

AUTHORSHIP CHALLENGES IN AI-GENERATED WORKS

MUHAMMAD ABDULLAH MALIK

| abdullah.mlk18@gmail.com

Muhammad Abdullah Malik is a lawyer who is currently practicing at Shahid Mehmood Abbassi Law Associates. He is also a paralegal at Hirely Consultants where he works on UK Asylum Cases. He has participated multiple National and International moot competitions, including the Sports Arbitration Moot, and the Bangladesh International Arbitration Contest, and has worked on comparative intellectual property research.

ABSTRACT

The emergence of generative artificial intelligence has intensified debates concerning authorship, originality, and ownership within intellectual property law. Existing copyright frameworks were developed upon assumptions of human creativity and intellectual labor, yet AI systems increasingly generate content with minimal human intervention. This article examines the principal authorship challenges posed by AI-generated works through a comparative analysis of the legal approaches adopted in the United States, the European Union, the United Kingdom, and China. It analyses the extent to which contemporary copyright law accommodates AI-assisted and autonomous outputs while remaining grounded in the traditional requirement of human authorship. The article further evaluates human-centric, hybrid, and corporate ownership models in order to determine which framework most effectively balances innovation, transparency, and doctrinal consistency. It argues that a hybrid human-centric framework, in which human users retain authorship while AI involvement is transparently disclosed, offers the most sustainable and normatively justifiable approach for the foreseeable future.

Keywords: Artificial Intelligence, Copyright, Authorship, AI-Generated Works, Intellectual Property, Generative AI, Human Creativity

1. INTRODUCTION

The rapid advancement of generative artificial intelligence has transformed the way creative and intellectual works are produced. Artificial intelligence systems are now capable of generating literature, music, visual art, software code, and scientific outputs with limited human intervention. This technological shift has created substantial uncertainty within intellectual property law, particularly regarding the concepts of authorship and ownership. Traditional copyright frameworks were constructed upon assumptions of human creativity, labor, and intellectual effort. However, AI-generated works challenge those assumptions by producing commercially valuable outputs without conventional human authorship.

Scholars have identified numerous forms of creativity through which artificial intelligence may be evaluated, including linguistic creativity, artistic creativity, creative problem-solving, and

scientific creativity.¹ Nevertheless, research demonstrates that AI-generated works continue to lack the contextual depth, originality, and intentionality associated with human authorship. Although collaborative human-AI systems have shown promise, their outputs frequently remain less diverse and conceptually rich than purely human-created works. These concerns have intensified legal and philosophical debates surrounding whether AI-generated outputs should qualify for copyright protection.

This article examines the principal authorship challenges associated with AI-generated works through a comparative analysis of the legal approaches adopted in the European Union, the United States, the United Kingdom, and China. It further evaluates competing ownership models and argues that a hybrid human-centric framework represents the most sustainable and normatively justifiable approach for the near future.

2. HUMAN AUTHORSHIP AND COPYRIGHT THEORY

Copyright law has historically been grounded in the principle that creative works originate from human intellect and personality. Theories of copyright protection, including labor theory and personality theory, assume that authors invest intellectual effort, creativity, and individual expression into their works. Consequently, the requirement of human authorship remains central to modern copyright systems.

The emergence of generative AI complicates this traditional understanding of authorship. AI systems can generate complex outputs through machine learning processes without direct human creative decision-making during the final stages of production. This raises a fundamental legal question: should intellectual property law continue to require human creativity as a prerequisite for protection, or should legal systems adapt to recognize AI-assisted creativity?

At the international level, the World Intellectual Property Organization initiated public consultations concerning AI and intellectual property policy in 2019. Discussions during subsequent WIPO conversations focused heavily on whether AI-generated works should qualify for copyright protection and how future reforms may balance innovation with existing legal doctrine.² Similarly, the European Union's AI regulatory framework emphasizes transparency, accountability, and human autonomy in relation to artificial intelligence systems. These developments illustrate the growing recognition that existing legal frameworks may be insufficient to address emerging technological realities.

3. COMPARATIVE LEGAL APPROACHES TO AI-GENERATED WORKS

The legal treatment of AI-generated works differs significantly across jurisdictions. The European Union and the United States maintain strict human authorship requirements, while

¹ Mete Ismayilzada and others, 'Creativity in AI: Progresses and Challenges' (arXiv, 29 June 2025) <http://arxiv.org/abs/2410.17218> accessed 7 August 2025.

² World Intellectual Property Organization, WIPO Conversation on Intellectual Property and Artificial Intelligence (2024).

the United Kingdom recognizes computer-generated works under statutory provisions. Chinese courts, meanwhile, have adopted a more pragmatic and flexible approach in certain circumstances.

3.1. European Union

Within the European Union, copyright protection remains firmly grounded in the concept of human authorship. The Court of Justice of the European Union has repeatedly held that copyright subsists only where a work reflects the 'author's own intellectual creation'.³ This standard presupposes human intellectual effort and therefore excludes purely autonomous AI-generated outputs from copyright protection. Similarly, in patent law, the European Patent Office rejected applications naming the AI system DABUS as an inventor on the basis that inventorship must belong to a natural person.⁴

3.2. United States

The United States has adopted an equally rigid human-centric approach. Under U.S. copyright law, protection depends upon human authorship.⁵ Courts and administrative authorities have consistently refused to recognize AI-generated works that lack substantial human creative input. In *Thaler v Perlmutter*, the courts affirmed that an image generated solely through AI could not qualify for copyright protection because it lacked human authorship.⁶ Similarly, the U.S. Copyright Office in *Zarya of the Dawn* recognized copyright only in the human-written text while refusing protection for images generated through Midjourney.⁷

The United States Patent and Trademark Office has similarly insisted that inventorship must belong to a natural person. Although AI may assist in the inventive process, patent protection remains dependent upon substantial human contribution. Consequently, the United States represents one of the strictest jurisdictions concerning AI-generated works.

3.3. China

Chinese courts have demonstrated greater flexibility concerning AI-assisted works. Rather than recognizing AI itself as an author, Chinese jurisprudence focuses upon whether sufficient human intellectual input and creative control exist. In *Shenzhen Tencent v Shanghai Yingxun*, copyright protection was granted in relation to an AI-generated news article by attributing ownership to the operator of the AI system.⁸ Other Chinese decisions have similarly recognized

³ *Infopaq International A/S v Danske Dagblades Forening* (C-5/08) EU:C:2009:465.

⁴ Boards of Appeal of the European Patent Office, Datasheet for the decision of 21 December 2021 (J 0008/20 – 3.1.01, Legal Board of Appeal) (21 Dec 2021).

⁵ US Copyright Office, *Compendium of US Copyright Office Practices* (3rd edn, 2021).

⁶ *Thaler v Perlmutter* 687 F Supp 3d 140 (DDC 2023).

⁷ Analla T, 'Zarya of the Dawn' (Harvard Journal of Law & Technology Digest, 6 March 2023) <https://jolt.law.harvard.edu/digest/> accessed 4 November 2025.

⁸ World Intellectual Property Organization (WIPO), *Session 3: Nanshan District People's Court, Shenzhen, Guangdong, China [2019]: Shenzhen Tencent v Shanghai Yingxun, Case No. Y0305MC No. 14010* (24 Dec

copyright where human prompts, refinements, and creative decisions were considered sufficiently original.

3.4. United Kingdom

The United Kingdom occupies a middle position between rigid human-centric systems and more flexible approaches. Under section 9(3) of the Copyright, Designs and Patents Act 1988, the author of a computer-generated work is deemed to be the person who made the arrangements necessary for the creation of the work.⁹ This statutory framework therefore recognizes computer-generated works while maintaining human authorship. Nevertheless, recent consultations by the UK Government demonstrate growing uncertainty concerning whether this framework remains suitable in the era of generative AI.

4. OWNERSHIP MODELS AND AUTHORSHIP CHALLENGES

The emergence of AI-generated works has produced substantial uncertainty regarding ownership and authorship. Existing legal frameworks have struggled to address situations in which AI systems generate works with minimal human intervention. Consequently, several ownership models have emerged within academic and policy debates.

4.1. Human-Centric Ownership

The human-centric ownership model remains the dominant framework across most jurisdictions. Under this model, the human user who contributes substantially to the creation of a work is recognized as the author or inventor. This approach aligns most closely with existing intellectual property doctrine and preserves the traditional rationale of rewarding human creativity. However, the model becomes increasingly difficult to justify where human involvement is limited to a simple prompt while the AI system independently generates substantial creative content.

4.2. AI as Author

A second model proposes recognizing artificial intelligence itself as the author or inventor of generated works. Despite ongoing academic debate, this model has been rejected by courts and intellectual property authorities worldwide. Critics argue that AI systems lack accountability, legal personality, and the need for economic incentives traditionally associated with intellectual property rights. Since intellectual property law seeks to reward and encourage human creativity, extending authorship directly to machines remains normatively problematic.

4.3. Hybrid Models

2019) WIPO Lex No. 22FORUM016-j <https://www.wipo.int/wipolex/en/judgments/details/1540> accessed 4 November 2025.

⁹ Copyright, Designs and Patents Act 1988.

Hybrid models attempt to balance human contribution with acknowledgment of AI involvement. One variation attributes authorship to the human user while recognizing AI as an assisting tool or arranger in the creative process. This approach resembles the United Kingdom's treatment of computer-generated works and preserves doctrinal consistency while promoting transparency. Another hybrid model proposes shared ownership between users and AI developers; however, such arrangements create significant practical and doctrinal difficulties concerning collaboration, enforcement, and fragmented ownership rights.

4.4. Corporate Ownership

Corporate ownership models would allocate rights to the company responsible for developing or deploying the AI system. Although this approach could provide certainty and encourage investment in AI research, it risks concentrating excessive power within corporations while marginalizing human creativity. Critics argue that such a framework undermines the fundamental purpose of intellectual property law by prioritizing technological infrastructure over genuine creative contribution.

5. TOWARD A HYBRID HUMAN-CENTRIC FRAMEWORK

Among the competing approaches, a hybrid human-centric framework appears to offer the most balanced and sustainable solution. Under this model, authorship remains attributed to the human user who contributes meaningful intellectual input while AI involvement is transparently disclosed. Such a framework preserves the human-centric foundations of intellectual property law while recognizing the increasingly significant role played by AI systems in the creative process.

This model is doctrinally consistent with existing copyright systems because it does not recognize AI as a legal person. Instead, AI is treated as an advanced technological tool whose contribution must be acknowledged. Requiring disclosure of AI involvement would further promote transparency and accountability while avoiding uncertainty concerning ownership.

Nevertheless, the challenge of fully autonomous AI-generated works remains unresolved. If future AI systems become capable of producing creative works without meaningful human intervention, traditional copyright frameworks may become inadequate. In such circumstances, limited sui generis protection for AI-generated outputs may provide a practical compromise. This would allow entities investing in advanced AI systems to receive limited protection without fundamentally altering the human-centric philosophy underlying intellectual property law.

6. CONCLUSION

Artificial intelligence has exposed significant weaknesses within traditional concepts of authorship and ownership in intellectual property law. Existing legal frameworks were developed on the assumption that creative works originate from human intellect, skill, and judgment. However, generative AI increasingly challenges these foundations by producing

sophisticated outputs with varying degrees of human involvement, thereby blurring the distinction between human creativity and machine-generated expression. As demonstrated through the comparative analysis of the United States, the European Union, the United Kingdom, and China, jurisdictions have adopted differing approaches to this challenge, yet a common principle persists: the preservation of human authorship as the basis for intellectual property protection.

The debate surrounding AI-generated works ultimately extends beyond questions of technological advancement and concerns the fundamental objectives of intellectual property law. The purpose of copyright and related intellectual property rights is not merely to reward production, but to incentivize and protect human creativity, innovation, and intellectual effort. Consequently, recognizing AI systems as independent legal authors or inventors remains both doctrinally inconsistent and normatively unjustified, as AI lacks legal personality, moral agency, and the need for economic incentives that underpin intellectual property protection. Conversely, approaches that disregard the contribution of AI altogether fail to acknowledge the increasingly significant role that such systems play in contemporary creative processes and risk undermining transparency.

In light of these considerations, a hybrid human-centric framework offers the most balanced and sustainable solution. By attributing authorship to the human user who makes the substantial creative contribution while requiring disclosure of AI involvement, this approach preserves the human-centered foundations of intellectual property law without ignoring technological realities. Such a framework promotes legal certainty, encourages innovation, safeguards transparency, and remains adaptable to future developments in artificial intelligence. As AI continues to evolve, intellectual property law must likewise adapt; however, any reform should remain anchored in the principle that creativity deserving of legal protection is ultimately a human endeavor.
