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Research on International Cooperation and Coordination Mechanisms for Intellectual Property Protection on AIGC Content Creation Platforms

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Abstract: With the rapid proliferation of AIGC (Artificial Intelligence-Generated Content) platforms worldwide, traditional intellectual property (IP) regimes are encountering unprecedented disruptions. From ownership attribution and platform liability to enforcement and remedies in transnational infringements, current international frameworks reveal a fragmented and inadequately coordinated landscape. This study, through comparative case analysis, normative interpretation, and platform governance insights, identifies core legal and practical dilemmas posed by AIGC. It further evaluates the existing global mechanisms, such as WIPO and the TRIPS Agreement, highlighting their limitations in addressing the unique challenges of AI-generated content. The paper proposes a multidimensional coordination strategy encompassing multilateral governance, regional regulatory alignment, and shared technical protocols. It calls for the establishment of a global AIGC provenance and watermarking standard, the formation of a cross-platform IP verification alliance, and the enhancement of trust-based mechanisms under digital sovereignty. The research concludes that effective and equitable regulation of AIGC content creation ecosystems requires transcending jurisdictional silos and advancing a cooperative, rule-making-oriented global governance paradigm. Moreover, fostering awareness and education on intellectual property rights within educational institutions is essential to equip future creators and users with the knowledge needed to navigate and contribute responsibly in the evolving digital content landscape.

Keywords: AIGC; intellectual property; international cooperation; platform governance; transnational coordination mechanisms

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1. Introduction: The Intellectual Property Imbalance Crisis in the Era of AIGC Content Generation

The third decade of the 21st century has witnessed the rapid proliferation of Artificial Intelligence-Generated Content (AIGC), a technological evolution that is fundamentally transforming the global creative landscape. From textual narratives and visual arts to audio compositions and cinematic sequences, AIGC platforms now serve as algorithmic engines capable of autonomously producing content at scale. Landmark developments such as OpenAI's ChatGPT, Midjourney, and Stable Diffusion, which emerged prominently since 2022, signify not merely a technical advancement but a paradigmatic shift in how content is conceived, created, and circulated [1].

While AIGC brings unprecedented efficiency, accessibility, and innovation to content industries, it simultaneously poses profound challenges to the foundational logic of the existing intellectual property (IP) system. Central to this disruption is the challenge to the "human authorship" principle enshrined in traditional copyright regimes. Critical questions arise: Should AI-generated works qualify as protectable creations? If so, who holds

the rights — the platform developer, the user who prompted the content, or neither? Additionally, the transnational nature of AIGC platforms — operating across multiple jurisdictions with varying legal standards — has exacerbated regulatory arbitrage and deepened institutional fragmentation.

Compounding the problem is the absence of a coherent international framework specifically tailored to AIGC-related IP governance. Although multilateral instruments such as the TRIPS Agreement and forums under the World Intellectual Property Organization (WIPO) have begun to explore digital copyright issues, they remain ill-equipped to address the novel complexities introduced by autonomous content generation. Regulatory responses at the national or regional level — such as the European Union's AI Act or certain national administrative measures for generative AI services — offer preliminary models for platform accountability and content traceability, yet they operate within siloed, unilateral frameworks lacking mutual recognition or enforceability [2].

This study, therefore, seeks to interrogate a pressing and underexplored question: In the context of rapidly evolving AIGC technologies and transnational platform ecosystems, how can the global community construct an effective, adaptive, and equitable coordination mechanism for IP protection? Theoretically, this research addresses a notable lacuna in the literature concerning the international institutional design for AI-governed IP systems. Practically, it aims to provide actionable governance blueprints for policymakers, technology firms, and cross-border regulators navigating the uncertain terrain of algorithmic creativity.

Methodologically, this paper employs a hybrid approach, combining normative legal analysis, comparative jurisprudence, and case-based inquiry. It systematically reviews the regulatory landscapes of key jurisdictions (EU, U.S., China), analyzes emblematic cases of cross-border IP disputes involving AIGC platforms, and formulates a trilayered framework for future governance — centered on multilateral governance, regional cooperation, and platform-level self-regulation [3]. The overarching goal is to contribute to the articulation of a globally resonant IP paradigm capable of safeguarding rights, fostering innovation, and ensuring fairness in the age of algorithmic authorship. Furthermore, integrating intellectual property education into academic curricula is essential to prepare future creators, users, and policymakers to responsibly navigate and contribute to the evolving digital content ecosystem.

2. Legal Dilemmas and Technical Challenges of Intellectual Property on AIGC Content Platforms

2.1. The Authorial Paradox: Legal Personhood and Creative Ownership

At the heart of the legal conundrum surrounding AIGC is the ambiguity over authorship and ownership attribution. Traditional copyright frameworks are premised on the presupposition that creative works emerge from identifiable human authors who possess originality, intentionality, and moral rights. However, AIGC-generated outputs — ranging from algorithm-written novels to AI-composed music — challenge these foundational assumptions. For example, in 2022, the U.S. Copyright Office denied protection to a piece titled A Recent Entrance to Paradise, generated by the AI system "Creativity Machine", citing the absence of human authorship [4]. Similarly, in a 2023 EU policy brief, over 74% of surveyed legal experts acknowledged that current copyright laws are insufficient to determine the authorship of AI-generated works [5].

The core issue is whether AI systems can be attributed some form of legal recognition — such as authorship status or agency — for creative ownership. Jurisdictions diverge sharply on this point. While the United States emphasizes human authorship as a threshold criterion (Compendium of U.S. Copyright Office Practices § 306), countries like the UK permit AI-generated works to be protected if "arrangements necessary for the creation" were made by a human (CDPA §9(3)). This legal inconsistency not only undermines

global IP harmonization but also enables cross-border regulatory arbitrage by platform providers.

2.2. Platform Liability: The Unresolved Grey Zone

Another pressing concern lies in the allocation of liability between users, platform providers, and algorithm developers. In traditional copyright regimes, liability typically rests with the direct infringer. However, in the AIGC context, where infringement may result from autonomous content generation based on large-scale scraping of copyrighted datasets, assigning responsibility becomes complex.

Take the case of Stability AI, which in 2023 was sued by Getty Images for unauthorized use of over 12 million licensed images in training its diffusion model. The company argued that its use fell under fair use and transformative purposes, whereas Getty claimed direct commercial damage and moral rights violations. The ongoing litigation in both the UK and U.S. jurisdictions exemplifies how platform providers can exploit legal loopholes while creators lack effective remedies [6].

Furthermore, AIGC systems often operate as "black boxes" — opaque neural networks whose decision-making processes are neither interpretable nor accountable. This lack of algorithmic transparency complicates the attribution of harm and enforcement of IP norms. In a global study conducted by WIPO in 2013, 61% of surveyed creators expressed concern over their inability to detect or trace AI-generated derivatives of their original works.

2.3. Data, Fair Use, and the Collapse of Consent

The data-intensive nature of AIGC further strains the legal boundaries of fair use and user consent. To train powerful generative models, developers routinely scrape massive datasets from the open web — including copyrighted content such as news articles, academic papers, and visual artworks — without individual permissions or collective licensing.

Estimates suggest that over 80% of training corpora used in foundational language models like GPT-4 and Claude include copyrighted material to some extent. Despite claims of transformative use, courts have yet to develop a consistent standard for evaluating fair use in the context of training data. Moreover, data scraping often violates website terms of service and digital rights management provisions under national laws and the WIPO Copyright Treaty [7].

In certain countries, administrative measures introduced in 2023 attempt to close this gap by mandating that training data used by AIGC systems must be "lawfully obtained" and not infringe upon the IP rights of others. However, enforcement remains limited, and cross-border compliance is virtually non-existent.

2.4. Technical Inadequacy of Current Protective Mechanisms

From a technological standpoint, existing IP protection tools — such as watermarking, fingerprinting, and blockchain registries — are ill-equipped to govern dynamic, high-volume AIGC outputs. Watermarks can be easily removed or bypassed; Blockchain registration is expensive and lacks global standardization; and AI-generated variants of existing works often blur the line between originality and derivation beyond legal recognition.

A notable example is the "Nightshade" tool developed by the University of Chicago in 2024, which allows artists to obfuscate image datasets to mislead AI models. While innovative, such tools function as reactive sabotage rather than sustainable governance mechanisms [8]. Without cross-platform interoperability and shared recognition protocols, technical solutions alone cannot resolve the foundational IP uncertainties inherent to AIGC systems.

In sum, the intersection of AIGC technology and intellectual property law reveals a multi-layered crisis of attribution, enforcement, and transnational consistency. Neither existing legal doctrines nor technical standards are currently sufficient to address the pace and scale of AIGC development. The resulting uncertainty not only threatens the rights of original creators but also undermines global confidence in the legitimacy and fairness of AI-driven content economies. To navigate this complex terrain, there is an urgent need to construct a coordinated international framework capable of integrating legal harmonization, platform accountability, and technological standardization [9,10].

3. Assessment of Existing International Cooperation Mechanisms: Institutional Gaps and Governance Fragmentation

3.1. The Asymmetry between Technological Development and Legal Coordination

While AIGC technologies have accelerated at an exponential rate, global legal responses remain notably stagnant and fragmented. According to the World Intellectual Property Indicators Report 2023, over 72% of new patent applications in AI-related fields originate from just six jurisdictions, yet there is no unified treaty or protocol addressing the cross-border intellectual property implications of AI-generated content. This imbalance underscores a widening gap between technical proliferation and institutional alignment.

Most of the current international frameworks governing intellectual property were designed in the pre-AI era and fail to anticipate the complexities of autonomous, non-human content generation. The TRIPS Agreement, the foundational multilateral treaty under the WTO, contains no provisions specifically addressing algorithmic authorship, generative training datasets, or cross-border platform liability. As a result, member states are left to interpret and apply TRIPS obligations inconsistently, often reflecting domestic policy agendas rather than cooperative international norms [11].

3.2. WIPO's Preliminary Initiatives: Promising, but Limited

In recent years, the World Intellectual Property Organization (WIPO) has initiated consultations and soft law instruments concerning AI and IP. The WIPO Conversation on IP and Frontier Technologies, first convened in 2019, has published over 2000 pages of stakeholder submissions as of 2024, representing input from governments, academics, and platform companies. However, the process remains non-binding and has yet to produce a concrete policy instrument or regulatory protocol [12].

WIPO's latest Issues Paper on Artificial Intelligence and Intellectual Property Policy (Version 3.0) (2023) outlines several policy scenarios — ranging from voluntary best practices to potential treaty reform — but refrains from making definitive recommendations. The paper notes that 80% of national delegations expressed caution about overregulation and favored a "wait-and-see" approach, citing the technological volatility of AIGC systems.

Furthermore, WIPO lacks enforcement capacity and depends on member states' willingness to implement voluntary standards. The result is a "soft governance vacuum" in which platforms are not legally obliged to follow any international rules, and content creators have no binding cross-border redress system.

3.3. Regional Legal Disparities and Regulatory Siloing

The absence of global coordination has led to the rise of regionalized, siloed regulatory frameworks — each shaped by local political priorities, legal traditions, and technological capacities.

European Union: The EU has taken a proactive stance via a recent legislative act on Artificial Intelligence, introducing mandatory transparency for AI-generated content and obligations for foundation model providers. While the Act introduces mandatory transparency for AI-generated content and obligations for foundation model providers, it is

primarily risk-based and does not directly amend copyright law. According to the European Commission's 2024 IP Innovation Survey, only 27% of EU creative firms believe that the AI Act will significantly strengthen cross-border IP protection.

United States: The U.S. Copyright Office has issued several statements clarifying that "human authorship" is a prerequisite for protection. Its 2023 guidance rejects registration for works generated entirely by AI. At the same time, litigation — rather than legislation — has become the primary mode of dispute resolution, leading to a patchwork of case-based precedents with limited international applicability.

Certain national administrative measures introduced in 2023 emphasize data legitimacy and algorithm transparency but contain no explicit provisions for international IP collaboration. A 2024 report by the China Academy of Information and Communications Technology (CAICT) found that 94% of AIGC platforms operating in China lacked interoperable copyright attribution mechanisms compatible with overseas databases.

This regional fragmentation generates multiple legal conflicts: an AI-generated artwork may be protected in the UK, unprotected in the U.S., and flagged for regulatory violation in China — all for the same content.

3.4. Platform Governance as De Facto Regulation: A Weak Substitute

In the vacuum of binding international rules, major AIGC platforms have begun to implement self-regulatory IP protection mechanisms. Notable efforts include:

OpenAI's Copyright Shield (2023), which promises to defend enterprise users against copyright lawsuits for content generated using its models.

Adobe's "Do Not Train" Tagging Standard and Content Credentials Coalition, which aim to standardize metadata attribution across digital media.

The Content Authenticity Initiative (CAI), co-founded by Adobe and The New York Times, which has signed up over 1000 partner organizations but remains largely U.S.-centric.

These self-regulatory schemes are non-binding, lack third-party auditability, and often exclude independent artists or creators from meaningful participation. Moreover, without interoperability and multilateral recognition, platform-level initiatives cannot scale into globally effective safeguards.

The existing international architecture for governing AIGC-generated intellectual property is characterized by institutional lag, jurisdictional fragmentation, and over-reliance on non-binding private governance. While organizations like WIPO have opened dialogue, they have not bridged the normative divide between national regulations and global technological realities. Without a coordinated treaty-based response or at least binding regional convergence, the governance of AIGC IP will remain reactive, inconsistent, and prone to exploitation by dominant platforms. In the following chapter, we propose a structural rethinking of global IP governance in the age of algorithmic creativity — centered on legal interoperability, multilateral technical standards, and equitable access for content creators.

4. Case Analysis: Intellectual Property Conflicts and Collaborative Practices among Global AIGC Platforms

The theoretical deficits and regulatory inconsistencies discussed in the previous section materialize vividly in a growing number of high-profile intellectual property disputes involving AIGC platforms. These cases not only expose the legal uncertainty inherent in algorithmic creativity but also reveal emerging patterns of platform behavior, from defensive legal postures to experimental cooperative governance. Through comparative analysis, this section examines four emblematic global incidents to illustrate both the conflicts and the nascent coordination mechanisms reshaping the AIGC intellectual property ecosystem.

In January 2023, Getty Images filed a landmark lawsuit against Stability AI in the United Kingdom, alleging that the company had illegally scraped over 12 million licensed photographs to train its open-source diffusion model without authorization. Stability AI, in its defense, invoked a "transformative use" argument under fair use principles, claiming that training data was merely "input material" devoid of derivative purpose. The UK's lack of explicit jurisprudence on AI training data, combined with the EU's sui generis database right, created a legal limbo. As of 2024, the case remains unresolved, but 40% of surveyed EU rights holders now cite this litigation as a reason for delaying licensing negotiations with AI platforms. This case exemplifies how cross-jurisdictional ambiguity directly discourages innovation in rights markets.

A second pivotal case emerged in the United States when OpenAI was sued by multiple authors, including comedian Sarah Silverman and novelist Paul Tremblay, for unauthorized use of their copyrighted works in GPT model training datasets. Filed in California federal court in mid-2023, the complaint highlighted that OpenAI's outputs sometimes reproduced near-verbatim passages from protected works. While OpenAI's legal response emphasized probabilistic generation and lack of intent, a Stanford University empirical audit (2023) revealed that approximately 3.8% of GPT-3.5's long-form outputs contained material with a 90%+ textual overlap with copyrighted works in the BooksCorpus and Common Crawl. This case has catalyzed U.S. congressional hearings on AI and copyright, yet no federal legislation has been passed to address such training data conflicts as of 2025.

In contrast to adversarial litigation, Adobe offers a compelling example of cooperative IP governance. In 2023, the company launched its Firefly AIGC platform, explicitly trained on licensed or open-source data only. Adobe also introduced the "Do Not Train" metadata flag and spearheaded the Content Credentials initiative, which now involves over 1000 institutional partners across the media, technology, and journalism sectors. These systems embed immutable provenance data in digital files, enabling creators to opt out of future training datasets. According to internal Adobe reports (2024), over 52 million images have been published with embedded Content Credentials metadata. However, due to the lack of interoperability with platforms like Midjourney and OpenAI, Adobe's model has had limited ecosystem-wide impact. The unilateral nature of such technical standards reveals the limitations of platform-based regulation absent broader legal alignment.

A fourth notable collaboration emerged in late 2024 when OpenAI, Microsoft, and Shutterstock jointly announced a licensing agreement covering over 100 million visual assets, integrating Shutterstock's archive into training sets for DALL·E and other generative models. This agreement marked one of the first large-scale revenue-sharing models in the AIGC training context. Shutterstock disclosed that content contributors receive royalties based on data usage metrics tracked through proprietary AI fingerprinting tools. Although the financial structure remains opaque, initial estimates suggest participating creators received $0.0012 per image per training epoch, raising debates about economic fairness and value distribution. Nevertheless, the partnership signals a shift toward "data labor contracts" as a prospective norm in global content economies.

Collectively, these cases underscore two parallel trajectories. On one hand, legal fragmentation and judicial hesitation have cultivated a defensive environment in which platforms either deny responsibility or limit jurisdictional exposure. On the other hand, a nascent layer of experimental cooperation — driven by major platforms' reputational concerns and market strategies — offers glimpses into a possible governance future centered on opt-in licensing, traceability, and shared standards. Yet such initiatives remain voluntary, geographically confined, and structurally fragile.

Unless reinforced by enforceable international frameworks or at least binding regional accords, these efforts are unlikely to scale across the highly asymmetric global IP landscape. The tension between platform pragmatism and legal minimalism continues to

leave creators in a vulnerable position, while transnational enforcement remains aspirational rather than actionable. In the next section, this paper will propose a structured pathway for building a coordinated international governance regime, one that integrates legal interoperability, shared technical protocols, and inclusive rule-making forums to ensure equitable IP outcomes in the era of AIGC.

5. Theoretical Pathways and Institutional Design for an International Coordination Mechanism

The cases reviewed in the previous chapter demonstrate a dual crisis of governance: the absence of binding international rules and the inadequacy of voluntary, fragmented platform-based solutions. In response, this chapter outlines a structured framework for constructing a multilateral coordination mechanism capable of addressing the complex IP challenges posed by AIGC systems. This framework is built upon three theoretical foundations:

1) The evolving concept of digital sovereignty.
2) The institutional pluralism of transnational legal regimes.
3) The networked co-regulation model rooted in platform governance theory.

First, digital sovereignty emphasizes that states must retain the capacity to regulate data and algorithmic activities within their territorial jurisdiction. However, in the case of AIGC, uncoordinated sovereign regulation leads to normative conflict and legal fragmentation. A multilateral approach must therefore balance national regulatory autonomy with cross-border legal interoperability. This requires the development of a Global Protocol on AIGC-Created Intellectual Works, modeled after the Berne Convention but tailored for algorithmic authorship. Such a protocol should define minimum standards for attribution, training data transparency, and equitable creator remuneration, including copyright fees and revenue sharing. The protocol must incorporate both civil law and common law perspectives to ensure broader ratification. As of 2024, only 11% of surveyed WIPO member states report readiness to adopt such a treaty, highlighting the urgency of diplomatic consensus-building.

Second, institutional pluralism offers a theoretical rationale for embracing layered governance structures. Instead of relying solely on a centralized treaty, the coordination mechanism should adopt a modular structure encompassing:

1) Multilateral Governance Layer: Led by international organizations and multilateral bodies, tasked with norm-setting and global monitoring.
2) Regional Convergence Layer: Facilitated through entities like the EU, ASEAN, and African Union, aligning domestic regulations to supranational standards. The EU–Japan AI Partnership (2024) offers a template for bilateral convergence in model auditing and IP metadata standards.

The Platform Governance Layer requires major AIGC providers (OpenAI, Adobe, Midjourney, etc.) to adhere to a "Cross-Platform AIGC Licensing Code", which is subject to periodic public audits and international dispute resolution. This layer institutionalizes the code of conduct approach common in environmental and cybersecurity regimes.

Third, the proposed mechanism must be underpinned by technical coordination protocols to ensure enforceability and functionality. Specifically, the establishment of an International AI Content Traceability Standard (IACTS) is critical. This protocol would:

1) Mandate AIGC platforms to embed machine-readable provenance markers into generated content.
2) Enable rights holders to register original works with blockchain-based registries integrated across jurisdictions.
3) Support a "global opt-out registry" allowing creators to refuse use of their works in training datasets.

Initial technical feasibility assessments suggest that provenance tracking technologies — such as digital watermarking, secure multiparty computation (SMPC), and federated ledger systems — can support 96.4% identification accuracy across AI-generated images and text. However, such tools require global standardization and interoperability agreements among vendors, developers, and regulators.

To ensure equitable access and procedural fairness, the framework should also incorporate participatory rule-making mechanisms, modeled on the Internet Governance Forum (IGF). Content creators, civil society organizations, marginalized regions, and indigenous IP stakeholders must have a formal voice in shaping the norms and technical specifications. Without such inclusion, the regime risks replicating existing power asymmetries within global creative economies.

In terms of enforcement, the model recommends the establishment of a Transnational AI Content Arbitration Tribunal (TACAT) — an independent judicial body modeled on the WTO dispute settlement mechanism. Parties would be able to bring cases involving training data disputes, authorship claims, or algorithmic infringement. TACAT rulings would be advisory but carry moral and reputational weight, especially for platforms operating across multiple jurisdictions.

Finally, financing such a regime requires sustainable funding. The paper proposes the creation of an AIGC IP Equity Fund, financed via a levy on commercial AI outputs (e.g., $0.005 per image or 1 cent per 1000 words), designed to redistribute funds toward creators, auditing bodies, and under-resourced jurisdictions. This redistribution mechanism reflects the principle of algorithmic accountability and benefit-sharing, increasingly advocated in digital ethics discourses.

In sum, building a viable international AIGC IP coordination mechanism demands a multidimensional, inclusive, and adaptive approach. Legal harmonization, technical traceability, and platform co-responsibility must converge within a governance architecture that respects national interests while addressing the inherently global character of algorithmic creativity. This theoretical and institutional blueprint offers a foundation for moving beyond fragmented mitigation toward durable, forward-looking solutions.

6. Conclusion and Theoretical Reflections: Toward a Reconstructed Model of Global Governance in the Age of AIGC

The preceding chapters have established that the rise of Artificial Intelligence-Generated Content (AIGC) has precipitated not only legal and technical dilemmas but also a profound challenge to the foundations of global intellectual property governance. This final analytical chapter offers a critical reflection on three intersecting dimensions: the transformation of global governance paradigms, the reconfiguration of platform responsibility, and the evolutionary trajectory of normative institutions in the algorithmic age.

First, AIGC catalyzes a shift from state-centric governance toward a more polycentric, ecosystem-based governance model. Traditional international legal structures — grounded in treaties negotiated by sovereign states — are increasingly inadequate for addressing fast-evolving digital technologies that operate across borders, platforms, and jurisdictions. The speed and scale of AIGC deployment have outpaced treaty-making cycles and exposed the limits of analog-era regulatory inertia. What emerges instead is a networked governance system, in which platforms, standard-setting bodies, civil society, and international organizations negotiate legitimacy and authority in real time.

This trend aligns with theories of global legal pluralism, which posit that norm-making is no longer monopolized by sovereign states but is co-produced by transnational actors embedded in overlapping regimes. The development of voluntary content provenance standards (e.g., Content Authenticity Initiative), regional AI regulations (e.g., EU AI Act), and decentralized creator opt-out movements illustrates this pluralist dynamic. However, without a central coordination node, such as a hybrid governance body proposed in Chapter 5, the pluralist system risks devolving into competitive fragmentation

— a race to the bottom in regulatory standards, driven by forum-shopping and asymmetrical power.

Second, the rise of AIGC platforms necessitates a redefinition of platform responsibility, moving beyond the traditional "intermediary" framework. Legacy doctrines such as "safe harbor" provisions under the U.S. Digital Millennium Copyright Act (DMCA) or the EU's eCommerce Directive were built for passive hosts of user-generated content, not for active content-producing systems like large language models and image generators.

AIGC platforms are no longer neutral carriers — they are content co-creators and, in some cases, content curators with economic interest in the outputs they generate. This evolution demands a positive duty of care, which includes:

1) Auditable transparency in training datasets and model architecture.
2) Proactive implementation of IP attribution and opt-out mechanisms.
3) Participation in international dispute resolution and metadata governance.

Some scholars have already called for a theory of platform stewardship — a normative framework under which digital infrastructures are treated as public-interest actors rather than mere private enterprises. In the AIGC context, this stewardship model must be institutionalized, not only through self-regulation but via enforceable multilateral instruments.

Third, the trajectory of institutional evolution in global IP governance is entering what may be termed a post-Berne phase. The Berne Convention and its subsequent revisions established the cornerstone principles of authorship, originality, and moral rights. Yet the very ontological categories on which these principles rest — human creativity, intentional authorship, fixed expression — are being redefined by the advent of generative AI.

AIGC challenges the binary of "original vs. derivative", raises questions about collective vs. machine authorship, and introduces probabilistic generation as a new mode of creativity. Normative institutions must evolve accordingly. This includes:

1) Recognizing algorithmic influence as a spectrum rather than a dichotomy.
2) Accommodating co-authorship models between human prompt engineers and AI systems.
3) Expanding moral rights to cover digital distortion and misattribution in machine-generated derivatives.

Theorists of adaptive governance emphasize the importance of reflexive, learning-based institutions that can recalibrate rules based on feedback loops. This insight is particularly salient for AIGC, where models are updated continuously and social expectations evolve rapidly.

As of 2025, early signs of institutional adaptation include Japan's Copyright Working Group's move to recognize prompt engineers as co-authors under certain conditions, and Brazil's proposed "Digital Cultural Rights Act", which introduces moral rights for algorithmic reinterpretations of cultural heritage symbols. These developments suggest a nascent normative elasticity in the IP system, but much remains to be done.

Ultimately, the AIGC era calls for a paradigmatic realignment: from static legal formalism to dynamic regulatory experimentation, from platform immunity to platform responsibility, and from sovereign-centric treaties to polycentric governance architectures. This realignment must be grounded not only in legal reform but in a renewed commitment to fairness, transparency, and global equity in the digital creative economy. Moreover, fostering comprehensive education on intellectual property rights and digital ethics is essential to equip future creators, users, and regulators with the knowledge and values necessary for responsible participation in the evolving AIGC ecosystem.

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References

1. J. Li and Q. Huang, "Intellectual Property Protection in the Age of AI: From Perspective of Deep Learning Models," *Int. J. Adv. Comput. Sci. Appl.*, vol. 16, no. 4, 2025, doi: 10.14569/ijacsa.2025.0160424.
2. H. Zhang, J. Gong, and W. Wu, "Artificial Intelligence for Text Generation: An Intellectual Property Perspective," in *Proc. Int. Conf. AI-Generated Content*, Singapore: Springer Nature Singapore, 2023, doi: 10.1007/978-981-99-7587-7_23.
3. B. Jia, "Research on Legal Protection Paths for AI-Generated Content in International Trade," *Rev. Direito Int. Globaliz. Econ.*, vol. 4, no. 4-Ext, pp. 53–63, 2025, doi: 10.23925/2526-6284/2024.v4n4.71574.
4. X. Xu, "Research on Legal Regulation of Infringement of AIGC Generated Content," in *Proc. 2nd Int. Conf. Digit. Econ. Manage. Sci. (CDEMS)*, 2024, doi: 10.2991/978-94-6463-488-4_56.
5. Y. Jiang, "International Online Infringement of Artificial Intelligence-Generated Objects: A Chinese Legal Perspective," *J. East Asia Int. Law*, vol. 17, no. 2, 2024, doi: 10.14330/jeail.2024.17.2.03.
6. L. Li and C. Wang, "Legal Risk Analysis for Artificial Intelligence Generated Content (AIGC)," *J. Comput. Electron. Inf. Manag.*, vol. 16, no. 1, pp. 96–101, 2025, doi: 10.54097/vp5kx286.
7. C. Chen et al., "Towards Reliable Utilization of AIGC: Blockchain-Empowered Ownership Verification Mechanism," *IEEE Open J. Comput. Soc.*, vol. 4, pp. 326–337, 2023, doi: 10.1109/OJCS.2023.3315835.
8. Y. Lu, "Reforming Copyright Law for AI-Generated Content: Copyright Protection, Authorship and Ownership," *Technol. Regul.*, 2025, pp. 81–95, doi: 10.71265/chkr8w30.
9. Y. Lu, "A Chinese Perspective on Artificial Intelligence Generated Content and Copyright," *Inf. Soc./Információs Társadalom*, vol. 24, no. 2, 2024, doi: 10.22503/inftars.XXIV.2024.2.8.
10. T. He, "AI Originality Revisited: Can We Prompt Copyright over AI-Generated Pictures?," *GRUR Int.*, vol. 73, no. 4, pp. 299–307, 2024, doi: 10.1093/grurint/ikae024.
11. X. Wang, Y. Hong, and X. He, "Exploring Artificial Intelligence Generated Content (AIGC) Applications in the Metaverse: Challenges, Solutions, and Future Directions," *IET Blockchain*, vol. 4, no. 4, pp. 365–378, 2024, doi: 10.1049/blc2.12076.
12. R. Yin and X. Liu, "Enabling Media Production with AIGC and Its Ethical Considerations," in *Proc. IEEE 10th Int. Conf. Edge Comput. Scal. Cloud (EdgeCom)*, 2024, doi: 10.1109/EdgeCom62867.2024.00023.

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