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RE-ASSESSMENT OF COPYRIGHT PROTECTION UNDER THE BERNE CONVENTION (1886): THE JURIDICAL STATUS AND CHALLENGES OF EMERGING ARTIFICIAL INTELLIGENCE (AI) GENERATED WORKS

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ABSTRACT

The Berne Convention (1886) has long been a cornerstone of international copyright protection, emphasizing the safeguarding of human intellectual creations across 177 member states. However, the rapid evolution of artificial intelligence (AI) technologies challenges the Convention's traditional concepts of originality, authorship, and ownership. This paper critically examines the legal status of AI-generated works under the Berne Convention, highlighting the limitations of its human-centric framework. Through a doctrinal analysis of international treaties, national laws, and judicial decisions, the study explores the emerging legal ambiguities and jurisdictional inconsistencies in protecting AI-generated content. It examines the definition of authorship, analyses the emerging global jurisprudence, evaluates the suitability of current legal interpretations, and provides a comparative legal analysis across various jurisdictions. Through doctrinal legal research supported by some real-world case studies and scholarly views, this study proposes future policy reforms to accommodate the realities of Artificial Intelligence driven creativity while preserving the integrity of international copyright system. The findings contribute to filling an urgent gap in legal scholarship at a time of technological disruption in creative industries.

Keywords: *Berne Convention, artificial intelligence, copyright law, authorship, originality, AI-generated works, legal challenges.*

INTRODUCTION

The development of artificial intelligence (AI) has brought about transformative changes across industries, including the creative sector. Algorithms and machine learning models now compose music, write literature, produce visual arts, and even generate innovative scientific theories (Gervais, 2019). These activities raise fundamental legal questions surrounding the concept of authorship and the applicability of copyright protection under traditional frameworks, particularly the Berne Convention of 1886, which has governed international copyright standards for over a century (Ricketson & Ginsburg, 2006).

The Berne Convention, ratified by 181 countries as of 2024, establishes the basic principle that copyright protection is accorded automatically to original works of authorship without formal registration (World Intellectual Property Organization [WIPO], 2021). However, the Convention assumes that the "author" is a natural person—a premise deeply rooted in legal tradition and philosophical notions of creativity (Leung, 2022). The ability of AI to autonomously generate content challenges this presumption and exposes gaps in both the language and intent of the Convention.

In response, jurisdictions and international bodies are grappling with whether AI-generated outputs can or should be protected under copyright law. Courts and legislators must decide whether to extend protection to works devoid of human authorship or to deny protection entirely, which could discourage innovation and create regulatory uncertainty (Yu, 2020). This paper explores these issues through an in-depth legal analysis of the Berne Convention and subsequent scholarly debate.

This research has three primary aims. First, it evaluates the Berne Convention's conceptual and legal boundaries regarding authorship and originality in light of AI developments. Second, it compares approaches taken by national legal systems such as the United States, European Union, and United Kingdom. Third, it proposes recommendations for addressing legal ambiguities and updating global norms to better reflect the realities of AI-driven creativity.

This article follows a doctrinal legal research methodology, analysing treaties, scholarly publications, case law, and legal commentaries. A comparative legal approach is also employed to evaluate the varying responses of national jurisdictions to the AI authorship dilemma.

As AI continues to evolve, so too must the legal frameworks that underpin intellectual property. This paper aims to provide clarity and scholarly insight into one of the most pressing issues at the intersection of technology and law.

The Berne Convention and Traditional Concepts of Authorship

Historical Foundations of the Berne Convention

The Berne Convention for the Protection of Literary and Artistic Works, signed in 1886, marked the first significant step toward harmonizing copyright protection internationally. Prior to its adoption, authors faced difficulties securing recognition and enforcement of their rights across borders (Ricketson & Ginsburg, 2006). The Convention established three key principles: national treatment, automatic protection, and independence of protection, which remain the foundation of international copyright law today.

The Berne Convention obliges member states to provide minimum standards of protection to works of authorship originating from other member states (WIPO, 2021). These standards were defined in the context of human creativity. Article 2 of the Convention broadly defines "literary and artistic works" but offers no detailed definition of "author," reflecting the presumption at the time that authorship necessarily implied a human creator (Ficsor, 2003).

The Legal Definition of Authorship

Authorship is the cornerstone of copyright protection. The term refers to the individual who creates the intellectual expression of a work. Traditional copyright doctrine, reflected in the Berne Convention, accords rights to this author as the originator of the creative work (Gervais, 2019). Legal scholars note that authorship is closely tied to human attributes such as judgment, creativity, and intentionality (Leung, 2022).

Despite this, the Berne Convention remains silent on whether non-human entities could qualify as authors. While certain provisions, such as Article 7 (right of the author to enjoy protection during their lifetime and 50 years posthumously), imply the necessity of a human subject, the text itself does not explicitly exclude non-human creators. However, courts and policymakers have historically interpreted "author" as a natural person (Ricketson & Ginsburg, 2006).

The Human Authorship Assumption

The idea of human authorship has been reinforced across multiple jurisdictions. For example, the U.S. Copyright Office Compendium clearly states that works produced by a machine without human intervention will not be registered (U.S. Copyright Office, 2021). Similarly, the UK Copyright, Designs and Patents Act 1988 provides for copyright in computer-generated works but even in that case attributed authorship to "the one by whom the arrangements necessary for the creation of the work are undertaken" (CDPA, 1988, s.9(3))—again presuming an identifiable human actor.

Thus, although the Berne Convention remains neutral on the question, the overwhelming historical and judicial consensus has assumed human authorship as a prerequisite for copyright protection. This human-centric legal tradition is now under pressure from the growing

sophistication of AI technologies capable of independently creating works that mimic or surpass human creativity (Gervais, 2019; Leung, 2022).

Emergence of Artificially Generated Works

Defining AI-Generated Works

Artificially generated works refer to creative outputs produced by autonomous or semi-autonomous algorithms, often without direct human control over the final expression (Gervais, 2019). These works can range from visual art, poetry, and music to complex designs and literary compositions. Recent advancements in generative AI models, such as deep learning neural networks and large language models, have pushed the boundaries of machine creativity to levels previously attributed only to human authors (Leung, 2022).

AI-generated works can be classified into three broad categories (Yu, 2020):

1. **Assisted creation**: AI serves as a tool, with humans directing the process and contributing significantly to the final work.
2. **Co-creation**: Human and AI inputs are balanced, with shared responsibility for the creative process.
3. **Autonomous creation**: The AI system independently produces the work with minimal or no human input.

It is this last category—autonomous creation—that poses the most serious challenges for existing copyright regimes under the Berne Convention.

Notable Examples of AI-Generated Creativity

In 2018, the auction of *Portrait of Edmond de Belamy*, generated by the AI model GAN (Generative Adversarial Network), for $432,500 at Christie's brought global attention to the capability of AI in producing valuable artistic works (Vincent, 2018). Similarly, OpenAI's models have composed poetry and music that are indistinguishable from human-created works (Leung, 2022).

The use of AI in journalism, architecture, fashion design, and even legal drafting has expanded rapidly. Studies show that AI-generated music and literature are increasingly accepted by consumers, raising difficult questions about attribution and the ownership of such works (Gervais, 2019).

Challenges Posed by AI Creativity

The key issue arising from AI creativity is that the Berne Convention and most national laws were drafted under the assumption that creativity is uniquely human (Ficsor, 2003). As AI grows more sophisticated, the distinction between human and machine contributions becomes increasingly blurred. Courts and legislatures are struggling to determine:

- Who, if anyone, should be recognized as the author?
- Whether a work lacking human authorship qualifies for copyright protection.
- Whether AI-created works should remain in the public domain to avoid disrupting traditional rights holders.

The answers to these questions are inconsistent across jurisdictions, leading to legal uncertainty and potential international conflicts (Yu, 2020).

Challenges Regarding Copyright Protection under the Berne Convention

Legal loopholes in the Berne Convention Regarding AI-Generated Works

The Berne Convention, was intended to protect the rights of human authors. Its provisions do not clearly address works created by entities, like artificial intelligence. This omission ends up in causing substantial ambiguity when determining the copyright status of AI-generated works.

Article 2 of the said Convention defines the term "literary and artistic works" but does not specify the author, indirectly assuming human authorship. Such an assumption becomes problematic as AI systems increasingly produce material that nonetheless resembles human-created works. The absence of clear guidelines in the Convention regarding non-human creators results in causing legal uncertainty and varying interpretations across various jurisdictions.

Requirement of Human Authorship

A vital principle of copyright law, as strengthened by the Berne Convention, is the implicit requirement of human authorship. This principle has been sustained in various legal systems, where courts have persistently ruled that the works created by humans can be protected under copyright law. As, the U.S. Copyright Office has maintained that works generated

solely by AI with no human intervention, are not copyrightable.

This human authorship requirement poses multiple challenges for AI-generated works, which may not involve any human creativity or intervention. Consequently, such works may fall outside the ambit of copyright protection, leaving them susceptible to their unauthorized use and exploitation.

Issue of determination of Ownership

Determining ownership of AI-generated works is yet another intricate issue. Traditional copyright law assigns ownership to the human author or their employer only. However, in case of AI-generated content, identifying an author most of the times becomes problematic. Questions arise as if it is the developer of the AI, or the user who inputted the said data, or the AI itself which should be considered and treated as an author. This ambiguity further complicates the assignment of rights and determine the liability for infringement, if any.

Furthermore, the use of copyrighted materials in order to train AI systems has raised concerns about the potential infringement. If an AI system is being trained on copyrighted works without any kind of authorization, and subsequently ends up in generating content that resembles those original works, then determining liability becomes challenging. This lack of a clear legal framework to address these scenarios under the Berne Convention intensifies the issue.

Comparative Legal Approach at International level:

United States of America

In the United States, the Copyright Act of 1976 has long been interpreted to mean humans when it comes to an issue of authorship. The U.S. Copyright Office Compendium has expressly stated that works generated barely by machines, without any sort of human intervention, are by no means registrable (U.S. Copyright Office, 2021). This position was further affirmed in the widely discussed *Thaler v. Perlmutter* case (2023), where the U.S. District Court for the District of Columbia upheld the refusal of copyright registration for a work which was the creation of the Creativity Machine, an AI system. The court ruled out that copyright law protects actually those fruits of intellectual labor that are founded in the creative powers of a human mind (Thaler v. Perlmutter, 2023).

United Kingdom

The United Kingdom provides an exceptional perspective under the Copyright, Designs and Patents Act 1988 (CDPA). Section 9(3) of the CDPA addresses computer-generated works and assigns authorship title to a person by whom the arrangements necessary for the creation of the work are undertaken. This approach offers some flexibility by recognizing that creative control exercised by a human over an AI system can confer authorship rights (CDPA, 1988).

Although this provision attempts to accommodate AI-assisted works, it is still debated how it applies to highly autonomous systems where human intervention is minimal (Leung, 2022).

European Union

The European Union lacks specific statutory provisions dealing withAI-generated works. The Court of Justice of the European Union (CJEU) has consistently emphasized the "author's own intellectual creation" as a standard established in *Infopaq International A/S v. Danske Dagblades Forening* (2009). According to this standard, only works reflecting the personality and free choices of the human author are eligible to be qualified for protection (CJEU, 2009).

The EU Parliament's 2020 report on intellectual property and AI recommends exploring new legal categories for non-human creators but halts short of suggesting any formal legislative amendments (European Parliament, 2020).

Other Jurisdictions stance

Full Federal Court of Australia in *Telstra Corporation Ltd v. Phone Directories Co Pty Ltd* (2010) held that copyright requires only human authorship and rejected thereby claims over purely automated compilations. Similarly, the Canadian courts have maintained the same human authorship standard, reinforcing the global inclination that current laws remain tied to human creators only (Gervais, 2019).

Synthesis of Comparative Approaches

A review being made of global jurisprudence highlights a common disinclination to encompass copyright protection to autonomous

AI-generated works. While the UK does provides a narrow statutory exception, most major legal systems, influenced by the Berne Convention's underlying philosophy, still require human intervention to claim authorship. This divergence results in legal uncertainty and calls for an internationally harmonized response (Leung, 2022; Yu, 2020).

Potential Solutions and Policy Recommendations

Retreating the Definition of Authorship

The most tenacious reform needed under international copyright law is a clearer and more inclusive definition of authorship. Scholars argue that the Berne Convention's silence on non-human creators has created needless uncertainty (Gervais, 2019; Leung, 2022). One of the possible solutions is to redefine the concept of authorship as including the person who initiated or even controlled the AI's creative process, aligning with the UK's approach under the CDPA (1988).

The World Intellectual Property Organization (WIPO) has proposed encouraging dialogue among member states to develop soft law instruments, such as guidelines or recommendations, to assist in national implementations without amending the Berne Convention itself (WIPO, 2021). Such a step could promote uniformity while respecting state sovereignty.

Introducing a New Rights Regime

A number of legal scholars recommend creating a sui generis (unique) rights regime for AI-generated works. Yu (2020) at one point suggests that a separate legal framework could be designed to offer a limited-term rights to the human stakeholders whosoever involved in the AI's development, training, or even an operation. This would avoid weakening the human-centric nature of copyright while providing an additional protection for commercially valuable AI-created works.

A sui generis right would:

- Provide legal protection for AI outputs,
- Clearly define rights holders (e.g., AI developers, users, dataset providers),
- Include exceptions to prevent monopolization of knowledge and culture (Leung, 2022).

Encouraging Global Harmonization

The fragmented nature of various national laws demands an urgent need for harmonization. A more practical approach towards this be the development of a model laws or best practice guidelines under WIPO leadership (Gervais, 2019; WIPO, 2021).

The European Parliament (2020) has proposed the creation of international task forces consisting of experts from various fields i.e. lawmakers, industry experts, information technology experts, creators, writers and legal scholars to explore a balanced international framework.

Balancing Innovation and Public Interest

Any legal framework for AI-generated works must prudently balance the rights of stakeholders with that of public interest. Overprotection could result to hinder access to knowledge and suppress creativity. WIPO (2021) demands for flexible limitations and exceptions to ensure that any new regime should respect existing international human rights principles and promotes cultural diversity.

Scholars also argue for strengthening fair use and fair dealing provisions, especially in cases where AI training relies on large volumes of copyrighted works, to work properly (Yu, 2020). This approach could help mitigate legal risks while simultaneously encouraging continued innovation.

Conclusion

The Berne Convention 1886 for over a century, has served as the cornerstone of international copyright protection. However, it never anticipated to address the profound and unforeseen challenge posed by artificial intelligence. AI systems today can autonomously and independently generate music, prepare literature, create images, and designs—creations that surpasses human works in complexity and market value. Yet, the legal frameworks of most of the states remain deeply rooted in a human authorship model, leaving AI-generated works in a unwarranted legal limbo.

This paper has demonstrated that though some national systems, such as the United Kingdom, have made an attempt to adapt existing laws to account for AI-generated works, the overwhelming global trend remains one of

exclusion unless and until clear human intervention exists. Courts of the United States, Australia, Canada, and the European Union still continue to reject the claims of copyright where human authorship is absent.

These inconsistencies between various jurisdictions pose significant challenges for stakeholders, from AI developers to creative industries and even the consumers. The absence of legal certainty threatens to throttle innovation which may lead to a patchwork of conflicting obligations and rights across borders.

Recommendations

Several policies have been proposed to address this emerging legal dilemma:

1. Expanding the legal definition of authorship in the Convention vis a vis national related laws, to include the initiators or operators of AI systems.
2. Creating a new sui generis rights regime that additionally recognizes the value of AI-generated works without deflating traditional human rights under copyright law.
3. Encouraging international cooperation under the ambit of WIPO to draft non-binding recommendations as well as model laws that could provide much needed consistency.
4. Mandate transparency regarding AI involvement and training datasets to address ethical and legal concerns.
5. Provide legal and technical assistance to developing countries to draft AI-compatible copyright laws.

Ultimately, as AI technologies continue to evolve with this pace, so too must legal framework. Any kind of failure to act, risks rendering the existing intellectual property regime obsolete in one of the most rapidly advancing sectors of human innovativeness. Scholarly engagement and International dialogue will be crucial in shaping laws that protect both innovation and the public interest at the same time.

The continuous debate over AI and copyright at present, is not merely a legal technicality; it also reflects a deeper philosophical question about what it means to create and who, or what, can be recognized as a creator of the work under law. As this discourse matures, the international community faces a rare opportunity to rethink copyright norms for the digital age and ensure their continued relevance well into the future.

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