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Legal Protection of Intellectual Property Rights over Artificial Intelligence–Generated Outputs

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Abstract. *The rapid development of artificial intelligence (AI) has fundamentally transformed the process of creation and innovation, giving rise to products generated autonomously or semi-autonomously by intelligent systems. This technological advancement poses complex legal challenges, particularly concerning the protection of Intellectual Property Rights (IPR). Traditional IPR regimes are primarily designed to protect human creativity and inventorship, thereby creating normative gaps when applied to AI-generated products. This study examines the legal protection of intellectual property rights over artificial intelligence–generated outputs by analyzing existing copyright, patent, and related rights frameworks. Using a normative juridical method with statutory, conceptual, and comparative approaches, this research explores the extent to which current legal systems can accommodate AI-generated works and identifies key issues related to authorship, ownership, originality, and liability. The study further compares national legal regulations with international instruments and selected foreign jurisdictions to assess emerging legal models for AI-related intellectual property protection. The findings indicate that current IPR laws remain anthropocentric and insufficient to fully address AI-generated products, necessitating legal reconstruction through adaptive regulatory frameworks, clarification of the legal status of AI outputs, and the strengthening of human accountability in AI-assisted creations. This research contributes to the development of a balanced and future-oriented intellectual property regime that ensures legal certainty, innovation incentives, and fair protection in the era of artificial intelligence.*

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1. Introduction

The Fourth Industrial Revolution has introduced Artificial Intelligence (AI) as a creative force capable of generating paintings, music, and software code. Unlike traditional tools, modern AI systems use machine learning to produce outputs that are not pre-programmed by humans. This evolution presents a fundamental crisis for Intellectual Property (IP) regimes born out of the Enlightenment, which placed the human "Individual" at the center of legal protection.

Philosophically, IP rights are rooted in the "Personality Theory" (Hegel), which posits that a work is a manifestation of the author's internal personality. Since an AI lacks a "soul" or "subjective intent," its outputs theoretically fall outside this protection. However, failing to protect AI outputs leads to a "Tragedy of the Commons" where no one invests in AI creation because the results can be freely copied. This paper examines the necessity of shifting from "Human Exceptionalism" toward a "Functionalist Protection Model" (Abbott, 2020).

The dawn of the twenty-first century has witnessed a transition from "Deterministic Computing" to "Generative Intelligence." In the previous era, software was a passive tool that executed predefined instructions (if-then-else logic). Today, Artificial Intelligence (AI) systems, particularly those based on Large Language Models (LLMs) and Diffusion Models, possess the capability to engage in "Pattern Synthesis" that mimics human creativity. This evolution presents a fundamental crisis for the law: current Intellectual Property (IP) regimes were born out of the Enlightenment, a period that placed the human "Individual" at the center of the universe. When a non-human entity—a silicon-based algorithm—produces a work that is indistinguishable from human art, it breaks the ontological link between the "Creator" and the "Work."

To address AI-generated outputs, we must deconstruct the philosophical justifications for IP rights. There are four primary pillars that AI challenges:

1) Labor Theory (John Locke): This theory suggests that property rights are earned through the "sweat of the brow." In AI generation, the "labor" is performed by the machine, while the human user provides only a "prompt." Does the act of prompting constitute sufficient labor to justify a property right?

2) Personality Theory (Hegel & Kant): This view posits that a work is a manifestation of the author's internal personality. Since an AI lacks a "soul" or "subjective intent," its outputs are technically "hollow" manifestations of data probability.

3) Incentive Theory: IP exists to encourage production. If we do not protect AI outputs, investment in AI development may stagnate because outputs can be instantly pirated.

The global legal landscape is a patchwork of confusion. In the United States, the "Human Authorship Requirement" is a rigid barrier. The US Copyright Office (USCO) consistently rules that works produced by a machine without a "creative spark" from a human belong to the public domain. In contrast, the United Kingdom, through the *Copyright, Designs and Patents Act 1988 (CDPA)*, provided a visionary exception for "computer-generated works," granting protection to the person who made the arrangements for the work's creation. Indonesia stands at a crossroads, needing to choose between a strict human-centric model or a flexible investment-centric model.

2. Research Methods

This study utilizes a Normative Juridical research method. It analyzes law as a system of norms consisting of principles, values, and regulations (Soekanto & Mamudji, 2015). The study employs a statutory approach by examining the Indonesian Copyright Law (Law No. 28/2014) and a comparative approach by looking at the UK's Copyright, Designs and Patents Act 1988 and recent US court rulings. This study utilizes a Normative Juridical research method. This approach treats law as a system of norms consisting of principles, values, and regulations. Statutory Approach: Analyzing Indonesia's Copyright and Patent Laws alongside international treaties like the Berne Convention and TRIPS Agreement. Conceptual Approach: Examining legal theories such as Labor Theory and Personality Theory to evaluate AI's place in the IPR ecosystem. Comparative Approach: Comparing the legal stances of the United States, the European Union (AI Act), and the United Kingdom regarding autonomous works.

3. Results and Discussion

3.1. Taxonomy of AI Creative Involvement: The Spectrum of Autonomy

To resolve the legal status of AI outputs, we propose a Spectrum of Autonomy: AI-Instrumentalism: AI functions as a "digital chisel." Human control is absolute. AI-Collaboration: A "centaur" model where human and AI engage in iterative feedback. Originality is shared. AI-Autonomous Generation: The AI creates the final output based on a singular, vague prompt. This is where the normative gap is widest.

In traditional law, originality is evaluated based on the source—the mind of the author. This research proposes a shift toward Objective Originality. If a composition is statistically unique

and possesses aesthetic value, its protection should not be denied simply because its origin is algorithmic. The law should protect the *result* to maintain a stable market for creative content.

Is a detailed prompt a creative act? If a user spends hours refining a prompt to get a specific visual result, they act like a director. By applying the "Doctrine of Direction and Control," the user who provides the creative direction should be the de facto owner of the resulting IP.

The case of *Thaler v. Perlmutter* (USA) established that "Human Authorship" is a constitutional boundary. Conversely, the Beijing Internet Court in China recently ruled that an AI image *could* be protected if the user exercised "intellectual investment" through prompting. This suggests a divergence between the West (protecting human dignity) and the East (prioritizing AI industry growth).

AI models are trained on billions of copyrighted works. Human artists argue this is "plagiarism," while developers argue it is "transformative." This research suggests a Compulsory Licensing Model. Instead of banning training, a global fund should be established where AI companies pay micro-royalties for training data, distributed to original human creators.

If an AI generates defamatory text, who is liable? We propose a Dual Responsibility Framework: The developer is responsible for the "guardrails," while the user is responsible for the "intent" of the specific output.

3.2. The Anthropocentric Barrier in Authorship

The primary hurdle in most jurisdictions is the definition of "Author." Article 1 point 2 of Indonesian Copyright Law defines a Creator as "a person or several persons." International precedents, such as the US Copyright Office's ruling in the *Zarya of the Dawn* case, have reaffirmed that works created entirely by machines lack "human authorship" and are thus ineligible for copyright (Ginsburg, 2018).

Originality usually requires "independent creation" and a "modicum of creativity." In AI, the output is a probabilistic prediction based on training data. This research suggests a shift toward Objective Originality. If a composition is statistically unique and possesses aesthetic value, its protection should not be denied simply because its origin is mechanical.

This study identifies a potential solution through the "Doctrine of Direction and Control." If a human user spends hours refining a prompt to get a specific visual result, they act like a film director. While the director does not "paint" the scene, they provide the creative vision.

Therefore, the user (prompter) who provides the creative direction should be recognized as the legal owner (Guadamuz, 2017).

Comparative Analysis: UK vs. USA :

1) United Kingdom: Provides a visionary exception in Section 9(3) of the CDPA 1988 for "computer-generated works," granting protection to the person who made the arrangements for the work's creation.

2) United States: Maintains a strict "Human Authorship" requirement, as seen in *Thaler v. Perlmutter*, where the court ruled that AI cannot be an inventor or author.

AI models are trained on billions of copyrighted works. Human artists argue this is "plagiarism," while developers argue it is "transformative." This research proposes a Compulsory Licensing Model, where AI companies pay micro-royalties into a global fund distributed to original human creators whose works are used in training sets (Hilty et al., 2020).

4. Conclusion

IP protection in the AI era requires a move away from "Human Exceptionalism" toward a "Functionalist Protection Model." The state should reconstruct IPR laws to: Recognize "Prompting" as a creative act under specific conditions. Grant a "Sui Generis" right for machine-generated works with a shorter duration (e.g., 25 years). Establish a transparent "Digital Training Royalty" to compensate human artists. This ensures that the AI era is one of "Human-Machine Collaboration" rather than one of legal chaos.

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