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WHO OWNS AND CONTROLS AI-GENERATED ART TURNED INTO NFTS: A DOCTRINAL LEGAL ANALYSIS

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ABSTRACT

The rapid growth of Artificial Intelligence (AI) has challenged the traditional framework of copyright law by blurring the boundaries of authorship, creativity, and ownership. Copyright regimes across jurisdictions, built upon the human-centric notion of originality, are now confronted with unprecedented questions: Can AI-generated works qualify for protection? If so, who should be recognized as the author the programmer, the user, or the AI itself? Parallelly, the emergence of Non-Fungible Tokens (NFTs) has added another layer of complexity, transforming digital creations into unique, tradable assets and raising issues of enforceability, authenticity, and intellectual property rights.

The primary objective of this research is to examine the ownership and control of AI-generated NFTs through a comparative study of statutory provisions, judicial decisions, and scholarly debates. It investigates whether existing copyright laws adequately address the challenges posed by AI creativity and NFT commercialization or whether new legal frameworks are necessary. The study further explores the extent to which international conventions, such as the Berne Convention and TRIPS, provide guidance on authorship in technologically advanced contexts.

The methodology employed is doctrinal and comparative, relying on statutes, case law, and academic literature from jurisdictions such as the United States, United Kingdom, India, and the European Union. Additionally, policy documents from WIPO and the OECD are analyzed to understand the global discourse on AI and intellectual property.

The tentative conclusion suggests that current copyright frameworks are ill-equipped to deal with the disruptive nature of AI-generated works and NFTs. While courts and legislatures have made piecemeal attempts, the absence of a harmonized international approach creates legal uncertainty. The study recommends a hybrid model of ownership recognizing human involvement while acknowledging AI's autonomous role paired with regulatory mechanisms for NFTs to ensure both innovation and legal clarity.

Keywords: Artificial Intelligence, Copyright Law, Authorship, Non-Fungible Tokens (NFTs), Intellectual Property

Chapter 1 – Introduction

1.1 Background and Context

The emergence of Artificial Intelligence (AI) and blockchain-based innovations has redefined the boundaries of creativity, authorship, and ownership. Traditionally, copyright law has been premised on the belief that creativity is an inherently human trait, deserving of legal protection through the concept of authorship. This human-centric model has shaped intellectual property regimes across

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jurisdictions, ensuring that writers, painters, musicians, and other creators receive recognition and protection for their works. However, the twenty-first century has witnessed a dramatic technological shift. Algorithms are now capable of producing art, music, literature, and design that closely resemble or even surpass human creations.[2181]

In parallel, blockchain technology has given rise to Non-Fungible Tokens (NFTs), which enable the tokenization of digital assets, thereby creating scarcity, provenance, and marketability in a digital environment otherwise characterized by limitless replication. The confluence of AI-generated art and NFTs raises unprecedented questions about ownership and control. If an AI system produces an original work and that work is minted as an NFT, who should be regarded as the rightful owner the programmer who designed the AI, the user who supplied the input, the AI itself, or the person who first tokenized the work? These questions are pressing not merely as theoretical inquiries but as practical challenges with significant economic implications, as the global NFT market alone has been valued in billions of dollars.[2182]

1.2 Statement of the Problem

Copyright law, as it stands, does not provide clear answers to the ownership of AI-generated works. Courts and copyright offices in many jurisdictions have consistently required human authorship[2183] as a prerequisite for protection. This stance leaves AI-generated outputs in a legal vacuum valuable works without enforceable copyright protection. The problem deepens when such works are tokenized as NFTs. While NFTs create a verifiable chain of title for the token, they do not resolve the underlying question of copyright ownership. Consequently, disputes may arise where multiple parties claim rights over the same AI-generated work, or where NFT holders mistakenly assume that token ownership equates to copyright ownership.

The research problem, therefore, lies at the intersection of copyright law and blockchain technology: whether AI-generated works qualify for copyright protection, and if so, how ownership and control should be allocated when such works are minted as NFTs.

1.3 Objectives of the Research

The objectives of this study are threefold:

To analyze the compatibility of AI-generated works with traditional copyright doctrines of authorship and originality. This includes assessing whether existing laws can be extended to AI or whether they require reform.

To examine the legal implications of tokenizing AI-generated works as NFTs, with particular emphasis on ownership, transfer, and enforceability of rights.

To propose possible frameworks or reforms that address the gaps in current law, balancing innovation and legal certainty while safeguarding the interests of stakeholders in creative and digital markets.

1.4 Scope and Limitations

The study is confined to copyright law and ownership issues relating to AI-generated art and NFTs. It does not extend to patents, moral rights, or broader debates on artificial general intelligence. The jurisdictions examined are primarily the United States, United Kingdom, European Union, and India[2184], representing diverse legal traditions and policy approaches. While blockchain regulation (such as financial oversight of crypto-assets) is briefly considered, the paper focuses on intellectual property dimensions rather than financial or securities law.

[2181] Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as revised at Paris, July 24, 1971, 1161 U.N.T.S. 30.

[2182] Non-Fungible Token Market Report, NonFungible.com (2021).

[2183] U.S. Copyright Office, Compendium of U.S. Copyright Office Practices § 313.2 (3d ed. 2021).

[2184] Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as revised at Paris, July 24, 1971, 1161 U.N.T.S. 30.

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1.5 Methodology

The research adopts a doctrinal methodology, relying on statutes, case law, and secondary literature. Primary sources include national copyright statutes (such as the U.S. Copyright Act[2185], the Indian Copyright Act[2186], and the U.K. Copyright, Designs and Patents Act[2187]), as well as judicial decisions on originality, authorship, and NFT disputes. Secondary sources include academic commentary, WIPO reports, and scholarly articles. A comparative approach is employed to highlight similarities and divergences across jurisdictions.

1.6 Significance of the Study

This research is significant for several reasons. First, it addresses a gap in copyright law by exploring the unsettled issue of AI authorship, which has become increasingly relevant as AI-generated works gain market prominence. Second, it evaluates the role of NFTs, a disruptive innovation in the art world, which complicates traditional notions of ownership and transferability. Third, it contributes to ongoing policy debates, both domestically and internationally, on whether intellectual property law should evolve to recognize AI as an author or whether sui generis rights should be created[2188] to address these challenges.

By situating the debate within both legal doctrine and practical realities, the study seeks to inform legislators, courts, and stakeholders about the pressing need for clarity in the governance of AI-generated NFTs.

1.7 Structure of the Paper

The research is organized into six chapters.

Chapter 1 – Introduction: Establishes the background, research problem, objectives, scope, methodology, and significance.

Chapter 2 – Evolution of Copyright Law and Authorship; AI in Creative Processes; Basics of NFTs: Provides a conceptual and historical overview of copyright law, examines the entry of AI into creative domains, and explains the fundamentals of NFTs.

Chapter 3 – Judicial Approach and Case Law: Analyzes leading judicial and regulatory decisions relating to AI-generated works and NFTs.

Chapter 4 – Comparative Perspective and Critical Analysis: Examines approaches in the U.S., U.K., EU, and India, and offers critical commentary on gaps and inconsistencies.

Chapter 5 – Discussion and Synthesis: Brings together doctrinal analysis and comparative insights, exploring possible models of ownership and policy considerations.

Chapter 6 – Conclusion and Suggestions: Summarizes findings and offers recommendations for reform, including the possibility of sui generis rights or hybrid solutions.

1.8 Conclusion

The introduction of AI into creative industries and the rise of NFTs have brought copyright law to a crossroads. Existing legal frameworks, designed for human authorship, are ill-equipped to address the complexities of machine-generated creativity and digital tokenization. This paper seeks to bridge that gap by examining who owns and controls AI-generated art once minted as NFTs. In doing so, it not only interrogates existing doctrines but also engages with broader policy debates about the future of creativity and ownership in the digital age.

Chapter 2 – Evolution of Copyright Law, AI in Creative Processes, and Basics of NFTs

2.1 Evolution of Copyright Law and Authorship

Copyright law has historically been rooted in the protection of human creativity[2189]. The earliest copyright regimes emerged in Europe as responses to the invention of the printing press,

[2185] Copyright Act of 1976, 17 U.S.C. § 101 et seq.
[2186] Copyright Act, 1957, No. 14, Acts of Parliament, 1957 (India).
[2187] Copyright, Designs and Patents Act 1988, c. 48 (U.K.).
[2188] European Parliament Resolution of 20 Oct. 2020 on Intellectual Property Rights for the Development of Artificial Intelligence Technologies, 2020/2015(INI).

[2189] Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as revised at Paris, July 24, 1971, 1161 U.N.T.S. 30.

with the Statute of Anne of 1710 in England[2190] often regarded as the first modern copyright law. The statute introduced the concept of granting exclusive rights to authors, reflecting a shift from publisher-centric privileges to recognition of individual creativity. This principle of authorship gradually became the cornerstone of copyright regimes worldwide.

The core rationale for copyright law has traditionally been twofold: first, to incentivize creation by granting authors control over their works, and second, to ensure dissemination of knowledge through a time-bound monopoly that eventually feeds into the public domain. In both civil law and common law traditions, authorship was conceived as inherently tied to human originality, reflecting the "sweat of the brow" doctrine in early jurisprudence, which emphasized labor and effort.

Over time, courts and legislatures refined the notion of originality. In the United States, the landmark case of Feist Publications, Inc. v. Rural Telephone Service Co.[2191] established that mere labor or investment was insufficient; creativity, however minimal, was essential for copyright protection. Similarly, Indian jurisprudence has moved from the "sweat of the brow" approach (Macmillan Co. Ltd. v. K. & J. Cooper[2192]) toward requiring a modicum of creativity (Eastern Book Company v. D.B. Modak[2193]). Across jurisdictions, the central thread remains the same: copyright law is designed to protect the fruits of human intellect.

This anthropocentric foundation has generally excluded non-human creators. A telling example is the "monkey selfie" case (Naruto v. Slater[2194]), in which the U.S. courts refused to recognize a macaque as an author, affirming that copyright requires human authorship. Such cases highlight a structural limitation: copyright systems were never designed with non-human creativity in mind. The arrival of Artificial Intelligence challenges this paradigm, forcing a reconsideration of what "authorship" means in the digital era.

2.2 Introduction of AI in Creative Processes

Artificial Intelligence has rapidly transformed from a supportive tool in human creativity to an autonomous generator of content. Early applications of AI in art were primarily assistive spellcheckers, photo-editing software, or algorithmic recommendations. However, advances in machine learning, particularly generative adversarial networks (GANs) and large language models, have enabled AI systems to produce original works with minimal or no human intervention.

Generative AI models such as OpenAI's DALL·E, Midjourney, and Stable Diffusion can create complex visual art in response to textual prompts. Similar tools compose music, generate scripts, or design fashion. The extent of human input in these processes varies widely from detailed curation of prompts to mere reliance on the AI's autonomous output. This spectrum complicates the assignment of authorship: is the human user merely a facilitator, or should they be regarded as the author because they initiated the creative process?

Legal systems worldwide are grappling with this uncertainty. The United States Copyright Office has explicitly refused to register works "produced by a machine without human authorship," as seen in the rejection of Stephen Thaler's application for an AI-generated image (A Recent Entrance to Paradise[2195]). By contrast, the United Kingdom's Copyright, Designs and Patents Act 1988[2196] provides that, for "computer-generated works," the author is the person "by whom the arrangements necessary for the creation of the work are undertaken." India, however, lacks express provisions for computer-generated works, leaving the question open to interpretation.

[2190] Statute of Anne, 1710, 8 Ann., c. 19 (Eng.).
[2191] Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991).
[2192] Macmillan Co. Ltd. v. K. & J. Cooper, (1923-24) 51 I.A. 109 (P.C.).
[2193] E. Book Co. v. D.B. Modak, (2008) 1 SCC 1 (India).
[2194] Naruto v. Slater, 888 F.3d 418 (9th Cir. 2018).
[2195] A Recent Entrance to Paradise, U.S. Copyright Office Review Board (Feb. 14, 2022).
[2196] Copyright, Designs and Patents Act 1988, c. 48, § 9(3) (U.K.).

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Beyond legal definitions, the introduction of AI in art also challenges the philosophical underpinnings of intellectual property. Copyright is premised on rewarding human creativity; AI, by contrast, creates without human-like intent or consciousness. While AI can replicate styles and generate new combinations of existing works, whether such outputs embody the "originality" required by law is debatable. This tension lies at the heart of disputes over AI-generated art.

2.3 Basics of Non-Fungible Tokens (NFTs)

Parallel to the rise of AI in art, the digital economy has witnessed the emergence of Non-Fungible Tokens (NFTs). NFTs are cryptographic tokens built on blockchain technology that represent ownership of unique digital assets. Unlike cryptocurrencies such as Bitcoin or Ether, which are fungible and interchangeable, NFTs are indivisible and unique, making them particularly suited to represent digital art, collectibles, and creative works.

NFTs gained mainstream attention in 2021 with record-breaking sales, most notably Beeple's "Everydays: The First 5000 Days,"[2197] which sold at Christie's for $69.3 million. This moment marked a paradigm shift, as digital art previously difficult to monetize due to its ease of duplication could now be authenticated, scarce, and tradable. By recording ownership and transfers on a blockchain, NFTs provide provenance, reduce fraud, and establish scarcity in the digital domain.

However, NFTs themselves do not inherently convey intellectual property rights. Purchasing an NFT often grants the buyer control over the token, not necessarily the copyright in the underlying work. In practice, the rights transferred depend on the terms of the smart contract or license agreement. This creates potential for conflict: the NFT holder may assume full ownership, while the underlying copyright remains with the creator or platform.

When applied to AI-generated art, these issues become more complex. If authorship itself is uncertain, who has the right to mint and sell an NFT of the AI-generated work? Is it the AI developer, the user, or the first entity to tokenize the work? Further, can ownership of a token substitute for ownership of copyright, or do NFTs merely function as digital certificates of authenticity? These questions expose the tension between technological innovation and legal doctrine.

2.4 Conclusion

The evolution of copyright law demonstrates its deep reliance on human authorship, a principle increasingly challenged by the emergence of AI in creative processes. At the same time, NFTs have redefined the way digital works are owned, transferred, and monetized. Yet, both frameworks copyright and NFTs operate on assumptions that are unsettled when applied to AI-generated works. The intersection of these developments forms the backdrop of this research: understanding who owns and controls AI-generated art when transformed into NFTs, and whether existing legal doctrines can adequately address this new frontier.

Chapter 3 – Judicial Approach and Case Law

3.1 Introduction

Judicial interpretation plays a pivotal role in clarifying the scope of copyright law in the context of technological change. While legislatures have been slow to adapt statutes to the realities of Artificial Intelligence (AI) and blockchain, courts and regulatory authorities have already confronted disputes involving non-human authorship, originality, and digital asset ownership. This chapter examines judicial approaches to AI-generated works and NFTs, highlighting landmark decisions that illustrate the present legal uncertainty.

3.2 AI and Copyright: The Question of Authorship

Courts have consistently emphasized human authorship as a prerequisite for copyright. The most notable example is the "monkey selfie"

[2197] Mike Winkelmann (Beeple), Everydays: The First 5000 Days, Christie's Auction Sale No. 1884, Mar. 11, 2021.

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case, Naruto v. Slater[2198] (9th Cir. 2018). In that case, a crested macaque used a photographer's camera to take a series of selfies. The court held that animals cannot own copyright, affirming the anthropocentric foundation of copyright law. Although not directly involving AI, the case demonstrates a broader principle: non-human actors, whether animals or machines, cannot be authors under current legal frameworks.

In the United States, the Copyright Office has repeatedly denied registration for AI-generated works. In A Recent Entrance to Paradise (2022), Stephen Thaler attempted to register an image generated by his AI system, the "Creativity Machine," listing the AI as the author. The Copyright Office rejected the application, stating that copyright protects "the fruits of intellectual labor that are founded in the creative powers of the mind," which excludes machine-generated works without human involvement. The Office reaffirmed this stance in Zarya of the Dawn (2023)[2199], where it canceled protection for images generated by Midjourney, even though the applicant had written the accompanying text. These decisions underscore the Office's position that human authorship is indispensable.

Indian jurisprudence, while limited on AI, has developed important principles on originality. In Eastern Book Company v. D.B. Modak (2008), the Supreme Court held that a "modicum of creativity" is necessary for copyright, rejecting the purely labor-based "sweat of the brow" standard. This creativity requirement could pose challenges for AI-generated works, as courts may struggle to attribute "creativity" to non-human processes. Without statutory reform, Indian courts are likely to mirror the U.S. approach, requiring human intervention for authorship.

3.3 NFTs and Intellectual Property Disputes

While AI-generated authorship remains unsettled, courts have already confronted disputes involving NFTs. The leading case is Hermès International v. Mason Rothschild (S.D.N.Y. 2023)[2200], concerning the "MetaBirkins" NFTs digital representations of Hermès' iconic Birkin bags. The court ruled in favor of Hermès, finding that the NFTs infringed trademark rights. Though not about copyright, the case demonstrates judicial willingness to treat NFTs as commercial products subject to traditional IP doctrines.

In Nike, Inc. v. StockX LLC (S.D.N.Y. 2022)[2201], Nike sued StockX for minting NFTs linked to images of Nike sneakers. Nike argued that StockX's NFTs constituted trademark infringement, while StockX claimed they were merely "digital receipts" for physical goods. The dispute illustrates the uncertainty surrounding what rights NFTs confer mere ownership of a token or broader intellectual property rights.

These cases are instructive for AI-generated NFTs. If the underlying work's authorship is uncertain, courts may still apply conventional IP doctrines (copyright, trademark, passing off) to regulate the NFT marketplace. However, without clarity on authorship, ownership claims remain vulnerable to challenge.

3.4 Synthesis

Judicial approaches indicate two consistent trends: (1) courts and regulators insist on human authorship for copyright protection, and (2) NFTs are treated not as entirely new categories of rights but as digital assets regulated through existing IP doctrines. Together, these trends suggest that AI-generated NFTs face a dual vulnerability: lack of recognized authorship and uncertain legal effect of tokenization. Until legislatures intervene, courts are likely to apply existing human-centric doctrines, leaving ownership of AI-generated NFTs unresolved.

[2198] Naruto v. Slater, 888 F.3d 418 (9th Cir. 2018).
[2199] Zarya of the Dawn, U.S. Copyright Office Review Board (Feb. 21, 2023).
[2200] Hermès Int'l v. Rothschild, No. 22-CV-384 (JSR), 2023 WL 1458126 (S.D.N.Y. Feb. 8, 2023).
[2201] Nike, Inc. v. StockX LLC, No. 22-cv-00983 (S.D.N.Y. 2022).

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Chapter 4 – Comparative Perspective and Critical Analysis

4.1 Introduction

Given the global nature of both AI and blockchain, examining comparative legal approaches is essential. Different jurisdictions have adopted distinct stances on computer-generated works and NFTs. This chapter contrasts the approaches of the United States, the United Kingdom, the European Union, and India, before providing a critical analysis of the gaps and inconsistencies.

4.2 United States

The U.S. maintains one of the strictest positions on authorship. The Copyright Act of 1976[2202], interpreted by the courts and the Copyright Office, requires human authorship. As noted earlier, the Copyright Office has categorically refused to register AI-generated works. This strict stance promotes clarity but may stifle innovation, as it denies protection to valuable outputs.

Regarding NFTs, U.S. courts treat them under existing IP frameworks. Cases like Hermès and Nike show that tokenization does not insulate works from trademark or copyright scrutiny. However, there is no federal NFT-specific legislation, meaning rights depend on contract terms and general IP law.

4.3 United Kingdom

The U.K. has taken a more flexible approach. Section 9(3) of the Copyright, Designs and Patents Act 1988 provides that, for computer-generated works, "the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken." This provision allows recognition of works created without direct human authorship, assigning rights to the programmer or user who arranged the creation. While drafted long before modern AI, this clause provides a statutory basis for AI-authorship by proxy.

In practice, however, determining who made the "arrangements" may still be contested. For NFTs, U.K. law also lacks explicit regulation, but courts would likely apply contract and IP doctrines.

4.4 European Union

The EU adopts a middle ground. The Court of Justice of the European Union (CJEU) has consistently tied copyright to the "author's own intellectual creation,"[2203] implying human creativity. Current directives do not extend authorship to AI systems. However, EU policy bodies, including the European Parliament, have explored the possibility of sui generis rights for AI-generated works.

On NFTs, the EU has begun regulatory efforts through the Markets in Crypto-Assets Regulation (MiCA), which, while primarily financial, may indirectly affect NFT markets. However, no explicit copyright recognition for AI-generated NFTs exists.

4.5 India

India's Copyright Act, 1957, does not explicitly address AI or computer-generated works. The Act defines an author depending on the type of work (e.g., writer, composer, photographer), implicitly assuming human authorship. Courts have developed originality standards (Modak case), but none have yet addressed AI-generated works. In practice, ownership may be resolved through contracts, but statutory silence creates uncertainty.

NFTs are also unregulated in India, though the RBI and SEBI monitor crypto-assets. NFT disputes would likely be adjudicated under contract and copyright law, but no judicial precedent exists yet.

4.6 Critical Analysis

A comparative analysis reveals divergent approaches: the U.S. denies AI-authorship outright, the U.K. allows proxy authorship, the EU hints at sui generis rights, and India remains

[2202] 17 U.S.C. § 101 et seq.

[2203] Infopaq Int'l A/S v. Danske Dagblades Forening, Case C-5/08, ECLI:EU:C:2009:465.

silent. For NFTs, most jurisdictions treat them under existing IP law, without recognizing them as independent rights.

This divergence creates legal uncertainty in cross-border transactions, where an AI-generated NFT minted in one jurisdiction may have different ownership status in another. Moreover, all jurisdictions share a common limitation: NFTs may establish provenance of a token but do not resolve underlying copyright ownership.

From a critical perspective, this patchwork approach risks undermining the potential of AI and NFTs. Denying protection entirely, as in the U.S., could discourage investment, while ambiguous proxy authorship, as in the U.K., may invite disputes. A sui generis framework, as debated in the EU, may offer a balanced solution, providing tailored rights without stretching traditional copyright doctrine.

4.7 Conclusion

Comparative analysis highlights both convergence and divergence. While all jurisdictions insist on human involvement, the U.K. provides statutory flexibility, the U.S. adopts rigidity, the EU experiments with policy reform, and India remains indeterminate. In all cases, NFTs are seen as proof of ownership but not creators of copyright. A harmonized or sui generis approach may ultimately be necessary to ensure legal certainty in the global marketplace for AI-generated NFT art.

Chapter 5: Discussion & Synthesis

The debate surrounding ownership and control of AI-generated art converted into NFTs is multi-layered, combining issues of intellectual property law, technological innovation, and digital asset regulation. This chapter synthesizes the doctrinal insights, judicial trends, and comparative approaches explored earlier, in order to develop a coherent framework for addressing the research problem.

5.1. The Clash between Traditional Authorship and AI Creativity

At the heart of the issue lies copyright law's reliance on the concept of human authorship. The Berne Convention[2204], TRIPS[2205], and most domestic copyright regimes presuppose that creativity flows from human intellect. AI, however, complicates this premise by producing works without direct human expression. While developers argue that the "creative spark" comes from the algorithms they designed, users and prompt-creators contend that their role in guiding AI outputs reflects authorship. Courts and legislatures remain divided. For instance, U.S. Copyright Office's refusal to grant protection to "A Recent Entrance to Paradise" (an AI-generated artwork) underscores the law's human-centric nature, whereas the UK's Copyright, Designs and Patents Act, 1988 attributes authorship to the "person making arrangements necessary for the creation of the work." This divergence demonstrates the inadequacy of existing frameworks to accommodate AI contributions.

5.2. NFTs and the Layering of Rights

NFTs add further complexity by tokenizing digital works, transforming them into unique, tradable assets on the blockchain. While NFTs authenticate ownership of a digital token, they do not, by default, transfer copyright. This results in a duality of ownership: the buyer holds the NFT (a digital certificate), while the copyright may remain with the AI developer, platform, or user, depending on contractual terms. The "Burnt Banksy" incident[2206], where a digitalised Banksy artwork was sold as an NFT despite uncertainties over copyright, illustrates how NFT markets thrive on assumptions of ownership that may not legally exist. Thus, NFTs amplify the urgency for clarity regarding AI-generated works.

[2204] Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as revised at Paris, July 24, 1971, 1161 U.N.T.S. 30.
[2205] Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), Apr. 15, 1994, Marrakesh Agreement Establishing the WTO, Annex 1C, 1869 U.N.T.S. 299.
[2206] Zachary Small, A Banksy Was Burned, and Its NFT Sold for $380,000, N.Y. Times (Mar. 5, 2021).

5.3. Comparative Synthesis: International Divergences

The comparative study reveals distinct approaches:

United States: Strictly human authorship; AI outputs not protected unless there is substantial human input.

United Kingdom: Broader, functional definition of authorship allows attribution to arrangers of AI processes.

European Union: Maintains human authorship but increasingly engages with AI policy discussions, especially under the proposed AI Act.

India: Copyright Act, 1957 is silent on AI, leaving the matter open to judicial interpretation. Indian courts' reliance on purposive interpretation suggests potential openness to recognizing human–AI collaborations, but not AI autonomy.

These divergences create uncertainty in cross-border NFT markets, where ownership, licensing, and enforcement are subject to jurisdictional inconsistencies.

5.4. Doctrinal Implications for Ownership and Control

The doctrinal analysis suggests three competing models of ownership:

Developer-Centric Model – attributing authorship to AI developers who design the algorithms.

User-Centric Model – granting authorship to the individual providing prompts and exercising creative input.

Public Domain Model – considering AI-generated works as unprotectable, entering the public domain unless human creativity is clearly established.

Each model has strengths and weaknesses. Developer-centric attribution incentivizes innovation but risks monopolization. User-centric attribution encourages broader participation but may dilute originality standards. Public domain treatment fosters access and creativity but undermines commercial incentives for AI development.

NFTs complicate these models further, as their tradeability depends on market assumptions of enforceable ownership. Without clear copyright allocation, NFT ownership risks being reduced to a hollow token.

5.5. Towards a Balanced Approach

A balanced approach may involve:

Recognizing human-guided AI outputs as protectable, provided there is demonstrable creative contribution.

Treating fully autonomous AI outputs as unprotected by copyright, but capable of contractual licensing through NFT smart contracts.

Encouraging legislatures to harmonize rules internationally, especially through WIPO-led initiatives, to provide legal certainty for NFT markets.

Thus, the synthesis indicates that the resolution of this debate requires both doctrinal reinterpretation and proactive legal reform.

Chapter 6: Conclusion and Suggestions

6.1. Conclusion

The ownership and control of AI-generated art converted into NFTs expose the structural limitations of existing copyright frameworks. Copyright law, built on the assumption of human creativity, struggles to adapt to the reality of AI's role in artistic production. NFTs, by tokenizing digital works, create an illusion of ownership that is often unsupported by intellectual property rights, leading to market volatility and legal disputes. Comparative analysis demonstrates that jurisdictions remain inconsistent, with the U.S. and EU prioritizing human authorship, the UK offering functional attribution, and India adopting a wait-and-watch approach.

Doctrinally, three models of authorship emerge developer-centric, user-centric, and public domain each offering partial solutions but

failing to comprehensively address the ownership dilemma. The synthesis suggests that human-guided AI outputs may warrant protection, while fully autonomous works should remain outside copyright's ambit but be subject to contractual regulation through NFTs. Ultimately, the current vacuum necessitates legislative clarity, judicial innovation, and international harmonization.

6.2. Suggestions

- Legislative Reforms

Amend copyright statutes to explicitly address AI-generated works, distinguishing between human-guided and autonomous outputs.

Provide default rules for ownership attribution to reduce uncertainty in NFT transactions.

- Contractual Clarity in NFT Markets

NFT platforms should mandate clear licensing terms specifying whether copyright accompanies the token or remains with the creator/developer.

Smart contracts should embed licensing rights to avoid reliance on ambiguous external agreements.

- International Harmonization

WIPO should spearhead the creation of a model framework for AI-generated works, aligning copyright and NFT regulation to enable cross-border enforceability.[2207]

- Encouraging Collaborative Authorship

Recognize hybrid models of authorship, where human and AI contributions are jointly acknowledged, ensuring both innovation incentives and user participation.

- Public Awareness and Market Education

NFT purchasers and creators should be educated about the difference between owning an NFT and owning the copyright to the underlying work.

- Judicial Innovation

Courts should adopt purposive interpretation to bridge statutory gaps until legislative reforms are enacted, ensuring adaptability to rapid technological change.

6.3. Final Reflection

AI and NFTs represent a new frontier in creativity and commerce. While law traditionally lags behind technology, the challenge lies in crafting frameworks that protect legitimate interests without stifling innovation. The future of ownership and control in AI-generated NFTs will depend not on choosing between human and machine, but on designing legal solutions that reflect their symbiotic relationship.

[2207] WIPO, Revised Issues Paper on Intellectual Property Policy and Artificial Intelligence, WO/GA/51/6 (May 21, 2020).