

AI Authorship and the Structural Tension in Copyright Law: A Public Domain Response

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Abstract. Generative artificial intelligence (AI) has been developed rapidly and applied widely. As AI transforms from a pure tool to an autonomous creator, the issue of AI authorship has emerged as a key challenge to the human-centered foundation of intellectual property law. While some scholars advocate recognizing the authorship of AI to ensure legal certainty and encourage technological investment, this article submits that such a move contradicts the core principle that copyright exists to protect the unique expression of human thought. What's more, this study identifies an important secondary risk that operators often exaggerate the extent of human intervention in the creative process, thereby undermining the normative authority of the law. In response to this issue, this article suggests a shift from the institutional perspective toward a clear public domain. By classifying autonomously AI-generated outputs as shared social resources, the law can effectively prevent the formation of a copyright thicket, aiming to reduce social transaction costs and ensure that the cornerstones of culture remain freely accessible which ultimately seek a balance between innovation incentives and public interests.

Keywords: Artificial Intelligence, Copyright, Authorship, originality, public domain

1. Introduction

With the rapid development and wide application of artificial intelligence, the doctrinal rigidity of Artificial Intelligence (AI) in current legal regulations has gradually become prominent. Whether AI should be accepted as an author protected by law captures the central dilemma facing Copyright Law in the age of AI [1]. There are different voices on this issue internationally. Some argues that accepting AI as an author protected by Copyright Law can provide legal certainty for innovation, others submit that due to the fact that AI does not have the human author-status, it is difficult to determine its originality, and considering the principle and purpose of copyright law, the mainstream international judicial jurisdictions tend to refuse to accept AI as an author protected by Copyright Law. However, failing to accept AI as an author protected by Copyright Law may create an incentive for dishonesty: operators of AI systems will simply exaggerate the degree of human involvement in the creative process in order to overcome the law's restrictive authorship criteria. By placing AI-generated works into the public domain, it is of great significance to balance motivation and public interests and help expand the effect of the Copyright Law in the age of AI. This paper is going to first explain the two main voices on whether to accept AI as an author in Copyright Law

and conclude why the mainstream international judicial jurisdictions tend to refuse to accept it. Then discuss the incentive for dishonesty brought by failing to accept AI as an author protected by Copyright Law. Finally, give insight into better dealing with the issue by placing AI-generated works into the public domain.

2. Theoretical background of AI authorship in copyright law

In its essence, copyright law is a legal fiction constructed to achieve specific societal objectives. All its norms, definitions, and doctrines are created and regularly re-created by humans to serve metaphorical purposes. From a genealogical perspective, the core of copyright protection has always been the expressions of the human mind, which, to be more specific, is human intellectual volition, with the ultimate goal of protecting individual creators for the benefit of mankind in general [2]. This human-centric stance serves as the starting point when assessing whether AI-generated outputs are eligible for copyright protection. Under the traditional copyright framework, a work must cross the threshold of originality to be protected [3]. Originality requires not only a perceptible difference in the output but also emphasizes that the creative process must stem from human intellectual effort. When AI is introduced into this process, the traditional causal chain of creation is obscured by technology, creating what is known as a technological opacity that obscures the causal link between human intention and expressive output. In substance, the attribution of authorship evolves into an exercise in tracing legal causation—determining whether the expression originates from human volition and intention or is autonomously generated by an algorithm [4]. This has become the criterion for copyrightability in the AI age. Regarding the granting of rights to non-human entities, legal scholarship presents three primary theoretical lenses. First is the Labor Theory, which questions whether expended effort deserves compensatory property rights. Second is the Personality Theory, which views a work as an extension of the creator's personality—a concept difficult to sustain in the context of purely machine-generated outputs [5]. Finally, the Utilitarian/Incentive Perspective focuses on whether granting rights effectively promotes technological iteration and social welfare. The current point of contention is that the creeping expansion of copyright control may lead to the enclosure of the commons, resulting in a fragmentation of rights and an uncertain future for creators [5]. The failure of the current legal framework in the face of AI lies in the difficulty of defining the degree of volitional connection between prompt input and expressive output. This theoretical lag leads to significant secondary issues: to circumvent outdated and unnecessary provisions, operators may act in bad faith by simply exaggerating the degree of human intervention in the creative process to secure copyright protection [6]. Such behavior ultimately undermines the normative authority of the law. To address the issue of copyright application in the era of artificial intelligence, scholars are exploring paths that go beyond traditional copyright attributes. A key suggestion is to directly classify the output generated by artificial intelligence into the public domain [7]. By clarifying that these contents constitute social shared resources without private ownership, the law can effectively prevent the copyright thicket obstacles formed by overlapping rights [6]. This institutional arrangement not only eliminates the motivation for malicious attribution but also ensures that the creative components of culture and technology remain freely accessible by reducing overall transaction costs. Therefore, while depriving the authors of artificial intelligence of their status, the law achieves a regulatory balance by strengthening the public domain and balancing innovation incentives with public interests.

3. Literature review

3.1. Two debates on AI authorship

As the works produced by Generative AI increasingly approach human creation in terms of aesthetics and form, the discussion on the boundaries of legal subjectivity in the legal field has shown that debates over AI authorship have become increasingly polarized.

3.1.1. The instrumentalist argument for recognizing AI authorship

Driven by technological progress, arguments for recognizing AI authorship have intensified. This school of thought is mainly based on the perspective of instrumentalists in nature, holding that copyright law should serve as a regulatory lever to promote technological innovation. It advocates that copyright law should not adhere to the outdated human-centered theory but should anticipate the future trend of AI's autonomous creation becoming a reality and incorporate it into the scope of protection through legal fiction. To be more specific, this view emphasizes that if one insists on refusing to protect AI-generated content, it will lead to a large-scale incentive gap, thereby suppressing developers' investment in the research and development of high-level generative algorithms [8]. Meanwhile, one of the most important reasons is that some commentators consider accepting AI as an author in copyright can promote the development of law and incentivize innovation. On the contrary, the lack of protection for AI would lead to a loss of valuable innovation because the investment willingness has declined [7]. Moreover, there is no evidence proving that AI fails to produce output that satisfies the necessary standard of creativity [1].

3.1.2. Doctrinal grounds for rejecting AI authorship

Although supporters often base themselves on the perspectives of technological neutrality and economic incentives, advocating that the law should lock in innovative investment by granting AI author status, however, as a system deeply rooted in the anthropocentrism logic of the Enlightenment era, the core doctrines of copyright law have shown a strong defensive nature against the invasion of AI. Refusing to recognize the identity of AI authors is not merely a matter of technical conservatism, but rather a profound examination based on the fundamental legal principles of copyright law. The rejection of AI authorship by the legal community is not based on a single reason, but is formed through a systematic review of the three pillars of copyright law - ownership, threshold, and goal. From the origin of authorship to the legal application of the originality standard, and then to the fundamental purpose of establishing the entire copyright system, the legal community has constructed a strict logical defense line, aiming to protect the uniqueness and sanctity of human intellectual labor.

3.1.2.1. Authorship and legal personality

In copyright law, the copyright system is structured to place the author at its core, protecting whether the creation is new, whether it reflects human personality or mental labor, and whether it represents an individual's unique aesthetic. However, copyright statutes and treaties internationally failed to define the concept of 'author', mainly because of the common understanding that member states have reached that authors are those humans who create an original work or expression. The Berne Convention requires that authors be the nationals of the member states because nationality can only be granted to human individuals [1]. Section 9(3) of the UK's Copyright, Designs and Patents Act

(CDPA) defines the author of a computer-generated work as the person who made the necessary arrangements, rather than the AI itself [6]. It is clear that copyright law is designed for human intellectual creativity in nature [9,10]. Besides, even in technological changes, human authorship remains the normative organ point of intellectual property law [11]. Similarly, the normative organ point of copyright law. And authorship requires expressive capacity—an intention to communicate and build relationships with others—that AI cannot possess at all [12]. The lack of the identity of a human author means the lack of an independent legal personality, which will cause confusion in rights attribution, different protection periods, and difficulties in determining legal consequences and fulfilling disclosure obligations. Thus, the mainstream view in modern judicial jurisdictions is to reject the idea of accepting AI as an author in copyright.

3.1.2.2. Originality

If the author's identity resolves the issue of who is creating, then originality sets the threshold for what constitutes a work. Another core argument in the academic circle against AI obtaining copyright is that the products generated by machines cannot meet the legal requirements for originality. Copyright protects original expression, but its essence is to protect the original thinking process behind it. The legal determination of whether there is originality in a work should be based on the creative process rather than merely looking at the output result. In *CCH Canadian Ltd. v. Law Society of Upper Canada (CCH)*, the Supreme Court of Canada has defined an author's expression as involving skill and judgment. Skill is defined as the use of one's knowledge, developed aptitude, or practised ability in producing the work, and judgment contains the use of one's capacity for discernment or ability to form an opinion or evaluation by comparing different possible options in producing the work. The amount of skill and judgment required must not be so trivial that it could be characterized as a purely mechanical exercise [13]. Obviously, these cannot be done by AI. Originality not only demands that the work is not plagiarized, but also that it reflects the author's personal intelligence and psychological imprint. However, the output of AI is essentially based on probability prediction and statistical optimization of massive training data, which is not a kind of 'express' but learn and concluding data. This algorithm-driven process is regarded as lacking the unique mental input of humans, thus making it difficult to satisfy the nexus between human spirits and output. Therefore, there is a distinction between the output expression and the idea itself.

3.1.2.3. The teleology of copyright: incentives and public interest

From the perspective of the macro institutional goals of copyright law, the denial of AI author status has profound policy rationality. Although copyright's rationale has been in dispute from the outset, to meet our need, however, it is sufficient to point out the justification why the copyright system has been widely accepted: It is a way to encourage or inspire the authorship and dissemination of original works, ultimately serving the public interest [7]. In its 1709 formulation, the encouragement of learning was the stated purpose of the first modern copyright law in the United Kingdom, which tried to achieve this by vesting the Copies of Printed Books in the Authors or Purchasers of such Copies [5]. Soon afterwards, the United States Constitution defined the purpose of copyright as being to promote the Progress of Science and useful Arts. Both laws submitted the grant of rights to authors as a means to achieve a larger public interest. Moreover, the Supreme Court of Canada described the purpose of copyright as a balance between promoting the public interest in the encouragement and dissemination of works of the arts and intellect and obtaining a just reward for the creator [14]. It is obvious that the purpose of copyright law ultimately leads to a larger public

interest, which can be explained as a promotion of public interest. The original intention of the copyright system is to encourage perceptive human beings to create. As an imperceptible collection of algorithms, machines do not require legal rights to induce their output, because their creative drive stems from electrical signals and instructions rather than economic rewards [1]. Therefore, granting Copyrights to machines not only fails to achieve the incentive effect of the law but may also lead to a patent wall. For example, large companies with large-scale AI models will file a vast number of patent protection applications. For individual applicants, this undoubtedly increases compliance and application costs, and also makes society more cautious in applying for and defending intellectual property rights, thereby undermining the public's right to access cultural resources.

3.2. Institutional risks of denying AI authorship

Although there are many reasons to support the rejection of AI as an author's identity, the gap between legal theory and practical needs is constantly widening as AI technology iterates. When the law chooses to refuse to grant author status to AI, we should recognize a series of practical challenges existing in market-oriented operations and resource allocation. This kind of identity absence may not only shake the investment confidence in the digital industry, but also plant hidden dangers at the boundary between the public domain and private property. The following text will conduct an in-depth analysis of the unavoidable practical challenges that the rejection of AI author identities will bring to the current copyright ecosystem. There are some restrictive authorship criteria in copyright. Copyright law does not clearly define the status of AIGC as either existing technology or a work. The definition of computer-generated works in Section 9(3) of the UK's CDPA is ambiguous, and this provision was not clearly applied in the *Nova Productions v Mazooma Games* case, nor did it address the objective standard of originality [6]. The EU's AI Act avoids the copyright issue of AIGC and only emphasizes transparency [1]. These human authorship formalisms may lead to human operators in judicial practice overemphasizing human participation and contribution in the creative process in order to obtain a patent or copyright. This creates a problem of reduced credibility of public records. Public records should reflect the true creative process, rather than the appearance that conforms to the law. Let's take some examples. The Next Rembrandt project, which uses AI to generate paintings in the style of Rembrandt [8]. The operators may exaggerate the role of humans in data selection and algorithm training, such as claiming that art history experts guided every step, while the actual process is highly automated. The operators may obtain copyright protection by exaggerating human involvement (such as claiming selective replication), but essentially, the AI merely recombines existing data. Even further, the exaggeration of selecting or discarding outputs and making iterative refinements. In the *Li v. Liu* case, the user generated images by repeatedly modifying the prompt words and parameters. The court held that this demonstrated aesthetic choices [9]. However, the operator might exaggerate the complexity of the adjustments, for instance, describing a simple prompt (such as a pink butterfly chair) as deep creative input to circumvent the essence of AI generation.

3.3. Reconstructing the framework: public domain as a regulatory strategy

Because AI is not a person and does not need rewards to create things, giving it legal rights might create a bad monopoly on information. In light of these concerns, this study proposes the relegation of AI-generated outputs to the public domain. This approach seeks to harmonize public interest with individual incentives, thereby ensuring that the foundational elements of creativity remain accessible

to the collective [7]. This also makes sure the basic parts of creativity stay free for everyone. The classification of AI-generated content as public domain is a proactive and forward-looking strategy for the future. To address the dual dilemma of strategic misrepresentation and incentive failure precipitated by the current structural misalignment of the law, this study proposes the following pathways:

3.3.1. Establishing a tiered institutional choice model

The law should go beyond choosing only between copyright and the public domain. Instead establishing a tiered institutional choice model based on how much a person is involved in the causal chain. First of all, where human volition exercises effective control over the generation of expression with their own thoughts, traditional copyright protection remains applicable. Next, if the AI acts on its own and the link between the person's idea and the final work is broken, the work should belong to the public.

3.3.2. Defining boundaries and mandatory disclosure mechanisms

The boundaries of the public domain are dynamic. The main challenge lies in identifying and isolating strategic misrepresentations regarding human involvement. First, rigorous substantive review standards must be established. The mere provision of prompts or trivial post-processing shall be deemed insufficient to own the work. Second, a mandatory disclosure obligation should be imposed. If a claimant cannot demonstrate a dominant role in the causal chain, the output shall automatically lapse into the public domain.

3.3.3. Alternative compensation and incentive mechanisms

Denying AI-generated work's copyright status does not equate to a dismissal of the economic value of the AI industry. Here are some other alternative pathways to solve the potential investment gap brought by public domain statue. On the one hand, enterprises making substantial capital investments in AI generation can be granted a term-limited and relatively weaker form of neighboring rights which only focus solely on protecting the investor's commercial interests. On the other hand, law can encourage secondary innovation rooted in public resources by promoting open-source architectures, open data, and open APIs.

4. Discussion

Based on a series of researches, there are divergent logical starting points regarding the status of AI in copyright law. One perspective stems, which from pragmatism and legal certainty, arguing that recognizing AI authorship provides clear legal provisions for technological innovation. Thus help AI industry move forward. Conversely, another more mainstream view posits that the core of copyright protection remains the expressions of human intellectual volition, and since AI lacks a human identity, it cannot be granted the author status. The rapid iteration of AI has led to a huge theoretical gap in copyright law, particularly in the threshold of originality. And when the law refuses to accept the authorship of AI-generated works, it inherently breeds the risk of bad faith behavior which to be specific is operators of AI systems often tend to exaggerate the degree of human intervention in the creative process. A pathway to deal with the issue is to set the relegation of AI-generated outputs to the public domain. This approach not only eliminates the incentive for dishonesty but also ensures the basic part of culture and technology free to the public, which reflects a shift in copyright

regulation during the digital age from single incentives to a normative equilibrium between innovation and public interest. However, the lack of a compensatory rule and technical verification in recognizing the dishonesty may limit the effect in the actual conflicts.

5. Conclusion

This paper provides an in-depth exploration of the institutional failure and theoretical reconstruction regarding the status of authorship for AI within the framework of copyright law. The research reveals that in a copyright system rooted in human-centrism, AI, as a non-human entity, struggles to align with traditional doctrinal requirements regarding the expressions of the human intellectual volition, which constitutes an inherent barrier to its attainment of authorial status. However, a purely refusal to accept AI as an author in copyright law has triggered significant secondary risks: specifically, to circumvent doctrinal rigidity, operators are prone to acting in bad faith by exaggerating the degree of human intervention. This disconnect between institutional doctrine and practical reality subjects copyright law to a severe normative crisis when facing generative technologies. This paper argues for the necessity of categorizing AI-generated outputs into the public domain. Future research directions should focus on applying this approach to global collaborative governance and the establishment of quantitative standards.

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