CHAPTER I

INTRODUCTION

1.1 Background

Artificial Intelligence (AI) is a multifaceted concept that encompasses a variety of definitions and interpretations across different fields. At its core, AI refers to computing systems designed to simulate human cognitive functions such as learning, reasoning, and problem solving. These simulations can take many forms, from narrow AI, which is specialized for specific tasks, to artificial general intelligence (AGI), which aims to replicate human-like intelligence across a wide range of activities.[1] The definitions of AI often highlight its ability to perform tasks that traditionally require human intelligence. For instance, Veselovsky et al. describe AI as a set of technological solutions that enable machines to carry out creative operations typically associated with human cognition, including self-learning and autonomous problem-solving. Similarly, Lyons emphasizes that AI involves computational approaches aimed at mimicking human capacities, which often leads to the perception of human-like features in these systems,[2] This perspective aligns with Nilsson's assertion that AI is concerned with intelligent

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[1] Veselovsky M Y and V A Trifonov, "Intellectual Governance in the Digital Economy of Russia," 2021.

[2] Joseph B. Lyons et al., "Responsible (Use of) AI," *Frontiers in Neuroergonomics* 4 (2023), https://doi.org/10.3389/fnrgo.2023.1201777.

behavior in artifacts, emphasizing the importance of perception, reasoning, and learning in complex environments.[3]

The impact of AI on art creation and human creativity is becoming increasingly significant with advancements in technology. In the realm of art, AI is increasingly being utilized as both a tool and a collaborator. Artists are employing AI algorithms to generate artwork, create music, and even write poetry. This integration of AI into artistic practices raises intriguing questions about creativity and authorship. For instance, AI systems can analyze vast datasets of existing artworks to produce new pieces that mimic certain styles or themes. Some notable projects include the use of generative adversarial networks (GANs) to create visual art that challenges traditional notions of originality. This has radically changed our perception of art and the creative process. While AI offers new avenues for exploring ideas, concerns about originality and the human role in art persist.

One positive aspect of AI in art creation is its ability to accelerate the creative process. By employing algorithms to process vast datasets, AI can generate innovative patterns and styles. For instance, AI can analyse thousands of classical artworks and produce paintings with unique styles while being inspired by existing ones. This enables artists to experiment

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[3] Na Liu, Philip Shapira, and Xiaoxu Yue, "Tracking Developments in Artificial Intelligence Research: Constructing and Applying a New Search Strategy," *Scientometrics* 126, no. 4 (April 1, 2021): 3153–92, https://doi.org/10.1007/s11192-021-03868-4.

with latest ideas without being constrained by traditional techniques or lengthy experimentation.[4]

Art is a broad and complex concept, which has been defined and interpreted differently by diverse cultures and individuals throughout history. Simply put, art can be understood as a creative human expression that involves imagination, skill, and feeling to produce works of aesthetic value.

Art comes from the Sanskrit word "Sani," which means "worship," "offering," and "service." According to the Indonesian Dictionary, art is the skill of creating works of high quality, judged by their refinement and beauty. The dictionary also defines art as creations made with extraordinary skill, such as dance, painting, and carving. Artistic works are the result of artistic creation.[5]

In the Indonesian Dictionary, the definition of art has three meanings: First, art is described as refined, small, delicate, thin, soft, pleasing to the ear, tiny, and beautiful. Second, it refers to the skill of creating high-quality works (in terms of beauty and refinement). Third, it signifies the intellectual ability to create something of high value. The dictionary

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[4] Idris, D. K., R. Birasa, C. S. Martis, and D. R. Philippe. "Comparative Analysis of Classical and AI-Based MPPT Techniques in Stand-Alone PV Systems: Perturb and Observe, Incremental Conductance, and Fuzzy Logic." In *2024 IEEE International Conference and Exposition on Electric and Power Engineering (EPEi)*, 139–144. 2024.

[5] Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia. *Seni*. Kamus Besar Bahasa Indonesia (KBBI) VI daring. Diakses dari https://kbbi.kemdikbud.go.id/entri/seni.

translates art as the skill of creating works of high quality, evaluated based on their refinement and beauty. The dictionary also states that art refers to creations made with exceptional skill, such as dance, painting, and carving. Artistic works are the result of artistic creation.[6]

KBBI further explains that art is a form of ability or skill to create works of high quality, which can be seen from various aspects, such as technical refinement, aesthetic beauty, and the artistic value embedded within. These artistic works can be found in various forms, such as dance, painting, sculpture, or carving, all of which are manifestations of the creator's expertise and creativity. Furthermore, art can also refer to an intellectual ability to produce something not only beautiful but also of extraordinary value, capable of inspiring and leaving a profound impact. This is often associated with individuals who possess exceptional intelligence or unique talents, often referred to as geniuses, who are able to create something beyond the ordinary.[7]

Art and works of art are manifestations of human creativity, which not only include technical skills, but also involve intellectual, emotional, and spiritual aspects.[8] Art has the unique ability to convey human ideas,

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[6] Hartono, et al. Ilmu Budaya Dasar. Jakarta: PT Bina Ilmu, 2004. p. 32.
[7] Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia. *Seni*. Kamus Besar Bahasa Indonesia (KBBI) VI daring. Diakses dari https://kbbi.kemdikbud.go.id/entri/seni.
[8] Nizhnikov, S. A. *Art and Creativity: The Concept of Spiritual Creativity*. 2017.

feelings, and experiences in a form that can be appreciated and felt by others, making it an important part of human culture and experience.[9]

The question of whether AI developers can be considered authors when humans use AI to create creative works takes us to a new dimension in the discussion of art and creativity. This is a complex issue that is still being debated in the legal and artistic communities. On the one hand, AI is a tool created and programmed by humans and can therefore be considered an extension of human creativity. However, on the other hand, modern AI has the ability to produce output that is not always fully predictable or controlled by its programmers.[10]

In the context of copyright law, the traditional definition of "author" usually refers to a human individual who creates an original work. However, with the advancement of AI technology, the boundaries of this definition are beginning to be questioned. Some argue that AI developers can be considered indirect authors, because they create the system that enables the creation of creative works. However, others argue that AI output should be considered a public work, with no copyright holder.

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[9] Galushko, M., and V. Drannyk. "Philosophical Thought and Artistic Creativity of Western Europe at the Turn of the XIX–XX Centuries." *Humanitarian Studios: Pedagogics, Psychology, Philosophy*, 2023.

[10] Guan, A. "Research on Copyright Protection of Works Generated by ChatGPT." *Journal of Innovation and Development*, 2023.

If we consider AI developers to be authors, this could open the door for them to obtain copyright protection for the works produced by the AI they develop. However, this raises complex questions about how to define originality and creativity in the context of AI. In addition, there are concerns that granting copyright to AI developers could limit innovation and public access to AI-generated works.[11]

In the context of IPR (Intellectual Property Rights), an author is defined as the creator of an original work who has exclusive rights to his/her work.[12] The relationship between authors and IPR is remarkably close, where IPR aims to protect the rights of authors to their works, including economic rights and moral rights. Economic rights allow authors to benefit financially from their work,[13] while moral rights protect the integrity of the work and the author's reputation.[14]

However, when we consider AI in this equation, the situation becomes more complex. Currently, most jurisdictions have not explicitly addressed the legal status of AI-generated works in the context of IPR. Some countries, such as the UK, have begun to adapt their laws to accommodate computer-generated works, but there is still much debate

[11] Mukoji, C. "Copyright Protection for AI-Generated Works in Tanzania: The Need for Legal Reforms." *East African Journal of Law and Ethics*, 2024.
[12] Undang-Undang Republik Indonesia No. 28 Tahun 2014 tentang Hak Cipta, Pasal 1 Ayat 2, Lembaran Negara Republik Indonesia Tahun 2014 No. 242, https://peraturan.bpk.go.id/Home/Details/55856/uu-no-28-tahun-2014.
[13] Undang-Undang Republik Indonesia Nomor 28 Tahun 2014 tentang Hak Cipta, Pasal 8.
[14] Undang-Undang Republik Indonesia Nomor 28 Tahun 2014 tentang Hak Cipta, Pasal 5.

about how to deal with works generated by more sophisticated and autonomous AI.[15]

In conclusion, the question of the status of AI developers as authors and their copyright to AI-generated works remains a legal and ethical grey area. As technology continues to advance, we may need to re-frame traditional concepts of authorship, creativity and intellectual property rights. This requires ongoing dialogue between policymakers, technology developers, artists, and the public to create a framework that is fair and beneficial to all parties in this AI era.

Given the complexities and challenges posed by AI in the context of copyright, it is important to consider the significance of copyright protection for AI developers. Copyright protection plays a crucial role in encouraging innovation and creativity in the field of AI development, while providing recognition and potential financial compensation for the efforts and investments made.

For AI developers, copyright protection can serve as an important incentive to continue developing and refining their technology. With the assurance that their work – whether source code, algorithms, or creative outputs generated by AI – will be legally protected, developers can feel more secure in exploring innovative ideas and investing in long-term

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[15] Gaffar, H., and S. Albarashdi. "Copyright Protection for AI-Generated Works: Exploring Originality and Ownership in a Digital Landscape." *Asian Journal of International Law*, 2024.

research. This not only benefits developers individually but can also drive the advancement of AI technology, which in turn can benefit society at large.

In addition, copyright protection can also help create a fairer and more competitive environment in the AI industry. By protecting developers' intellectual work, copyright can prevent unauthorized use or imitation of AI technology by others. This not only protects the economic interests of developers, but also encourages healthy competition where companies and individuals race to create better and more original AI solutions, rather than simply copying existing work. Overall, this can lead to a more diverse, innovative, and beneficial AI ecosystem for end users.[16]

Given the importance of copyright protection for AI developers and its impact on innovation and healthy competition, it is important to understand how copyright law is applied in different countries. In Indonesia, copyright protection is regulated by Law Number 28 of 2014 concerning Copyright, which is an update of the previous law to accommodate technological developments and new challenges in the digital era. The Indonesian Copyright Law provides a comprehensive legal framework for protecting creative and intellectual works. Its scope is broad, covering various forms of works such as books, computer

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[16] Nikodimov, I. Y., and T. S. Slivin. "Modern Problems of Legal Protection of Copyright in Science and Art." *Arts Education and Science*, 2024.

programs, songs, films, fine arts, and more.[17] The main purpose of this law is to protect the economic and moral rights of creators, as well as to encourage creativity and innovation in various fields. This law also aims to create a balance between the interests of creators and the interests of the wider community in accessing and utilizing creative works.

In the context of technological developments, Law Number 28 of 2014 has tried to accommodate several digital aspects, such as copyright protection on the internet and regulations on technological control facilities. However, as in many other countries, this law does not specifically regulate works produced by AI. This raises interesting questions about how copyright law in Indonesia will evolve to meet the challenges of the AI era, especially in determining the legal status of works produced by AI and the rights of AI developers.

While Indonesia has its national copyright law, it's important to note that copyright protection has long been a concern at the international level as well. Various international agreements have been established to ensure copyright protection across borders. One such early agreement that highlights the global nature of copyright protection is the Buenos Aires Convention, and The Agreement on Trade-Related Aspects of Intellectual

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[17] Undang-Undang Republik Indonesia Nomor 28 Tahun 2014 tentang Hak Cipta, Pasal 40.

Property Rights is an international legal agreement between all the member nations of the World Trade Organization.

The Buenos Aires Convention primary aim was to establish a unified copyright protection system among signatory nations, safeguarding literary and artistic works internationally. The convention provided extensive protection for various creative works, including books, writings, musical compositions, visual arts, scientific materials, and architectural works. It stipulated that copyright obtained in one member state would be automatically recognized in all others without additional formalities, provided the work included a clear statement of reserved property rights. Authors were granted exclusive rights to control their works, including publishing, translating, reproducing, and assigning rights. Additionally, the convention introduced the presumption of authorship, assuming the named or pseudonymous individual on a work as the author unless proven otherwise, thereby facilitating legal actions against copyright infringement.[18]

According to the Berne Convention for the Protection of Literary and Artistic Works, copyright is defined as the exclusive right of authors to control the use of their literary and artistic works. This includes the right to reproduce, distribute, and adapt their works, as well as the right to

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[18] *Buenos Aires Convention on the Protection of the Rights of Authors in Literary, Artistic, and Scientific Works*, 24 February 1910, https://www.wipo.int/treaties/en/ip/buenos_aires/

authorize translations. The Convention emphasizes that copyright protection is automatic upon the creation of a work, without the need for formal registration, and it applies to a wide range of works, including books, music, films, and visual arts. The duration of protection typically lasts for the life of the author plus an additional number of years, ensuring that authors and their heirs benefit from the economic rights associated with their creations. The Berne Convention establishes a framework for international cooperation in copyright protection, obligating member countries to recognize and enforce these rights across borders.[19]

Building upon these earlier efforts, the international community recognized the need for a more comprehensive and globally applicable agreement on intellectual property rights. This led to the development of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which came into effect in 1995 as part of the World Trade Organization agreements. The TRIPS Agreement represents a significant evolution in international copyright protection, expanding upon and modernizing the principles established in earlier conventions like the Buenos Aires Convention.

Based on the TRIPS Agreement, copyright is a form of intellectual property protection granted to authors of original literary and artistic

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[19] *Berne Convention for the Protection of Literary and Artistic Works*, 9 September 1886, as amended on 28 September 1979, Article 1, https://www.wipo.int/treaties/en/ip/berne/

works. The Agreement extends the provisions of the Berne Convention, requiring member countries to comply with its substantive articles. Copyright protection under TRIPS covers expressions, not ideas, procedures, methods of operation or mathematical concepts. It includes protection for computer programs as literary works and compilations of data. The TRIPS Agreement stipulates that copyright protection should last for at least 50 years from the end of the calendar year of authorized publication, or 50 years from the end of the calendar year of creation for unpublished works. It also covers related rights, such as those of performers, producers of sound recordings, and broadcasting organizations.[20]

The urgency of copyright protection for AI-generated artwork stems from the rapid advancement of AI technology and its increasing ability to produce creative works. This raises complex questions about authorship, originality, and the nature of creativity itself. The question of who should hold the copyright for AI-generated artwork - the developer or the user - is not explicitly addressed in the TRIPS Agreement, as AI authorship was not a consideration when it was drafted. However, we can analyze this issue based on copyright principles. The AI developer could argue that they created the system that enables the artwork's production, and thus

[20] *Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)*, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 33 I.L.M. 1197 (1994), https://www.wto.org/english/docs_e/legal_e/27-trips_04c_e.htm.

should hold the copyright. Their creative input lies in designing the AI algorithm and training it on specific datasets. Conversely, the user who prompts the AI to create specific artwork might claim copyright based on their role in initiating and directing the creative process. Some argue that the AI itself should be recognized as the author, though this is problematic under current legal frameworks that typically require human authorship. Another perspective is that AI-generated works might not qualify for copyright protection at all, as they lack human authorship.

Currently, there's no international consensus on this issue. Different jurisdictions are grappling with these questions, and policies vary. For instance, the U.S. Copyright Office has stated that it will not register works produced by a machine or mere mechanical process that operates randomly or automatically without creative input or intervention from a human author.[21] Given the complexity of this issue, there's an urgent need for international discussion and potentially new guidelines or amendments to existing agreements like TRIPS to address AI-generated works. Any solution will need to balance encouraging innovation in AI technology with maintaining the integrity of copyright law and its fundamental purpose of promoting human creativity.

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[21] Hanson, Erin. "U.S. Copyright Office Provides Guidance on Registrations Involving AI-Generated Works." *White & Case*, 2023. https://www.whitecase.com/insight-our-thinking/us-copyright-office-provides-guidance-registrations-involving-ai-generated.

1.2 Formulations of Issues

Regarding the thesis subject, the author will address the ensuing set of issues:

1. How should copyright protection for creator of AI generated artwork be reviewed in terms of Copyright Law in Indonesia and the TRIPS Agreement?

2. How is the implementation of copyright enforcement of the protection of AI generated works currently based on Copyright Law in Indonesia and the TRIPS Agreement?

1.3 Research Purposes

This research aims to:

1. The first objective of this study is to conduct a comparative analysis and legal discovery related to copyright protection for creator who create artworks generated by AI, by comparing Law No. 28 of 2014 concerning Copyright in Indonesia and the TRIPS Agreement. This study aims to identify and solve legal issues that arise due to the development of AI technology in the context of copyright. Through an in-depth analysis of the two legal frameworks, this study will examine how the definitions of authorship, ownership, and copyright protection criteria can be applied to AI artworks. The results of this analysis are expected to provide innovative and relevant legal interpretations to face new challenges in copyright protection in the digital era.

2. The second objective is to evaluate the implementation and effectiveness of copyright enforcement for the protection of artworks generated by AI based on the Copyright Law in Indonesia and the TRIPS Agreement. This study will examine current practices in law enforcement, identify obstacles faced, and assess the suitability of existing protection mechanisms to the unique characteristics of AI artworks. Through this evaluation, the study aims to find legal loopholes and practical challenges in enforcing copyright on AI works.

1.4 Research Benefits

1.4.1   Theoretical Benefits

This research aims to evaluate the effectiveness of current copyright enforcement models in protecting AI-generated content and analyze who should hold copyright in the context of commercialization, focusing particularly on challenges faced by AI developers. By examining the obstacles that AI-generated works present to traditional copyright enforcement mechanisms and ownership concepts, the study addresses key questions regarding the application of intellectual property rights in the AI era, with specific emphasis on Indonesian law and international conventions.

The study develops a conceptual framework for assessing the effectiveness of copyright enforcement in the context of AI-generated content, considering factors such as ease of reproduction, the global

nature of digital distribution, and challenges in proving authorship. This theoretical exploration provides valuable insights into potential reforms or adaptations of copyright law to better suit the realities of AI-driven creative industries in Indonesia and beyond. Overall, this research contributes theoretical insights that inform policy decisions, guide legal practices, and promote ethical considerations in copyright enforcement and ownership attribution for AI-generated content.

1.4.2   Practical Benefits

This research provides a foundational basis for policymakers to formulate AI-responsive regulations, ensuring protection for AI-generated artworks while fostering innovation. It offers guidance for creative industries and AI developers in managing intellectual property rights associated with AI creations, promoting fair practices and maximizing economic benefits. Additionally, the study serves as a valuable resource for courts and legal practitioners, providing insights for handling copyright cases related to AI artworks.

By clarifying legal uncertainties and proposing adaptive measures, the research supports the development of legal frameworks that balance the interests of creators, users, and stakeholders in the AI-driven creative economy. The theoretical and practical insights generated contribute to informed decision-making, ethical considerations, and

sustainable growth in the dynamic landscape of AI-driven creativity and intellectual property law.

1.5 Framework of Writing

CHAPTER I: INTRODUCTION

This chapter serves as a fundamental introduction to the overarching thesis, laying the essential groundwork for an in-depth examination of the topic of commercialising AI artwork which is the central focus of this research. This chapter is structured into five distinct sections, each offering unique insights and contributing to a multifaceted understanding of the subject matter.

CHAPTER II: LITERATURE REVIEW

This chapter is structured systematically into sub-chapters, each providing unique perspectives on copyright protection for AI-generated artworks. Firstly, it explores perspectives on copyright protection by examining existing frameworks and conventions that govern intellectual property rights in the context of AI-generated art. The chapter then reviews literature offering comparative analyses of legal frameworks with a specific focus on effective measures for copyright protection in the digital age.

Moving forward, the research delves into the Indonesian legal frameworks dedicated to copyright protection, emphasising the specific provisions and regulations aimed at preserving intellectual property

rights in AI-generated artworks. Additionally, it addresses challenges unique to Indonesia in protecting copyrights, drawing insights from literature that discusses societal attitudes, resource constraints, and institutional capacities. The chapter aims to identify gaps in the current legal frameworks and institutional responses, proposing recommendations for enhancing copyright protection practices.

CHAPTER III: RESEARCH METHODS

This chapter provides a comprehensive overview of the research approach, data types, data analysis techniques, and the overall research methodology. It outlines the specific research methods, data sources, data analysis techniques, and research approaches employed in addressing the issues presented in this thesis.

CHAPTER IV: DISCUSSION AND ANALYSIS

The fourth chapter discusses research problems and their solutions. It is further divided into two sub-chapters, each of which corresponds to the research questions outlined in Chapter Two.

CHAPTER V: CLOSING

In this chapter, the author will provide a thorough recap and address the issues explored in the preceding fourth chapter concerning copyright protection. In addition to presenting conclusions, the author will provide valuable recommendations and suggestions for addressing these concerns. This initiative aims to enhance legal clarity and protect the

rights and well-being of all involved parties.