be adopted, such as granting copyright to parties that develop or operate AI technology (Nurjannah, 2024) .

In addition, it is important to discuss the social and economic implications of granting copyright protection to AI works. On the one hand, copyright protection may encourage further innovation and development in the field of AI technology. However, on the other hand, existing legal uncertainties may create inequities in the distribution of economic benefits from AI works, especially if copyright is only granted to certain parties that control the technology. Therefore, a balanced policy is needed between incentivizing innovation and protecting the fair rights of all parties involved.

Legal Restrictions Imposed by AI's Ability to Produce Works.

The ability of artificial intelligence (AI) to produce creative works brings significant legal challenges, especially in the context of copyright protection. These challenges arise because the existing legal system is designed based on the assumption that the creators of

works are humans, while AI creates works autonomously through complex algorithmic processes. The mismatch between the traditional legal framework and the evolving capabilities of AI creates issues that require serious attention (Purnama et al., 2024) .

One of the biggest challenges is determining the legal subject entitled to copyright protection of works produced by AI. In copyright law, the creator is a human individual or legal entity that has a will and responsibility. However, AI does not have a human-like consciousness or will, so it cannot be considered a legal subject. The question that arises is who can be considered the copyright owner of an AI work? Is it the technology developer, the user operating the AI, or any other party involved in the creation process? This ambiguity opens up room for complicated legal disputes.

In addition, the concept of originality in copyright is a prominent issue in the context of AI works. Copyright is granted to works that are original, born out of the creativity and effort of the creator. However, works produced by AI are often the result of analyzing and processing pre-existing data. While such works may appear to be new, their originality is difficult to measure because they are not entirely the result of human creativity. This poses a legal dilemma: are such works still worthy of copyright protection, and how does the law define originality in the context of AI?

Uncertainty regarding copyright ownership of AI works is also a challenge that needs to be resolved. In situations where AI works have commercial value, the question of who gets the economic benefits becomes an important issue. If copyright is granted to the technology developer, it may monopolize innovation. On the other hand, if it is granted to AI users, there will be challenges in determining the extent of the user's contribution to the creation process.

Another challenge is how to regulate legal liability if an AI work infringes on another party's copyright. AI may produce works that unintentionally resemble or even copy existing works, creating the potential for copyright infringement. In such cases, it is unclear who should be liable: is it the AI developer who created the algorithm, the user who operates the technology, or the other parties involved? This uncertainty can create complex legal issues and requires clear regulation (Azmi, 2024) .

On an international scale, challenges also arise due to different approaches among countries in dealing with AI-generated works. Some countries, such as the United States, only recognize copyrights for works produced by humans, while other countries are beginning to consider protecting AI works. This misalignment can lead to barriers in international trade and dispute resolution related to AI works in the global market (Setiadarma et al., 2024) .

In addition to the legal challenges, the social and economic implications of copyright protection of AI works also need to be considered. If AI works are exclusively protected, it may encourage further development of the technology, but it also has the potential to shift the role of humans in the creative industries. Reliance on AI in producing works may create inequality in access to economic benefits, especially for human creative workers who may lose opportunities to compete with technology (Christi & Cahyaningsih, 2024) .

How the Current Legal System Can Adapt to Provide Adequate Protection for AI Works

The current legal system faces a major challenge in adapting to provide adequate protection to works produced by artificial intelligence (AI). This challenge requires innovative and flexible approaches, given the different characteristics of AI from traditional human creation. As a first step, the law needs to re-examine fundamental concepts such as originality, ownership, and legal subject, which have been the basis for copyright protection (Setiawan & Michael, 2024) .

One way the legal system can adapt is by updating the definition of originality in the context of copyright. Originality can no longer be defined solely as the result of human creativity, but needs to include works produced by AI with human assistance in the development process. This entails recognizing that even if AI works autonomously, human inputs such as training data, algorithm design, or user goals affect the final outcome of the work. By expanding this definition, the law can provide protection to AI works without losing the basic principle of originality.

In addition, adaptation of the legal system can be done by regulating copyright ownership of AI works. One approach that could be considered is to grant copyright to individuals or entities that have significant control over the process of creating the work, such as technology developers or AI users. This approach emphasizes the importance of human contributions in the operationalization of AI, while ensuring that copyright does not only go to the technology itself. This arrangement should also include a fair profit-sharing mechanism, especially if the AI work has high commercial value.

Legal systems may also adopt new, more flexible protection models, such as "AI-related rights." These models can provide temporary or limited protection to AI works without classifying them directly as traditional copyrights. This approach allows the law to accommodate AI works without changing the basic structure of the existing intellectual property rights system (Michael & Selvie, 2024) .

At the international level, harmonization of policies between countries is essential to create consistent standards of protection for AI works. International agreements such as the Bern Convention or the TRIPS Agreement can be updated to cover AI works, including cross-jurisdictional ownership issues and global trade (Reza & Kristanto, 2024) . Collaboration between member states can help reduce legal uncertainty and provide clarity for innovators and industry players.

In addition to substantive legal arrangements, adaptation of the legal system also requires updates in law enforcement mechanisms. Legal institutions need to be equipped with an adequate understanding of AI technologies in order to appropriately handle disputes involving AI works. Training judges, lawyers, and policymakers on these technologies is an important step to ensure that laws can be applied effectively and relevantly (Hasanah et al., 2024) .

Last but not least, the legal approach should take into account the social and economic impacts of protecting AI works. Regulations should strike a balance between incentivizing technological development and protecting human creative workers from being marginalized by AI dominance in the creative industry. The legal system can adopt inclusive policies that encourage collaboration between humans and AI, so that both can complement each other in producing works (Wahyuono et al., 2024) .

By taking these steps, the legal system can adapt to meet the challenges posed by AI works while providing fair, relevant and sustainable protection. This adaptation is not only important to ensure the sustainability of the legal system in the digital age, but also to create an environment that supports technological innovation while respecting the principle of fairness in the protection of intellectual property rights.

5. CONCLUSIONS AND SUGGESTIONS

Advances in artificial intelligence (AI) technology have presented significant legal challenges in the context of copyright protection. AI's ability to generate works autonomously shakes the foundations of legal systems designed to protect human works. The lack of clarity regarding originality, ownership, and responsibility for AI works creates an urgent need to update the existing legal framework. While AI works have great potential to drive innovation, their legal protection must be carefully designed so as not to undermine the role of humans as key creative actors. The legal system needs to adopt flexible approaches, such as expanding the definition of originality, regulating ownership based on significant contribution, and considering new protection models such as "AI-related rights."

In addition, international policy harmonization is an important step to create legal clarity on a global scale, given that AI often operates across jurisdictions. At the domestic level, policymakers and legal practitioners need to update their understanding of AI technologies in order to appropriately and fairly address legal disputes that arise. Balanced regulation should ensure the protection of technological innovation without compromising social and economic justice for creative human workers.

As a suggestion, policymakers should immediately start a cross-disciplinary dialog to formulate relevant and inclusive regulations. Collaboration between jurists, technologists, academics, and industry players is essential to create a legal framework capable of accommodating the complexities of AI. Public education on the impact of AI on copyright is also needed to build collective awareness of the importance of balancing technological innovation and the protection of individual rights. In addition, there is a need to develop technology-responsive enforcement mechanisms, including specialized training for law enforcers so that they can handle cases involving AI works professionally.

With these measures, it is hoped that the legal system can adapt effectively, provide fair protection to AI works, and remain relevant in the digital age without forgetting the principles of fairness and sustainability in the protection of intellectual property rights.

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