THE KEY CHALLENGES THAT THE EMERGENCE AND PROLIFERATION OF AI TECHNOLOGY POSE TO COPYRIGHT LAW

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ABSTRACT

Generative AI tools like ChatGPT and DALL-E are flipping the script on creativity, spitting out essays, code, and art from simple prompts that look shockingly human-like. They're shaking up industries from entertainment to education, making creation super accessible but exposing big cracks in copyright laws meant for people, not machines.

This paper digs into three messy issues: Who's the real author of AI stuff, and is it even "original" enough for protection? (The U.S. Copyright Office says no without human input, like that monkey selfie case.) Who owns it—the coder, the prompter, or nobody? And is it okay for AI to gobble up copyrighted books, pics, and code for training, leaning on U.S. fair use or EU calls for transparency and pay-for-use?

Zooming in on U.S. vs. EU vibes: America's all about innovation with flexible fair use, while Europe's pushing creator rights, data controls, and ethics via its AI Act and white papers. These clashes could splinter markets and shortchange artists, but they point to a smarter balance—protecting human work without killing AI's potential.

Keywords: AI, Law, Technology, Copyright Law, Authorship, Originality, Ownership, EU, USA, Fair Use, Infringement, Non-Human Authorship.

1. INTRODUCTION

The emergence of generative AI— exemplified by tools like ChatGPT, which can write essays and code, and DALL-E, which can create complex artwork based on simple text prompts—has ushered in a revolutionary era of machine-powered creativity. Powered by massive datasets and complex deep learning algorithms, these technologies are transforming everything from the entertainment to education sectors, democratizing content creation while, at the same time, disrupting traditional legal and ethical regimes. As the outputs of AI diminish the line separating machine and human creativity, they also disclose major flaws in intellectual property systems, particularly copyright law, designed to promote human innovation. The social stakes are profoundly important: while generative AI promises efficiency and accessibility, it also risks undervaluing human work, complicating accountability, and increasing tensions between technological innovation and creative rights.[1]

At the heart of this upheaval lie three intrinsic challenges. The first is one of authorship and originality: when a novel or artwork emanates from the fingers of AI, who—if anyone—can rightfully be deemed its author? As exemplified by the U.S. Copyright Office's 2023 Report, existing legal frameworks categorically maintain that only "human authorship" works deserve protection[2], citing examples such as refusing copyright to a monkey's selfie. Yet this stance conflicts with facts in which AI software, in response to user input, generates outputs that rival human ones. Secondly, ownership disputes: Do the rights belong to the developer who built the AI, the user who inputted it, or no one? The absence of definite ownership frameworks risks inhibiting investment and innovation. Thirdly, training data legality: Generative AI models rely on ingesting massive quantities of copyrighted text, images, and code. While U.S. law generally protects the same in "fair use" doctrines[3], the EU 2020 White Paper on AI emphasizes issues with the non-remunerated use of authors' works, calling for transparency and accountability in data acquisition[4].

Sharp jurisdictional boundaries between the U.S. and the EU are part of these difficulties. The U.S. is technologically friendly and fosters innovation through open-doctrine principles of fair

[1] Lee, J.-A. et al. (2023) AI and intellectual property. Cambridge: Cambridge University Press.
[2] U.S. Copyright Office (2023) Copyright registration guidance: Works containing material generated by AI. Washington, DC: U.S. Government Publishing Office.
[3] Lee, J.-A. et al. (2023) AI and intellectual property. Cambridge: Cambridge University Press.
[4] European Commission (2020) White paper on AI: A European approach to excellence and trust. COM(2020) 65 final.

use and refusing AI authorship qualification[5]. The EU, however, in its 2020 White Paper, sets top priorities in terms of minimization of risks, control and protection for creators and ethical safeguards and proposes more control over AI training methodologies and potential licensing regimes for copyright materials[6]. These reflect underlying philosophical tendencies: market-based solutions are preferred in the U.S., and moral rights and equitable gains distribution are preferred in the EU.

These are not merely matters of academic interest but have norm development implications in an international context. The underlying legal ambiguities can fragment markets, erode creators' coffers, and corrupt public trust in AI systems[7]. This comparison of U.S. and E.U. stances is employed herein to underscore the potential scope for balancing the encouragement of innovation and protection of human creativity, a balance necessary to ensure generative AI becomes a source of empowerment rather than exploitation in the digital environment.

2. BACKGROUND

2.1 Traditional Copyright Principles

Copyright law based on ideas about individualism and creativity in the 18th century has traditionally premised human agency on authorship. The assumption of human authorship was reaffirmed in Burrow-Giles Lithographic Co. v. Sarony (1884), in which the U.S. Supreme Court reiterated that copyright is granted to works demonstrating a human author's "intellectual labour"[8]. The assumption remains applicable even today in the form of the U.S. Copyright Office's rejection of copyrighted works without human creative contributions[9]. Similarly, while non-human authors are not excluded, EU copyright systems de facto privilege human creativity through requirements such as "author's intellectual creation"[10].

The originality definition also demarcates the copyright eligibility boundary. The U.S. Supreme Court's landmark decision in Feist Publications v. Rural Telephone Service (1991) overruled the "sweat of the brow" model—previously awarding labour-based protection—and

[5] Gervais, D. (2022) 'The machine as author', Iowa Law Review, 105(5), pp. 2053-2106.
[6] European Commission (2020) White paper on AI: A European approach to excellence and trust. COM(2020) 65 final
[7] Lee, J.-A. et al. (2023) AI and intellectual property. Cambridge: Cambridge University Press.
[8] Jaszi, P. (1991) 'Toward a theory of copyright: The metamorphoses of "authorship"', Duke Law Journal, 40(2), pp. 455-502.
[9] Thaler v. US Copyright Office, No. 22-1564 (D.D.C. 2023).
[10] Infopaq International A/S v. Danske Dagblades Forening, Case C-5/08 (CJEU 2009).

required a "modicum of creativity"[11]. The EU's more stringent test in Infopaq requires works to reflect the "author's personality" and freedom of creative decisions. This difference reveals a philosophical rift: the U.S. would sooner foster innovation at low originality requirements, whereas the EU would sooner protect individual creative expression.

2.2 How AI Creates Works

Generative AI models such as DALL-E and ChatGPT have a two-stage process: training and output. During training, machine learning algorithms run through vast amounts of data—often copyrighted materials in texts, pictures, or music—to enable them to recognise patterns and correlations[12]. For instance, OpenAI's GPT-4 was trained on internet data through terabits of books and articles. These data are "raw materials" where AI acquires skills to respond like a human. The algorithms under a directive by neural networks produce work anew by predicting sequences (text) or synthesis of visual attributes (pictures) in probabilistic models.

This process necessarily displaces traditional paradigms of copyright. Unlike human writers, AI is inadvertent; its creations are stochastic byproducts of its training data. As Martha Woodmansee explains in The Idea of Authorship in Copyright, the Romantic notion of author-genius as a sequestered, inspired author cannot be reconciled to AI's mechanical production[13]. But also, the use of training data involves ethical and legally fraught questions: when AI systems take in copyrighted works without permission, is this a violation, or is it to be treated as falling within exceptions like fair use (U.S.) or text-and-data mining (EU)?

LEGAL CHALLENGES

Authorship in the Age of AI

Applying AI to creative labour has necessarily engendered a revaluation of established ideas about authorship in copyright law. Pre-eminent among these is whether AI systems are entitled to be considered "authors" and entitled to copyright. This was brought to centre stage in Naruto v. Slater (2018), the much-publicized macaque "selfie" photograph case. The U.S. Ninth Circuit Court held non-human players, like animals, have no standing in the Copyright Act,

[11] Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340 (1991).
[12] Lemley, M.A. and Casey, B. (2023) 'Fair learning', Stanford Law Review, 75, pp. 1-58.
[13] Woodmansee, M. (1984) 'The genius and the copyright: Economic and legal conditions of the emergence of the "author"', Eighteenth-Century Studies, 17(4), pp. 425-448.

setting a precedent against non-human authorship[14]. Even though the case didn't touch on AI, such justification supports anthropocentric assumptions of copyright regimes. This has been taken board by the U.S. Copyright Office, which clarified that "human authorship is essential" to such protection, reconfirmed in Thaler v. USCO (2023), where work generated by AI was denied registration on the grounds of a failure to have been a product of human creative input[15].

The position of the EU is less outspoken yet no less human-centric. In Infopaq International A/S v. Danske Dagblades Forening (2009), The Court of Justice of the EU associated copyright with the "author's intellectual creation" and intimated a human element[16]. The EU has not directly dealt with non-human authorship by AI in cases like Acohs Pty Ltd v. Ucorp (2012), in which a computer-generated manual was denied protection because of a lack of human creativity[17]. This reticence creates scope for ambiguity, specifically when AI is working more autonomously.

The issue is whether a case for protecting AI-generated work with ownership rests in the human developer or user because AI is merely an "instrument" used in creativity[18]. This conforms with utilitarian copyright aims to influence investments in AI systems. But AI has the potential to generate autonomously in a mode detrimental to the human-centric paradigm and renders traditional authorship obsolete[19]. For example, AI generates results autonomously without human interference in the problematic fiction of human control.

This tension raises essential questions for copyright regimes. If AI is viewed as a tool, existing regimes can conceivably be sufficient to allocate ownership to human operators. If AI is viewed as a standalone entity, legislative development may be necessary to plug gaps in protection and incentivisation. The model based on Naruto and human-centric principles risks suppressing innovation by casting AI-generated works into a zone of regulation uncertainty. Legislatively, policymakers will increasingly face trading technological advances against philosophical and economic foundations in copyright law.

[14] Naruto v. Slater, 888 F.3d 418 (9th Cir. 2018).
[15] Thaler v. US Copyright Office, No. 22-1564 (D.D.C. 2023).
[16] Infopaq International A/S v. Danske Dagblades Forening, Case C-5/08 (CJEU 2009).
[17] Acohs Pty Ltd v. Ucorp Pty Ltd, [2012] FCA 141 (Federal Court of Australia 2012).
[18] Abbott, R. (2022) The patentability of AI inventions. https://www.gje.com/resources/turning-lemons-into-lemonade-professor-ryan-abbott-on-the-patentability-of-ai-inventions/
[19] Guadamuz, A. (2021) 'The death of the human author', European Journal of Law and Technology, 12(1). https://ejlt.org/index.php/ejlt/article/view/662/886

Originality Standards Under Stress

The emergence of AI has fundamentally challenged the originality-based principles of copyright law, which seek to differentiate between algorithmic works and those stemming from human creativity. The Supreme Court of the US, in Feist Publications v. Rural Telephone Service (1991), determined that originality necessitates a "modicum of creativity," establishing a minimal standard to exclude works that are purely factual or mechanical[20]. However, AI-generated output complicates this assessment, as it typically results from algorithms simulating creativity without the intentionality inherent in human artistry. In 2023, an AI-generated comic book was denied listing by the U.S. Copyright Office, as it failed to satisfy Feist's originality test due to the absence of direct human creative input. This issue highlights the conflict between AI's ability to generate creative works comparable to those of humans and the legal requirement for human authorship to receive protection.

Conversely, the EU imposes a stricter standard for originality, as evidenced in Infopaq International A/S v. Danske Dagblades Forening (2009). This provision stipulates that protected works must be the "author's intellectual creation" and exhibit a "personal touch"[21]. Analysing EU copyright law, this test inevitably excludes works created solely by AI, as they lack human subjectivity and individuality[22]. This framework prioritises the unique attributes of the author over the aesthetic or functional qualities of the product, resulting in the exclusion of AI systems from authorship under current legal standards. The disparity between U.S. and EU testing protocols leads to legal fragmentation, complicating the protection of cross-border AI-generated works and raising concerns regarding harmonisation in a global digital economy.

The implications of these originality standards are significant. AI creations that do not meet jurisdictional criteria may enter the public domain upon their inception, potentially discouraging investment in AI-driven creative sectors. The law's hesitance to safeguard AI-generated products arises from a philosophical bias favouring human creativity, viewing authorship as a manifestation of individual identity and agency[23]. This effort may inhibit creativity, as users and developers might lack motivation to improve AI systems if they do not

[20] Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340 (1991).
[21] Infopaq International A/S v. Danske Dagblades Forening, Case C-5/08 (CJEU 2009).
[22] Rosati, E. (2019) 'The EU's approach to AI creativity', European Intellectual Property Review, 41(5), pp. 278–291.
[23] Gervais, D. (2023) 'AI and the originality requirement', Journal of Intellectual Property Law, 30(2), pp. 145-168.

possess ownership of the outputs. The rejection of the 2023 AI-generated comic book highlights the conflict between doctrinal rigidity and technological advancement, exposing the legal system's inability to reconcile technological progress with established doctrines.

Redefining originality to incorporate AI in the creative process poses challenges, particularly in maintaining the integrity of human-centric principles that underpin copyright law. Some scholars advocate for recognising AI as a collaborative tool, suggesting that human involvement in its creation or guidance meets originality criteria. Conversely, others warn against diluting the concept of authorship[24]. The EU's rigorous "personal touch" test and the U.S.'s implementation of Feist's low-creativity test highlight a significant uncertainty regarding the adaptation of copyright law to technological advancements versus the maintenance of traditional distinctions between human and machine creativity[25].

Ownership Disputes

The ownership issue regarding outputs generated by AI—whether rights belong to users, programmers, or the AI—poses a significant challenge to established copyright law, highlighting inconsistencies across legal jurisdictions and complexities within foundational principles. The work-for-hire principle in US copyright law assigns ownership rights to employers or commissioned individuals, provided an employee creates the work within the scope of their job duties. This legal framework is inadequate for addressing AI-generated works that do not involve a human "employee" or independent contractor[26]. Courts have not yet determined if individuals utilising AI systems, programmers developing AI systems, or organisations employing AI tools can be classified as "authors" under this doctrine. OpenAI's terms of service grant users rights to the outputs generated by its models while the organisation maintains ownership of the underlying AI systems, resulting in contractual complexities[27]. This bifurcation poses risks of fragmented ownership, with users managing specific outcomes while developers maintain overarching proprietary rights over the technological infrastructure.

[24] Hugenholtz, P.B. (2022) AI and copyright: A transatlantic comparison. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4982516
[25] Rosati, E. (2019) 'The EU's approach to AI creativity', European Intellectual Property Review, 41(5), pp. 278–291.
[26] Samuelson, P. (2023) 'Generative AI and copyright law', Communications of the ACM, 66(12), pp. 30–32.
[27] Gervais, D. (2023) 'AI and the originality requirement', Journal of Intellectual Property Law, 30(2), pp. 145-168.

The copyright regime in the EU creates ownership conflicts by emphasising droit d'auteur, thereby prioritising moral rights of attribution and integrity[28]. Jane Ginsburg, in The Machine as Author, contends that the EU's emphasis on the internal relationship between a human author and her work is significantly undermined by the existence of independent AI systems[29]. French law establishes that moral rights are inalienable and immortal, prompting inquiries into whether a programmer or user can assert authorship of AI-generated products, given the absence of direct human creative input. The EU's reluctance to recognise non-human authors exacerbates the issue, resulting in legally ambiguous ownership concerning unnamed human intermediaries. In the US, corporate adoption of work-for-hire laws is prevalent; however, in the EU, moral rights law may hinder innovation in AI by obscuring the commercial use of AI-generated materials[30].

The UK's Copyright, Designs and Patents Act of 1988 uniquely designates the individual who commissions a computer-generated work as its author[31]. This approach mitigates contentious debates regarding AI autonomy by attributing authorship to a human overseeing an AI program, irrespective of their level of engagement. The provision may lead to overly broad ownership claims, as virtually anyone could be deemed an "author" simply by initiating an AI process[32].

The absence of cohesive regulations highlights a key issue: the human-centric basis of copyright law inadequately addresses the collaborative and frequently unclear aspects of AI-generated creativity. Without legislative intervention, ownership disputes are expected to increase, hindering technological progress and the creative sector. Policymakers can modify current legal frameworks, such as broadening work-for-hire doctrines or developing new models that define explicit ownership rights for AI-generated works. Currently, contractual agreements and jurisdictional differences serve as temporary measures for a challenge that requires a cohesive international strategy.

[28] Hugenholtz, P.B. (2022) AI and copyright: A transatlantic comparison. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4982516
[29] Ginsburg, J.C. (2023) 'The machine as author', Columbia Journal of Law & the Arts, 45(3), pp. 321-358.
[30] Hugenholtz, P.B. (2022) AI and copyright: A transatlantic comparison. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4982516
[31] UK Parliament (1988) Copyright, Designs and Patents Act 1988 (c. 48). London: The Stationery Office. Available at: https://www.legislation.gov.uk/ukpga/1988/48/contents
[32] Samuelson, P. (2023) 'Generative AI and copyright law', Communications of the ACM, 66(12), pp. 30–32.

Training Data Legality

Using copyrighted material for training AI systems presents a significant challenge to copyright law, particularly as AI developers increasingly extensively scrap texts, images, and other protected content. The central question is whether this practice qualifies as fair use in the US or if it fails to meet the stricter regulations established by the EU. The US established important case law in Authors Guild v. Google (2015), which set a precedent for transformative use, permitting the digital reproduction of copyrighted books for search engine purposes under the fair use doctrine[33]. The courts emphasised that the Google initiative offered significant public benefit while not directly substituting the original work. Nonetheless, this rationale faces growing scrutiny in cases like The New York Times v. Microsoft (2023), where plaintiffs contend that training AI on copyrighted journalism amounts to commercial exploitation, thus challenging the definition of "transformative" use[34]. AI training may qualify as fair use when it involves non-expressive data processing in an analytical context. However, this remains a contentious issue, particularly as generative AI produces outputs that closely resemble human creativity[35].

The EU's approach, established via the 2019 Copyright Directive, is notable for its specificity. Article 4 allows text and data mining (TDM) for non-commercial research activities but mandates a commercial use license, ensuring rights holders' compensation[36]. This strategy illustrates Europe's focus on author-centric control, which can sometimes impede practical innovation[37]. Commercial AI developers, such as OpenAI, must obtain explicit permission from EU copyright holders to train models like GPT on books, articles, and web pages, presenting a significant challenge not faced in the US. This difference indicates a forthcoming transatlantic divide: while U.S. law fosters AI development via a flexible doctrine of fair use, the EU prioritises creator remuneration, potentially hindering technological progress.

The ongoing legal dispute highlights a significant ethical issue: the necessity for compensation

[33] Authors Guild v. Google, Inc., 804 F.3d 202 (2d Cir. 2015).
[34] The New York Times v. Microsoft/OpenAI, Case No. 1:23-cv-11195 (S.D.N.Y. 2023)
[35] Sag, M. (2023) Copyright in the age of AI training. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4976393
[36] European Parliament and Council (2019) Directive (EU) 2019/790 on copyright and related rights in the Digital Single Market, Article 4. Official Journal of the EU, L 130, 17 May, pp. 92–125. https://eur-lex.europa.eu/eli/dir/2019/790/oj
[37] Hugenholtz, P.B. (2022) AI and copyright: A transatlantic comparison. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4982516

for artists and writers whose work is utilised in training AI algorithms. Proponents of licensing argue that creators deserve compensation for their work, enabling the development of commercially viable AI-based products akin to music licensing in films. Some caution that stringent regulations may impede access to information, particularly in open-source initiatives[38]. This ethical dilemma involves the potential of AI to create derivative works that may conflict with human creators, particularly when generated texts or art undermine the value of original works.

Policymakers must balance the rights of creators with the need for technological advancement. The flexibility of the U.S. system fosters innovation; however, its litigious nature introduces potential unpredictability through varied interpretations of "transformative use." The European model ensures regulatory consistency and promotes clarity; however, it may impose economic challenges on startups and researchers due to licensing fees.

COMPARATIVE ANALYSIS

Authorship and Originality in the U.S. and EU

The differing paths of copyright law in the US and EU countries—especially concerning originality and authorship—reflect distinct philosophical and legal priorities that shape their regulation of creativity. Both areas recognise the importance of human creativity in creating works eligible for copyright protection; however, their legal frameworks exhibit significant differences in rigidity, foundational principles, and responsiveness to emerging technological advancements such as AI.

In the US, copyright law imposes a strict authorship criterion for human-generated works, as highlighted in the Thaler v. USCO (2023) case, where the U.S. Copyright Office rejected a registration request for an AI-generated work due to insufficient human creative contribution[39]. The ruling reaffirmed earlier precedent, notably in Naruto v. Slater (2018), where non-human authorship was explicitly rejected[40]. The foundation of American law rests on the principle that copyright promotes human creativity, as articulated in the Copyright Act's reference to "original works of authorship." Originality is defined by the “minimal creativity” standard

[38] Sag, M. (2023) Copyright in the age of AI training. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4976393
[39] Thaler v. US Copyright Office, No. 22-1564 (D.D.C. 2023)
[40] Naruto v. Slater, 888 F.3d 418 (9th Cir. 2018)

established in Feist v. Rural (1991), which necessitates a "modicum" of human intellectual effort[41]. This standard permits a wide range of works, including databases and compilations, to be protected as long as they demonstrate human judgment. However, insisting on human authorship creates a legal gap for works produced by increasingly sophisticated AI without direct human involvement[42].

In contrast, the EU enforces strict regulations regarding non-human authorship, yet it maintains a rigorous originality test aligned with the concept of the "author's intellectual creation"[43]. The harmonised test established by member states stipulates that works must exhibit a human creator's "personal touch," thereby underscoring the importance of human creative freedom and the value of subjective choices. The EU has yet to address AI authorship explicitly; however, its focus on "human creative expression," inherently excludes works produced entirely by machines[44]. An illustrative case is Acohs Pty Ltd v. Ucorp (2012) which has impacted EU discussions, wherein a human-generated manual produced by a computer was denied protection due to its mechanical nature[45]. The EU's Copyright Directive reinforces a human-centred approach by enhancing authors' ownership of AI-generated works, ensuring that human creative control is maintained throughout the process.

The frameworks of the U.S. and EU differ significantly in their treatment of works generated by AI. The U.S. system's complete exclusion of non-human authorship categorises these works as public domain, disincentivising investment in AI creativity. The EU's ambiguous stance permits limited protection in instances where human involvement—like the curation of training data or the refinement of outputs—can be considered integral to the creative process. P. Bernt Hugenholtz observes that this flexibility enables Member State courts to adapt to technological advancements without necessitating comprehensive legislative revisions. However, it poses a risk of inconsistent application across Member States[46].

[41] Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340 (1991).
[42] Abbott, R. (2022) The patentability of AI inventions. https://www.gje.com/resources/turning-lemons-into-lemonade-professor-ryan-abbott-on-the-patentability-of-ai-inventions/
[43] Infopaq International A/S v. Danske Dagblades Forening, Case C-5/08 (CJEU 2009)
[44] Rosati, E. (2019) 'The EU's approach to AI creativity', European Intellectual Property Review, 41(5), pp. 278–291. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3452376
[45] Acohs Pty Ltd v. Ucorp Pty Ltd, [2012] FCA 141 (Federal Court of Australia 2012)
[46] Hugenholtz, P.B. (2022) AI and copyright: A transatlantic comparison. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4982516

Ownership and Licensing in the U.S. and EU

The U.S. and EU copyright ownership and licensing frameworks reflect fundamentally different philosophies. The U.S. prioritises economic efficiency, while the EU focuses on safeguarding creators' moral rights. This influences how jurisdictions balance corporate objectives and individual authorial rights, particularly in fields dependent on commissioned or collaborative works.

Section 101 of the Copyright Act in the US establishes that employers or hiring entities automatically obtain copyright ownership of works created by employees during their employment and for specially commissioned projects documented in writing[47]. This provision is particularly beneficial in film production, software development, and publishing, where collaboration is essential. The mechanism disadvantages solitary creators by stripping them of economic and moral rights unless these rights are explicitly retained in their agreements. Although the US acknowledges moral rights via the Visual Artists Rights Act (VARA), these rights are strictly confined to visual art and do not extend to commercial or digital works, underscoring a pragmatic approach to achieving market efficiency[48].

The EU articulates strong moral rights as inalienable protections for creators, as stated in Article 6bis of the Berne Convention. The rights of attribution and integrity, particularly the right to contest derogatory modifications, remain intact even when copyrights are licensed to employers or licensors[49]. A notable instance is a 2019 French court ruling favoured a street artist whose mural was altered without consent, affirming that contractual waivers do not impact moral rights[50]. The EU moral rights model embodies a cultural obligation to safeguard authors from actions that violate their personal and reputational interests, particularly when creativity is viewed as fundamentally linked to human dignity[51]. This model complicates commercial transactions as licensors must navigate enduring creators' rights, which limit

[47] U.S. Copyright Office (2023) Copyright and AI: Policy listening sessions. https://www.copyright.gov/ai/
[48] US Congress (1990) Visual Artists Rights Act of 1990, Pub. L. No. 101-650, 104 Stat. 5089 (codified at 17 U.S.C. § 106A)
[49] Berne Convention for the Protection of Literary and Artistic Works (1886, as revised) Article 6bis: Moral Rights. World Intellectual Property Organization (WIPO).
[50] Tribunal de grande instance de Paris [TGI Paris] (2019) Société Commune des Auteurs Multimédia (SCAM) v. Société JCDecaux, Case No. 18/58743 (Judgment of 31 May 2019).
[51] Bently, L. (2018) The UK provisions on computer-generated works. European Copyright Society. https://europeancopyrightsociety.org/wp-content/uploads/2018/06/lionel-the-uk-provisions-on-computer-generated-works.pdf

commercial sales to some extent.

Licensing further emphasises the transatlantic divide. The work-for-hire doctrine in the US streamlines licensing by centralising ownership and facilitating derivative works and industries based on diffusion. A software firm can efficiently transform and license code created by employees without the need for negotiations with individual coders. In the EU, the situation is different: licensors are required to uphold moral rights, necessitating ongoing communication with creators despite changes in ownership. This significantly raises transaction costs and diminishes the authors' reputational capital. The EU's 2019 Copyright Directive strengthens protections by mandating "proper and reasonable" remuneration for creators in exploitation agreements[52]. In contrast, the situation in America reveals a bargaining imbalance that results in creators having minimal residual claims.

The emergence of AI-generated content poses a new challenge to established paradigms. In the US, AI-generated works without human authorship are classified as public domain. This situation is highlighted by the Thaler v. USCO (2023) case, which creates uncertainty for individuals aiming to license these works. The EU, while denying copyright protection for wholly AI-generated works, may still recognise moral rights for human contributors involved in the training or refining of AI systems. This reflects Bently's analysis of "computer-generated works" under UK law, a remnant of pre-Brexit influence[53]. This divergence underscores the EU's inclination to integrate human dignity within copyright policy despite challenges posed by technological advancements.

Ultimately, we encounter the contrasting copyright ideologies of the U.S. and the EU: one promoting market flexibility and corporate autonomy and the other striving to safeguard the essential connection between creators and their works. As this activity becomes more decentralised and driven by artificial stimuli, such systems will consistently need to balance economic demands with the ethical obligations of authorship. The US will face challenges regarding demands for fairness in creator licensing. At the same time, the EU must reconcile its commitment to moral rights with its practical approach to digital advancement.

[52] Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market.
[53] Bently, L. (2018) The UK provisions on computer-generated works. European Copyright Society. https://europeancopyrightsociety.org/wp-content/uploads/2018/06/lionel-the-uk-provisions-on-computer-generated-works.pdf

AI Training and Exceptions in the U.S. and EU

The legislation governing text and data mining for AI highlights a significant distinction between copyright frameworks in the US and the EU. The U.S. employs a flexible principles-based system that utilises fair use to support AI development. In contrast, the EU adheres to a more rigid framework characterised by statutory exceptions and a significant focus on owners' rights[54]. The differences illustrate broader cultural and economic goals, influencing how each jurisdiction manages the balance between technological progress and the rights of creators.

In the US, Section 107 of the Copyright Act establishes the doctrine of fair use, permitting unauthorised use of copyrighted materials for purposes including criticism, research, or transformative use[55]. The provision has historically promoted AI innovation, notably illustrated in Authors Guild v. Google (2015), where the Second Circuit determined that creating digital copies of millions of books to enhance Google's search capabilities is transformative. The court emphasised the societal importance of this initiative—specifically, information accessibility—while safeguarding against negative impacts on the original market[56]. The text and data mining for AI training exemplifies fair use, as it entails non-expressive computational processing aimed at pattern extraction rather than replicating creative works[57]. This perspective has faced growing opposition, especially when generative AI outputs closely resemble human-created work.

The EU explicitly references Text and Data Mining in Articles 3 and 4 of the 2019 Copyright Directive. Article 3 permits non-commercial text and data mining, provided that users possess "lawful access" to the original materials acquired via subscription or open licensing[58]. Article 4 broadens this exemption to include commercial TDM, imposing stricter conditions: it establishes opt-out provisions supported by technological measures and mandates access to training data following applicable terms of access[59]. This establishes a "two-tier system" that

[54] Sag, M. (2023) Copyright in the age of AI training. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4976393
[55] US Congress (1976) Copyright Act of 1976, 17 U.S.C. § 107.
[56] Authors Guild v. Google, Inc., 804 F.3d 202 (2d Cir. 2015)
[57] Sag, M. (2023) Copyright in the age of AI training. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4976393
[58] European Parliament and Council (2019) Directive (EU) 2019/790 on copyright and related rights in the Digital Single Market, Articles 3–4. Official Journal of the EU, L 130, 17 May, pp. 92–125. https://eur-lex.europa.eu/eli/dir/2019/790/oj
[59] European Parliament and Council (2019) Directive (EU) 2019/790 on copyright and related rights in the Digital Single Market, Articles 3–4. Official Journal of the EU, L 130, 17 May, pp. 92–125. https://eur-lex.europa.eu/eli/dir/2019/790/oj

promotes non-commercial scholarship while requiring commercial AI developers, such as those creating large language models like GPT-4, to secure licenses or depend on narrowly acceptable data sets[60]. The EU's emphasis on "lawful access" safeguards creators' control over their work and aligns with its broader commitment to author-centric copyright principles. Critics contend that the opt-out provision and licensing requirements impose excessive burdens on startups, potentially hindering innovation, particularly in sectors characterised by significant data aggregation[61].

A significant distinction exists in the treatment of "intermediate copies." The U.S. doctrine of fair use permits temporary reproductions of works for text and data mining, provided the purpose is transformative[62]. The EU considers such copies infringing unless explicitly excluded and mandates that developers demonstrate compliance with Article 3 or Article 4. The difference underscores the EU's careful approach to balancing the interests of creators with technological development, in stark contrast to the US' risk-taking culture.

The sustainability of these strategies in the long term is questionable. The inflexibility of the EU strategy threatens to disrupt the digital single market through inconsistent application of exceptions to TDM. The U.S. method of judicial interpretation leads to protracted court proceedings and fosters uncertainty for creators. The future standalone nature of AI will compel jurisdictions to consider whether developing frameworks can bridge the gap between human creativity and the data demands of machine learning. The global competition in AI will ultimately depend on which incentive systems achieve the best reconciliation.

LEGAL REFORMS & AI COPYRIGHT

AI's rapid development has highlighted significant copyright law deficits. It has stirred calls for legislative changes addressing authorship questions, legality surrounding training data, and copyrighting AI-generated work. Policymakers in America, in the EU, and across global institutions face the dilemma of balancing innovation stakeholders against human creators. This leads to various proposals representing clashing philosophical and economic assumptions.

[60] Margoni, T. (2020) 'Text and data mining in the EU', GRUR International, 71(8), pp. 685–699. https://academic.oup.com/grurint/article/71/8/685/6650009
[61] Sag, M. (2023) Copyright in the age of AI training. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4976393
[62] Margoni, T. (2020) 'Text and data mining in the EU', GRUR International, 71(8), pp. 685–699. https://academic.oup.com/grurint/article/71/8/685/6650009

US Approach

In US, there is a need to call for a reform of today's doctrine of fair use to make room for training AI without infringing on creators' rights. The non-expressive uses of copyrighted works—such as extracting statistical patterns for machine learning—should be considered fair use if they avoid directly undermining markets for original works[63]. This view is strengthened by decisions such as Authors Guild v. Google (2015), which support large-scale digitisation based on an argument of its transformative nature—however, policy listening sessions organised by the U.S. Copyright Office in 2023 uncovered major cleavages between stakeholders. Tech firms highlight the social gains of AI and are pushing for exemptions to fair use on a large scale, whereas creators demand licensing agreements so they are remunerated for their data to be used in training[64]. The Office has also clarified the notion of "human authorship" in cases like Thaler v. USCO (2023), where completely AI-created works are released into the public domain[65]. This stance has the potential to stymie investments in creative AI systems. It has sparked debates over whether Congress should limit certain protections for AI products through a new "work-for-hire" model granting developers or users ownership.

EU Approach

The EU has taken a more directive path, utilising the 2019 Copyright Directive to regulate text and data mining. Article 3 and Article 4 of this directive clearly distinguish between non-commercial and commercial TDM: non-commercial is subject to broad exceptions, while commercial requires authorisation by owners unless they opt-out[66]. This approach highlights creators' control in defining "lawful access" to training data—interpreting this in a sense requiring licences for copyright-protected content unless such exclusion is made. Coupled with this is the proposed AI Act of the EU (2021), adopting additional transparency requirements regarding training data overviews aimed at developers in connection with Articles 52–53[67]. While this creates accountability, it warns of compliance costs potentially stultifying

[63] Samuelson, P. (2023) 'Generative AI and copyright law', Communications of the ACM, 66(12), pp. 30–32.
[64] Hilty, R. (2022) AI and global copyright harmonization. Max Planck Institute for Innovation and Competition.
[65] U.S. Copyright Office (2023) Copyright and AI: Policy listening sessions. https://www.copyright.gov/ai/
[66] Hugenholtz, P.B. (2022) AI and copyright: A transatlantic comparison. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4982516
[67] European Commission (2021) Proposal for a Regulation laying down harmonised rules on AI (AI Act), COM(2021) 206 final. Official Journal of the EU, C 78, 5 March, pp. 1–33. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0206

competitiveness in the European AI market. When considering works produced by AI, the EU believes sui generis rights similar to those granted to databases, allowing a form of exclusivity to creations by AI without comparing them to those of human creativity[68]. This approach stimulates investment while preserving the nature of "human creative expression" in EU law.

Global Harmony

The lack of an international consensus on AI copyright poses significant challenges to AI development across borders. It calls for WIPO-driven harmonisation, seeking to develop standardised exceptions for text and data mining and tiered protection for AI results based on human contribution. Such standards would address jurisdictional tensions, especially where U.S.-developed models end up in European markets subject to more stringent regulation[69]. Reconciling, however, the U.S. utilitarian-driven fair use with the rights holder-centric framework in the EU remains contentious. There is a necessity of clearly defining differences between AI-assisted works, which are entitled to traditional copyright, and purely automated AI results that could be granted sui generis rights[70]. An international framework would also address moral challenges, such as ensuring attribution to human creators whose inputs help train AI systems, as highlighted by transparency requirements in the EU.

Key Debates and Proposals

Such modifications raise questions about how AI output should be safeguarded. Proponents of sui generis rights contend that restricted exclusivity would stimulate innovation since developers may benefit financially from AI-generated content[71]. Critics argue that such protections will stifle innovation and entrench technological monopolies. Conversely, enhancing fair usage in America emphasises open innovation but threatens human employment as inexpensive AI substitutes inundate markets[72]. These two forces must achieve equilibrium for the future. Mandatory licensing pools for training data, which compensate producers, and co-ownership agreements in human-AI collaboration represent compelling hybrid

[68] Samuelson, P. (2023) 'Generative AI and copyright law', Communications of the ACM, 66(12), pp. 30–32.
[69] Hilty, R. (2022) AI and global copyright harmonization. Max Planck Institute for Innovation and Competition.
[70] Hilty, R. (2022) AI and global copyright harmonization. Max Planck Institute for Innovation and Competition.
[71] Sag, M. (2023) Copyright in the age of AI training. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4976393
[72] Hilty, R. (2022) AI and global copyright harmonization. Max Planck Institute for Innovation and Competition.

methodologies. Success is improbable in the absence of regulations to prevent market fragmentation. Reform must reconceptualise copyright principles as a versatile framework that facilitates human creativity and technological progress in light of AI's evolution concerning tools and authorship.

ETHICAL IMPLICATIONS OF AI IN COPYRIGHT LAW

AI in artistic work raises ethical concerns about bias, cultural appropriation, and economic fairness. These issues threaten to undermine principles of fairness and inclusion in copyright regimes and necessitate urgent examination and reform to guarantee technological progress is in line with societal values.

Bias and accountability

AI systems inherently contain biases from their training data, reproducing societal inequities in novel and unexpected ways. Data sets often embed historical biases—such as racial, gender, or cultural stereotypes—that generative AI systems not only utilise but also perpetuate[73]. AI-generated images may unjustly link specific occupations to certain demographic groups, reinforcing harmful stereotypes. The issue is exacerbated by the lack of transparency in proprietary training data, which hinders accountability for biased outcomes. The EU AI Act (2024) addresses this issue by categorising generative AI tools like ChatGPT as "high-risk," necessitating the implementation of bias audits and transparency measures[74]. Developers are required to disclose data sources and implement measures to prevent discriminatory effects. While these regulations represent advancement, critics contend that they are merely reactive and fail to address the root causes of data inequity[75]. The responsible development of AI necessitates proactive curation of diverse and representative data sets, along with continuous monitoring to mitigate potential harm.

Cultural Appropriation

The ability of AI to replicate cultural artefacts, including Indigenous art and traditional music,

[73] Crawford, K. (2021) The atlas of AI: Power, politics, and the planetary costs of AI. New Haven: Yale University Press.
[74] European Commission (2021) Proposal for a regulation laying down harmonised rules on AI (AI Act). COM(2021) 206 final. https://digital-strategy.ec.europa.eu/en/library/proposal-regulation-laying-down-harmonised-rules-artificial-intelligence
[75] Rosati, E. (2019) 'The EU's approach to AI creativity', European Intellectual Property Review, 41(5), pp. 278–291. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3452376

presents significant ethical concerns regarding consent and sovereignty. The study on Indigenous data sovereignty highlights instances where AI platforms have commercialised Indigenous artistic traditions without community consent, displacing cultural expressions from their sacred contexts and intricate historical significances. This exploitation reflects colonial extractive patterns, wherein marginalised cultures are exploited for value without reciprocity[76]. UNESCO's 2022 guidelines on the Ethics of AI for Cultural Heritage oppose these practices by promoting "prior and informed consent" frameworks, ensuring that communities have a voice using their cultural heritage for AI training. The guidelines highlight the importance of collaborative models that allow Indigenous peoples to co-design AI systems and equitably share in the economic benefits they generate[77]. Nonetheless, the enforcement challenge persists in a globalised digital economy, where AI developers frequently function beyond the legal jurisdiction of source communities. Addressing cultural appropriation necessitates legal reform and a transformative shift towards ethical AI literacy and respectful cross-cultural sensitivity.

Labor and Economic Equity

The rise of AI-generated content threatens to diminish the value of human creative work, exacerbating economic instability for artists and writers in the market. There is a "paradox", in which AI systems utilise training datasets sourced from humans while progressively displacing the creators of the works that constitute these datasets[78]. Generative AI tools produce illustrations and articles at an unprecedented scale, leading to a decline in market prices for human creative professionals. This poses a risk, as it enables profits to concentrate within tech companies, rendering sustainable livelihoods in creative labour unviable. Potential solutions encompass profit-sharing models, allowing the creators to earn residuals from using their work in training AI generators and regulations requiring transparency in revenue distribution. Organisations such as Creative Commons (2023) advocate for open licensing systems that promote a fair balance between innovation and access. These systems enable creators to influence the use of their works concerning AI while still permitting profit from commercial applications[79]. It anticipate that alternative compensation methods will allow creators to receive

[76] Anderson, J. (2023) Indigenous Data Sovereignty and AI: Protecting Cultural Heritage in Machine Learning Systems. New York: NYU Press.
[77] UNESCO (2022) Ethics of AI for cultural heritage. https://unesdoc.unesco.org/ark:/48223/pf0000383317
[78] Abbott, R. (2022) The patentability of AI inventions. https://www.gje.com/resources/turning-lemons-into-lemonade-professor-ryan-abbott-on-the-patentability-of-ai-inventions/
[79] Creative Commons (2023) AI, copyright, and the commons. https://creativecommons.org/2023/05/09/ai-copyright-and-the-commons/

value for their works within AI-driven economies.

Toward Ethical Synthesis

Copyright law has historically focused on promoting human creativity, yet we currently face challenges regarding AI's position as an intermediary and a competitor[80]. This necessitates a redefinition of authorship to include collaborative works integrating AI and human creativity. Additionally, it calls for expanding liability to hold AI developers accountable for any harm resulting from AI system creation. A systemic approach is also required to embed equity within the physical architecture of AI systems. UNESCO and the EU AI Act emphasise the importance of establishing global standards to prevent a "race to the bottom" concerning ethical standards. The objective is not to halt innovation but to direct it towards inclusive growth. AI enhances human creativity without undermining its significance or value or displacing the cultural and economic contexts that support it[81]. To effectively transform our approach to ethics in copyright policy, technology must serve as a facilitator rather than an impediment to a fair, creative future.

CASE LAW & PENDING LITIGATION

The interactive relationship between AI and copyright law has created headline-grabbing conflicts across jurisdictions, testing fundamental legal principles and shaping the path of AI regulation. These cases identify the tension between technological innovation and the protection of creative interests, with courts increasingly needing to interpret centuries-old legislation in light of machine learning and generative AI.

US: Testing Fair Use and Infringement

In The New York Times v. Microsoft/OpenAI (2023), in the Southern District of New York, reproducing copyrighted articles to train AI models like ChatGPT without a license constitutes mass infringement and tests the boundaries of fair use. The plaintiffs allege that AI-generated content, which can copy Times material verbatim or as synthetic derivatives, directly competes with the newspaper's subscription and licensing business[82]. This case relies on Authors Guild v. Google (2015), in which the Second Circuit established the digitisation of books for

[80] Craig, C. (2023) 'Ethical dimensions of AI and copyright', Osgoode Hall Law Journal, 60(1), pp. 1–35.
[81] Craig, C. (2023) 'Ethical dimensions of AI and copyright', Osgoode Hall Law Journal, 60(1), pp. 1–35.
[82] The New York Times v. Microsoft/OpenAI, Case No. 1:23-cv-11195 (S.D.N.Y. 2023)

searching as a transformative fair use. However, NYT v. OpenAI is distinguishable because it addresses commercial outputs of generative AI asserted by plaintiffs to benefit from exploiting protected expression instead of public access[83]. The choice may hinge on whether or not courts view AI training as an un-creative, analytical process or a derivative commercial activity subject to licensing[84].

A similar case, Getty Images v. Stability AI (2023), filed in Delaware, involves scraping copyrighted images to train Stable Diffusion's text-to-image model by Stability AI[85]. Stability AI has allegedly copied millions of Getty's watermarked photographs without permission, allowing users to create competing images that mirror Getty's proprietary materials. This litigation tests whether AI training is "copying" under copyright law and whether synthetic outputs violate derivative rights. Stability AI's defence relies on fair use, arguing that training involves extracting non-protectable visual patterns rather than reproducing creative expression[86]. However, Getty's claims are bolstered by evidence that Stable Diffusion outputs occasionally retain fragments of watermarks, suggesting residual traces of original works. The case could redefine how courts assess "substantial similarity" in AI contexts, particularly when outputs mimic stylistic elements without direct replication.

EU: Precedents in Non-Human Authorship

Whereas the EU has no pending copyright cases specifically centred on AI on its docket, the 2012 Australian Acohs Pty Ltd v. Ucorp precedent—often used in EU precedent discussions—is significant because it set a precedent against computer-generated work protection. In Acohs, the Federal Court of Australia withheld a software-generated manual from copyright because the lack of human creative activity made it impossible to protect[87]. Although not obligatory for the EU, this argument is in harmony with the CJEU's Infopaq (2009) standard that links copyright with the "author's intellectual creation." As articulated in its Copyright Directive, the EU's hesitation to create non-human authors puts AI works in a state of illegality limbo[88].

[83] Gervais, D. (2024) 'Generative AI and copyright's fair use doctrine: NYT v. OpenAI in context', Harvard Journal of Law & Technology, 37(1), pp. 1-42.
[84] Sag, M. (2023) Copyright in the age of AI training. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4976393
[85] Getty Images v. Stability AI, Case No. 1:23-cv-00135 (D. Del. 2023).
[86] Dootson, P. and Suzor, N. (2023) 'AI art and the illusion of creativity', Harvard Journal of Law & Technology, 36(2), pp. 467-502.
[87] Acohs Pty Ltd v. Ucorp Pty Ltd, [2012] FCA 141 (Federal Court of Australia 2012)
[88] Margoni, T. (2016) 'The digitisation of cultural heritage: Originality and Infopaq standards', International Journal of Law and Information Technology, 24(1), pp. 1-25.

However, pending the upcoming revisions of the EU AI Act (2024), such positions may indirectly influence this stand by imposing disclosure on generative AI creators over sources of training data and adherence to copyright exceptions under Articles 3–4[89].

Implications for International Copyright Frameworks

These examples illustrate varying jurisdictional responses to AI legislation. U.S. litigation concerning machine learning will mostly depend on judicial interpretations of "transformative use" and market harm, owing to the flexibility of fair use. The language of the Copyright Directive and the data mining opt-out provisions indicate that the EU's emphasis on human invention and legal data access formalises the advancement of AI. The Getty Images and NYT situations may compel lawmakers to investigate whether existing exemptions include training data methodologies or need further approval. Acohs and its EU counterparts reflect the conceptual distinction between systems that uphold human authorship and those that evaluate protections for AI-generated output.

The absence of international harmonisation jeopardises the cohesion of AI advancements when these matters are adjudicated in courts. Models trained in the U.S. and used in the EU may be liable for non-compliant TDM activities. Still, EU developers might have challenges in competing because of more stringent regulations. These issues will shape copyright law and ascertain whether AI evolves into a creative tool or an intrusive entity that requires new legal frameworks.

CONCLUSION

Fusing AI with technological and creative infrastructures has irreversibly eroded copyright law's initial pillars of authorship, originality, and ownership. As AI computer programs generate indistinguishable products from those of human beings and search enormous depositories of well-guarded information, current legal frameworks struggle to fit anachronistic doctrine into algorithmic innovation. The three key problems are the denial of authorship rights to non-human authors, legal and ethical confusion over the use of training data as employment, and the lack of international agreement on the balance between protection and innovation for authors. In the US, rigid adherence to “human authorship” risks stifling investment in creative

[89] Margoni, T. (2016) 'The digitisation of cultural heritage: Originality and Infopaq standards', International Journal of Law and Information Technology, 24(1), pp. 1-25.

AI by relegating its outputs to the public domain, while the EU's emphasis on "intellectual creation" offers limited flexibility but fails to address AI's autonomous potential. Without reform, copyright law risks obsolescence in an era where machines rival human creativity.

To navigate this paradigm shift, legislatures must institute a multi-faceted authorship policy. Works supported by AI, where human touch guides ideation or improvement, must remain subject to traditional copyright protection, vesting rights in users or developers. For the output of autonomously functioning AI, sui generis rights—akin to database protections—can grant limited exclusivity to stimulate innovation without human authorship being assigned to machines. These reforms must be reinforced with ethical guarantees, including forced repayment of writers whose work will be utilised as training data for AI systems and algorithmic inspection to minimise prejudice caused by representative-deficient data sets[90]. A worldwide agreement through WIPO-driven standards is the most serious way to prevent fragmentation of markets, particularly with tensions between the U.S. fair use doctrine and the EU opt-in licensing model and text and data mining[91]. A formalised approach would be to make minimum exemptions to non-expressive data analysis and provide higher protections for business use to ensure equitable revenue distribution.

The imperative of such reforms cannot be exaggerated. The potential of AI to democratise creativity is balanced with its potential to devalue human work and cultural authenticity. Legislators need to move quickly to redefine originality in language that recognises collaborative human-AI processes, rebalances ownership to remunerate creators and innovators alike, and infuses ethical responsibility into the life cycle of AI development. Failure to reform copyright law for today's world will displace public trust in creative organisations and lose regulatory authority to corporate interests, inscribing unfairness into the digital economy. The choice is simple: transform or become a relic. With proactive, inclusive, and internationally converged policies, copyright law can catalyse inclusive innovation during the AI era rather than an obstacle to technical change.

[90] Craig, C. (2023) 'Ethical dimensions of AI and copyright', Osgoode Hall Law Journal, 60(1), pp. 1–35.
[91] Hilty, R. (2022) AI and global copyright harmonization. Max Planck Institute for Innovation and Competition.