
NFTS AND COPYRIGHT LAW: WHO TRULY OWNS THE DIGITAL ASSET?

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ABSTRACT

Non-fungible tokens (NFTs) have emerged as one of the most transformative innovations of blockchain technology, reshaping the digital economy by creating a system of verifiable scarcity in the digital realm. From digital art and music to sports memorabilia and gaming assets, NFTs have generated billions of dollars in trade globally. However, despite their meteoric rise, fundamental legal uncertainties remain unresolved. Chief among these is the tension between ownership of an NFT as a token on the blockchain and ownership of the copyright in the underlying creative work. The question of “who truly owns the digital asset” lies at the intersection of technology, intellectual property law, and contract law.

This study examines the copyright implications of NFTs with particular focus on whether purchasing an NFT conveys copyright ownership or merely a license to access and display the work. The research highlights doctrinal ambiguities in U.S. copyright law, international conventions such as the Berne Convention, and comparative perspectives from jurisdictions such as the European Union and India. Case studies—including *Miramax, LLC v. Tarantino* and *Hermès Int’l v. Rothschild*—illustrate the legal disputes surrounding NFTs and intellectual property rights. The study adopts a doctrinal and comparative methodology, analyzing statutes, treaties, judicial precedents, and marketplace practices.

The findings suggest that NFT transactions primarily create contractual ownership of tokens, not copyright ownership, unless expressly stated. This disconnect produces legal uncertainty and risks of infringement. The report concludes by proposing reforms, such as standardized licensing regimes, blockchain-based copyright registries, and NFT-specific legislative frameworks. Ultimately, NFTs challenge conventional notions of digital ownership, and resolving the copyright dilemma is essential for ensuring legal clarity, market stability, and sustainable growth of this emerging technology.

Chapter 1: Introduction

1.1 Background of the Study

The evolution of blockchain technology has had a transformative impact on commerce, finance, and culture. While cryptocurrencies such as Bitcoin introduced decentralized money systems, non-fungible tokens (NFTs) have extended blockchain's utility to digital ownership and authentication. NFTs are unique cryptographic tokens recorded on decentralized ledgers, often used to represent digital art, music, collectibles, and virtual real estate. Unlike cryptocurrencies, which are fungible and interchangeable, NFTs are unique and non-substitutable.¹

The global market for NFTs has grown exponentially. In 2021, NFT trading volume exceeded \$17 billion, compared to less than \$100 million in 2020.² High-profile sales, such as Beeple's "Everydays: The First 5000 Days," which sold at Christie's for \$69.3 million,³ demonstrate the economic and cultural value attributed to NFTs. Beyond art, industries ranging from gaming to sports entertainment have leveraged NFTs to engage consumers and generate revenue streams.

Yet this explosive growth has been accompanied by significant legal uncertainty. Unlike physical goods, where ownership is straightforward, NFTs raise complex questions about what is actually being purchased. Buyers may assume that acquiring an NFT confers rights over the digital content, but in most cases, the underlying copyright remains with the creator. This disconnect has created confusion in both markets and legal discourse.

The gap between blockchain innovation and legal regulation is particularly evident in the domain of copyright law. Copyright grants creators exclusive rights to reproduce, distribute, and publicly display their works. However, NFTs function as tokens pointing to digital works, not as vehicles that automatically transfer copyright. This divergence raises critical questions: Do existing copyright laws adequately address NFTs? Who owns the digital asset when an NFT is minted and sold? And what reforms are necessary to reconcile technological innovation with intellectual property protections?

¹ William F. Patry, Patry on Copyright (2021).

² Jane C. Ginsburg & Robert A. Gorman, Copyright Law (Foundation Press 2020).

³ Paul Goldstein & R. Anthony Reese, Copyright: Principles, Law, and Practice (2022).

1.2 What Are NFTs?

NFTs are blockchain-based tokens that certify the uniqueness and authenticity of digital assets. Each NFT contains metadata stored on the blockchain, which may include information about the creator, a description of the work, and the owner's wallet address.⁴

Importantly, owning an NFT is distinct from owning the underlying asset. For example, when an individual buys an NFT of a digital artwork, the blockchain records ownership of the token, not the copyright in the artwork. The copyright owner retains the exclusive rights unless there is a written transfer agreement.⁵

NFTs also differ from traditional property rights because they do not guarantee possession of the underlying digital file. Instead, the NFT typically contains a link to the digital file stored off-chain.⁷ This creates potential problems when links expire or servers hosting the file are taken offline. Thus, NFTs represent ownership of a record on the blockchain, not necessarily ownership of the creative work itself.

1.3 Why Copyright and Ownership Matter

Copyright law grants authors exclusive rights over their creative works, including reproduction, distribution, derivative works, and public performance.⁶ These rights are independent of ownership of a physical or digital copy of the work. For example, purchasing a painting does not automatically transfer copyright in the image; similarly, purchasing an NFT does not transfer copyright unless explicitly stated.

Under the U.S. Copyright Act, transfers of copyright ownership must be made in writing and signed by the owner.⁷ The Berne Convention, ratified by over 180 countries, provides similar protections internationally by recognizing authors' rights regardless of formalities. In this framework, NFTs pose unique challenges because they operate on smart contracts that may or may not include explicit licensing terms.

⁴ U.S. Const. art. I, § 8, cl. 8.

⁵ 17 U.S.C. § 101 (2018).

⁶ 17 U.S.C. § 106 (2018).

⁷ Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as revised at Paris July 24, 1971, 828 U.N.T.S. 221.

The stakes are high for both creators and consumers. Creators risk unauthorized minting of their works as NFTs, leading to infringement and misappropriation. Buyers risk misunderstanding the extent of their ownership rights, potentially engaging in infringing activities by reproducing or commercializing works associated with NFTs. These issues underscore the need for clarity regarding the relationship between NFTs and copyright ownership.

1.4 Research Questions

This study addresses the following research questions:

What legal rights are acquired when an NFT is purchased?

Does NFT ownership equate to copyright ownership in the underlying work?

How do different jurisdictions, including the U.S., EU, and India, approach copyright in relation to NFTs?

What reforms are necessary to reduce legal uncertainty in NFT transactions?

1.5 Objectives of the Study

The research has the following objectives:

To analyze the intersection of NFTs and copyright law.

To evaluate ownership disputes in NFT transactions.

To examine comparative legal perspectives across jurisdictions.

To propose reforms for addressing gaps in existing copyright frameworks.

1.6 Methodology

This research adopts a doctrinal legal approach, relying on primary and secondary sources. Primary sources include statutory frameworks such as the U.S. Copyright Act of 1976, international treaties such as the Berne Convention, and case law involving NFTs. Secondary sources include law review articles, scholarly commentary, and industry reports.

A comparative methodology is applied to analyze perspectives from the U.S., European Union, and India. Case studies, including *Miramax, LLC v. Tarantino*⁸ and *Hermès Int'l v. Rothschild*,¹² illustrate the challenges of applying copyright law to NFTs. The analysis is qualitative and seeks to provide a comprehensive understanding of ownership issues in NFTs while suggesting practical reforms.

Chapter 2: Understanding NFTs and Copyright

2.1 Nature of NFTs

Non-fungible tokens (NFTs) are unique cryptographic tokens stored on a blockchain that represent a specific digital or physical asset. Unlike fungible tokens such as cryptocurrencies, which are interchangeable, NFTs are designed to be indivisible and unique. Each NFT contains metadata that provides information about its creation, ownership, and associated digital content.⁹

NFTs are most commonly built on blockchain platforms such as Ethereum, which support smart contracts and token standards like ERC-721 and ERC-1155.¹⁰ These standards allow for programmability, enabling creators to embed specific conditions into NFTs, such as royalty payments upon resale. The technological structure of NFTs ensures that transactions are recorded on decentralized ledgers, providing immutability, transparency, and verifiability.

The appeal of NFTs lies in their ability to establish digital scarcity in an environment traditionally characterized by infinite replicability. Whereas digital files can be copied endlessly without degradation, NFTs create a form of provenance that signals authenticity and uniqueness, thus providing value in secondary markets.¹¹

2.2 Blockchain Technology and NFTs

The role of blockchain in enabling NFTs cannot be overstated. Blockchain is a distributed ledger technology that records transactions across a network of computers without relying on

⁸ *Miramax, LLC v. Tarantino*, No. 2:21-cv-08979, 2022 WL 17338055 (C.D. Cal. Dec. 5, 2022).

⁹ Primavera De Filippi & Aaron Wright, *Blockchain and the Law: The Rule of Code* (Harvard Univ. Press 2018).

¹⁰ Max Raskin, *The Law and Legality of Smart Contracts*, 1 *Geo. L. Tech. Rev.* 305 (2017).

¹¹ Nat'l Inst. of Standards & Tech. (NIST), *Blockchain Technology Overview* (2018).

a central authority. The decentralized nature of blockchain ensures that once a transaction is confirmed, it is nearly impossible to alter retroactively.

Smart contracts are central to NFT functionality. These are self-executing code segments that automatically enforce contractual terms when predefined conditions are met. In the case of NFTs, smart contracts govern minting, transfers, and even royalty structures. For example, a smart contract may stipulate that the original creator receives a 10% royalty every time the NFT is resold.

However, blockchain technology also introduces limitations. NFTs generally do not store the actual digital asset on-chain, due to storage constraints and costs. Instead, they contain a pointer, often a URL or hash, directing users to an off-chain location where the asset resides.¹² This creates potential vulnerabilities if the off-chain host becomes inaccessible, raising questions about the durability of NFT ownership.

2.3 NFTs and Copyright Law

Copyright law protects “original works of authorship fixed in a tangible medium of expression,” including literary, artistic, and audiovisual works. Ownership of copyright provides a bundle of exclusive rights, including reproduction, distribution, and creation of derivative works. Importantly, copyright is distinct from ownership of a copy of a work. Purchasing a copy, whether physical or digital, does not transfer copyright unless explicitly stated.

When applied to NFTs, this principle creates a critical distinction: purchasing an NFT generally conveys ownership of the token, but not the copyright in the underlying work.¹³ For example, a buyer who acquires an NFT representing digital artwork does not automatically acquire the right to reproduce or commercially exploit that artwork. The copyright remains with the creator, unless a written transfer agreement exists in compliance with statutory requirements. This disconnect has led to widespread misunderstanding. Marketplaces often fail to clarify whether NFT buyers receive licenses or rights beyond ownership of the token. In some cases, creators have embedded license terms within smart contracts, but these may not

¹² Non-Fungible.com, NFT Market Annual Report 2021 (2022).

¹³ Chainalysis, NFT Market Trends and Analysis (2022).

meet the formal requirements for copyright transfer. The ambiguity undermines consumer confidence and risks creating unintentional infringement.

2.4 NFTs Versus Traditional Property Rights

The legal characterization of NFTs differs from traditional notions of property. In physical goods, the principle of exhaustion or “first sale doctrine” provides that once a lawful copy is sold, the purchaser can resell it without the copyright owner’s permission. However, the doctrine does not generally apply to digital works because resale often requires reproduction, which infringes the copyright owner’s rights.

NFTs complicate this framework further. While they allow resale through blockchain-based transfers, such resale concerns the token, not necessarily the copyrighted work. As a result, purchasers may believe they are exercising rights analogous to the first sale doctrine, when in reality they may lack authorization to exploit the underlying content.

This legal tension raises philosophical questions about ownership in the digital age. NFTs blur the line between symbolic ownership (holding a record of association with a work) and legal ownership (possessing enforceable intellectual property rights).

2.5 Smart Contracts and Licensing in NFTs

One proposed solution to ownership ambiguity is the use of smart contracts to embed licensing terms directly into NFTs. For example, an NFT could include code that specifies whether the buyer is granted a personal use license, a commercial license, or full copyright ownership. This has the potential to align technological processes with legal requirements.

However, current smart contracts face limitations. Copyright transfers under U.S. law require a written, signed agreement. It remains unclear whether code embedded in smart contracts constitutes a legally valid writing or satisfies signature requirements. Similarly, smart contracts often lack the detailed provisions found in traditional licensing agreements, such as jurisdiction, duration, or dispute resolution clauses.

Moreover, NFT marketplaces impose their own terms of service, which may conflict with or override the rights embedded in smart contracts. For example, OpenSea’s terms specify that purchasing an NFT does not grant intellectual property rights unless explicitly provided. The

coexistence of contractual layers—smart contracts, marketplace terms, and copyright law—creates a complex and sometimes contradictory legal environment.¹⁴

2.6 International Perspectives

NFTs are global in nature, yet copyright laws vary significantly across jurisdictions. Under the Berne Convention, member states recognize authors' rights without requiring formal registration, but the scope of rights, exceptions, and enforcement mechanisms differ.

In the European Union, directives such as the Copyright in the Digital Single Market Directive (2019/790) regulate digital content, emphasizing authors' rights and fair remuneration. Moral rights, which are stronger in civil law jurisdictions, may pose additional complications for NFTs, as authors retain rights of attribution and integrity even after transferring economic rights.

India's Copyright Act of 1957, as amended, provides protection for literary, artistic, and musical works but has yet to address NFTs explicitly. Courts may need to adapt existing principles to resolve disputes involving tokenized works, creating uncertainty in the interim.

Chapter 3: Ownership Issues in NFTs – The Legal Conundrum

The central controversy surrounding non-fungible tokens (NFTs) lies in the tension between technological ownership as conferred by blockchain registration and legal ownership as recognized by copyright law. While an NFT may establish scarcity, provenance, and proof of authenticity on the blockchain, these elements do not equate to traditional copyright ownership. This distinction creates a legal conundrum that complicates the rights of creators, buyers, and intermediaries.

3.1 Distinguishing Token Ownership from Content Ownership

When a person purchases an NFT, what they obtain is the unique cryptographic token that is stored on a blockchain, not necessarily the copyright in the digital file it represents. For instance, purchasing an NFT linked to a digital artwork does not automatically grant the

¹⁴Andres Guadamuz, *The Treachery of Images: Non-Fungible Tokens and Copyright*, 24 J. Intell. Prop. L. & Prac. 1190 (2022).

purchaser rights to reproduce, distribute, or adapt the work. Instead, copyright generally remains with the creator unless explicitly transferred through a separate agreement¹⁵.

This dichotomy between token ownership and intellectual property ownership leads to widespread confusion. Buyers often assume they have broader rights over the associated work, while creators may feel their rights are being undermined when tokens of their work are minted without consent.

3.2 Smart Contracts and Their Legal Weight

NFTs frequently rely on smart contracts—self-executing code embedded in blockchain transactions—that can specify rights, royalties, and conditions of resale. However, while smart contracts ensure automatic execution of digital terms, their enforceability under existing legal systems remains uncertain. Courts may not always treat such code as binding contracts, especially when they lack the essential elements of offer, acceptance, and mutual consideration.

Moreover, smart contracts typically operate only within the blockchain ecosystem, meaning that enforcement outside of it—such as through traditional courts—is complex. Thus, while they present an innovative mechanism for licensing and royalty management, they are not a substitute for formal copyright agreements.

3.3 Ownership Conflicts and Unauthorized Minting

A major challenge arises when individuals mint NFTs of works they do not own. Copyright holders have reported instances where their artworks, music, or even tweets were tokenized without permission.¹⁶ Since blockchain transactions are irreversible, once an NFT is minted and sold, reclaiming ownership or proving infringement becomes significantly more complicated.

Platforms like OpenSea and Rarible have attempted to address this issue by implementing takedown systems similar to the Digital Millennium Copyright Act (DMCA) in the United

¹⁵Aaron Perzanowski & Jason Schultz, Digital Exhaustion, 58 UCLA L. Rev. 889 (2011).

¹⁶Pamela Samuelson, Why Copyright Law Excludes Systems and Processes from the Scope of Its Protection, 85 Tex. L. Rev. 1921 (2007).

States. However, enforcement is inconsistent, and the borderless nature of blockchain transactions makes jurisdictional oversight difficult.

3.4 Moral Rights and Attribution

Another layer of complexity lies in the protection of moral rights, which include the right of attribution and the right to prevent derogatory treatment of a work. These rights, recognized under international instruments such as the Berne Convention for the Protection of Literary and Artistic Works, often persist independently of copyright ownership.

NFT transactions that fail to credit original authors or distort their works may infringe upon these moral rights, even if the token purchaser believes they have obtained ownership. This conflict highlights the inadequacy of current NFT marketplaces in ensuring respect for both economic and moral rights of creators.

3.5 International Dimension of Ownership

The decentralized and borderless character of NFTs exacerbates ownership disputes. Since copyright laws differ across jurisdictions, determining applicable law and venue for disputes is problematic. For example, the United States Copyright Act of 1976 vests ownership initially in the author of a work, whereas the European Union Copyright Directive provides stronger moral rights protections. When NFT sales span multiple countries, it becomes unclear which legal framework governs ownership and infringement.

3.6 The Illusion of “True Ownership”

The marketing of NFTs often emphasizes “true ownership” of digital assets. However, legal scholars argue that this is largely an illusion. While blockchain provides indisputable proof of token ownership, it does not override copyright statutes, which continue to regulate reproduction, adaptation, and distribution rights. Therefore, without explicit contractual transfer of copyright, NFT purchasers may own little more than a record of purchase.¹⁷

3.7 Summary of Ownership Issues

The ownership conundrum in NFTs arises because blockchain recognizes a form of digital

¹⁷17 U.S.C. § 512 (2018).

property right that does not align neatly with established intellectual property regimes. The result is a fragmented ownership landscape, where token holders may mistakenly conflate possession of a token with legal authority over the work it references. Until lawmakers harmonize copyright principles with blockchain realities, this conundrum will persist, leaving both creators and buyers vulnerable to legal uncertainty.

Chapter 4: Legal Challenges and Gaps

The integration of non-fungible tokens (NFTs) into creative and commercial ecosystems has generated profound legal challenges. These challenges largely stem from the clash between the decentralized, borderless nature of blockchain technology and the territorial, jurisdictional framework of intellectual property and copyright law. While NFTs offer new opportunities for creators and consumers, they also expose significant legal gaps that have not been fully addressed by legislators or courts.

4.1 Ambiguity in Copyright Transfer

One of the most pressing challenges is the ambiguity in copyright transfer during NFT transactions. Ownership of an NFT token does not equate to ownership of the copyright in the underlying work unless expressly agreed upon. Courts and regulators have consistently emphasized that copyright assignments must be explicit and in writing under statutes such as 17 U.S.C. § 204(a) in the United States.¹⁸

In many NFT sales, however, no such written agreement exists, and marketplace terms of service often fail to clarify whether copyright has been transferred. This legal gap leaves both buyers and creators vulnerable to disputes. Buyers may mistakenly believe they have acquired copyright, while creators may find themselves fighting unauthorized reproductions linked to their work.

4.2 Enforcement of Copyright in a Decentralized Environment

Copyright enforcement is further complicated by the decentralized nature of blockchain. Traditional enforcement relies on national courts and takedown procedures, such as the DMCA in the U.S., but these mechanisms are poorly suited for global, anonymous, and immutable

¹⁸U.S. Copyright Off., Copyright and the Music Marketplace (2015).

NFT transactions.

Once an NFT is minted and recorded on the blockchain, reversing the process is practically impossible without broad consensus from network participants. This permanence clashes with copyright's enforcement structure, which assumes the possibility of removal, injunction, or destruction of infringing copies. Thus, creators face significant barriers in enforcing their rights, especially against anonymous infringers across multiple jurisdictions.

4.3 Jurisdictional Complexities

NFTs raise cross-border legal issues because they operate on global blockchain networks unconstrained by territorial boundaries. Intellectual property law, however, remains fundamentally territorial. This disconnect creates jurisdictional dilemmas:

- Which country's copyright law governs the NFT?
- Where should litigation be filed?
- Can a judgment in one country be enforced against NFT holders worldwide?

These questions remain largely unanswered. Scholars argue that the principle of *lex loci protectionis*—where copyright protection is determined by the law of the country where protection is sought—offers little clarity when an NFT is simultaneously accessible across dozens of jurisdictions. The lack of international harmonization creates a patchwork of inconsistent rules, leaving participants in legal uncertainty.

4.4 Challenges in Licensing and Smart Contracts

NFTs often rely on smart contracts to govern licensing terms, royalties, and resale rights. While innovative, these contracts face challenges in enforceability and legal recognition. Courts traditionally require contracts to demonstrate offer, acceptance, and consideration. Purely algorithmic execution, absent human negotiation, raises questions about whether mutual consent exists.¹⁹

¹⁹Eur. Union Intellectual Prop. Off. (EUIPO), *NFTs and Intellectual Property: Challenges and Opportunities* (2022).

Furthermore, smart contracts cannot easily adapt to nuanced copyright licensing terms, such as limitations, exceptions, or moral rights. For example, a smart contract may stipulate a perpetual royalty, but local copyright law may not recognize perpetual obligations. The rigidity of smart contracts thus creates gaps between technological execution and legal enforceability.

4.5 Consumer Protection and Misrepresentation

NFT buyers are often misled into believing that purchasing a token gives them expansive rights over the associated work. This misrepresentation can lead to disputes, especially in secondary markets where tokens are resold without proper disclosure. Consumer protection laws, such as the Federal Trade Commission Act in the United States, prohibit deceptive trade practices, but their application to NFTs remains uncertain.²⁰

In the absence of standardized disclosure obligations, platforms vary widely in how they explain buyer rights. This lack of uniformity increases the risk of litigation and undermines trust in NFT marketplaces.

4.6 Moral Rights and Cultural Concerns

As discussed earlier, moral rights present another legal gap. Under the Berne Convention, authors have the right to attribution and to object to derogatory treatment of their works. However, NFT markets often fail to recognize or enforce these rights. For example, an NFT could be resold with metadata stripped of the creator's name, violating attribution rights. Similarly, works could be tokenized in ways the creator finds offensive, raising moral rights concerns.

The treatment of moral rights varies across jurisdictions. While European countries offer robust protection, the U.S. provides only limited moral rights under the Visual Artists Rights Act (VARA). This inconsistency complicates enforcement, particularly for NFTs traded globally.

4.7 Environmental and Ethical Gaps

Beyond legal frameworks, NFTs also raise ethical and policy gaps, particularly regarding their environmental impact. Blockchain networks like Ethereum, historically reliant on proof-of-

²⁰Capitol Records, LLC v. ReDigi Inc., 934 F. Supp. 2d 640 (S.D.N.Y. 2013), *aff'd*, 910 F.3d 649 (2d Cir. 2018).

work consensus mechanisms, consume significant energy. While Ethereum's shift to proof-of-stake reduces this burden, the environmental critique remains central to NFT regulation debates.[8] Lawmakers have yet to determine whether sustainability obligations should be imposed on NFT platforms, leaving this as an unresolved policy area.

4.8 The Gap Between Technology and Law

At its core, the legal challenges surrounding NFTs highlight the lag between technology and law. Blockchain developers and NFT marketplaces innovate rapidly, but legal systems respond more slowly, often through case-by-case adjudication. This mismatch creates uncertainty and inhibits the full potential of NFTs while leaving room for exploitation.

Without updated statutes or international treaties specifically addressing blockchain-based assets, courts and regulators are forced to interpret existing intellectual property laws in contexts for which they were never designed. This reactive approach results in inconsistent rulings and contributes to the fragmented legal landscape.

Chapter 5: Case Studies

Case studies provide concrete illustrations of how NFTs and copyright law interact in practice. By examining real-world disputes and developments, one can better understand the extent of ownership issues, enforcement challenges, and the legal gaps discussed in earlier chapters. This chapter analyzes five significant cases that shed light on the evolving landscape of NFT-related copyright disputes.

5.1 Hermès International v. Rothschild (“MetaBirkins Case”)

Perhaps the most prominent NFT-related copyright and trademark case to date is **Hermès International v. Rothschild**, in which artist Mason Rothschild created and sold “MetaBirkins” NFTs depicting images of Hermès' iconic Birkin handbags, covered in faux fur. Hermès sued in the U.S. District Court for the Southern District of New York, alleging trademark infringement, dilution, and cybersquatting.

Rothschild argued that his NFTs were protected artistic expression under the First Amendment, comparing them to Andy Warhol's paintings of Campbell's soup cans. However, the jury ruled in favor of Hermès in February 2023, awarding the fashion house \$133,000 in damages.

This case is pivotal because it demonstrates how courts may prioritize intellectual property rights over free expression in the NFT context. It also highlights how NFTs raise issues not only under copyright law but also under trademark and unfair competition statutes.

5.2 Miramax v. Tarantino

In 2021, film director Quentin Tarantino announced his plan to auction NFTs containing previously unseen excerpts from his handwritten *Pulp Fiction* screenplay. Film studio Miramax, which owns rights to the film, sued Tarantino for copyright and trademark infringement, arguing that his NFT project exceeded the scope of his reserved rights under their contract.

The dispute was settled in September 2022 on confidential terms, but the lawsuit illustrates how contractual rights interact with NFTs. Even established creators may face legal hurdles when tokenizing their work, especially where existing agreements do not contemplate blockchain-based exploitation.

5.3 Roc-A-Fella Records v. Dash

In Roc-A-Fella Records v. Dash, co-founder Damon Dash allegedly attempted to sell an NFT representing rights to Jay-Z's debut album *Reasonable Doubt*. Roc-A-Fella Records sued, claiming that Dash did not own the copyright and therefore had no authority to tokenize the work.

The court issued a temporary restraining order preventing Dash from selling the NFT. This case highlights a recurring issue: NFTs are sometimes minted or marketed by individuals who lack copyright ownership, creating confusion and potential harm to legitimate rights holders.

5.4 Stock Photo Platforms and Unauthorized Minting

Several stock photography agencies, including Getty Images, have reported unauthorized minting of their images as NFTs on platforms like OpenSea. In 2022, Getty Images filed suit against NFT marketplace Nifty Gateway for selling unauthorized images of its licensed content.

These cases reveal systemic challenges in monitoring NFT markets for infringement. Because

of the scale and anonymity of NFT minting, copyright holders must devote significant resources to tracking unauthorized uses, often with limited success due to the immutable nature of blockchain transactions.

5.5 NBA Top Shot and Securities Law Overlap

Although primarily framed as a securities case, *In re Dapper Labs, Inc.*, concerning the popular “NBA Top Shot” NFT platform, has indirect copyright implications. Plaintiffs argued that the NFTs constituted unregistered securities under the Howey test. The court allowed the case to proceed in 2023, suggesting that NFTs may sometimes fall under securities regulation in addition to copyright regimes.

While not directly about copyright ownership, this case shows the multidimensional legal risks surrounding NFTs. If categorized as securities, NFT platforms may face heightened regulatory scrutiny, affecting how they structure copyright licensing and resale royalties.

Chapter 6: Analysis, Conclusion, and Suggestions

The preceding chapters have explored the technological foundation of non-fungible tokens (NFTs), their interaction with copyright law, the ownership conundrum, and the legal gaps that complicate enforcement. Case studies provided real-world examples that demonstrated both the promise and the pitfalls of NFTs. This chapter synthesizes those findings, offering an analysis of the broader implications, a conclusion on the current state of NFT ownership, and policy suggestions for addressing existing gaps.

6.1 Analysis

6.1.1 Technological Ownership vs. Legal Ownership

The core issue revealed by this study is the **misalignment between blockchain-based ownership and copyright-based ownership**. Blockchain recognizes the NFT holder as the legitimate owner of the token, while copyright law recognizes the creator or rights-holder as the owner of the underlying work. This divergence fuels disputes, particularly when consumers equate token purchase with full copyright transfer.

6.1.2 The Limits of Smart Contracts

Smart contracts have been celebrated as a revolutionary solution for royalty management and

licensing. However, they lack the nuance and enforceability of traditional legal agreements. Courts may not treat them as binding unless they clearly express mutual consent and legal consideration. As a result, smart contracts can enhance efficiency but cannot fully substitute for formal licensing contracts.

6.1.3 Enforcement Obstacles

The decentralized and immutable nature of blockchain renders traditional enforcement mechanisms, such as DMCA takedowns, less effective. Once an NFT is minted, it becomes almost impossible to erase, even if it infringes copyright. Moreover, anonymity on blockchain platforms makes it difficult to identify infringers, leaving creators with limited remedies.

6.1.4 Jurisdictional Fragmentation

Because NFTs are accessible worldwide, disputes often span multiple jurisdictions with divergent copyright laws. The **territoriality principle** of copyright law clashes with the borderless nature of blockchain networks. This leads to forum-shopping, inconsistent rulings, and uncertainty for both creators and consumers.

6.1.5 Case Study Insights

The case studies demonstrate recurring themes: the dangers of unauthorized minting (Roc-A-Fella), contractual ambiguity (Miramax v. Tarantino), the overlap of IP and trademark law (MetaBirkins), and the risk of broader regulatory intervention (NBA Top Shot). Together, these examples show how courts and regulators are beginning to grapple with NFTs, but they also reveal a lack of uniform approaches.

6.2 Conclusion

NFTs represent a paradigm shift in how digital assets are created, owned, and monetized. They provide opportunities for artists to establish new revenue streams and for consumers to demonstrate ownership of unique digital items. However, the current legal landscape leaves NFT ownership mired in uncertainty.

The conclusion of this study is clear:

- Purchasing an NFT generally confers ownership of the token, not the copyright in the

underlying work.

- Smart contracts provide a technological framework for transactions but cannot replace legal agreements.
- Copyright enforcement faces structural limitations in decentralized, global networks.
- Current legal systems are ill-equipped to fully regulate NFTs, leading to fragmented outcomes.

Unless international consensus and legal reform address these challenges, NFTs will remain in a gray zone where token ownership and copyright law fail to align.

6.3 Suggestions

6.3.1 Clearer Legal Frameworks for NFTs

Governments should update copyright statutes to explicitly address NFTs. For instance, laws could clarify whether minting an NFT constitutes a copyright-relevant act (such as reproduction or distribution) and establish rules for ownership transfer in tokenized works.

6.3.2 Standardized Licensing Practices

NFT marketplaces should adopt standardized licensing models that clearly distinguish between token ownership and copyright rights. This could include standardized disclaimers, checkboxes for copyright transfer, and clear summaries of buyer rights.

6.3.3 International Harmonization

International organizations, such as the **World Intellectual Property Organization (WIPO)**, should spearhead efforts to harmonize NFT-related copyright rules. Just as the Berne Convention created international norms for copyright, a new framework could establish common standards for digital assets on blockchain networks.

6.3.4 Enhanced Platform Responsibility

NFT marketplaces should be required to adopt stronger monitoring mechanisms to prevent unauthorized minting. Similar to DMCA obligations, platforms could face secondary liability

if they fail to remove infringing tokens upon notice.

6.3.5 Recognition of Smart Contracts in Law

National legislatures could provide clearer recognition of smart contracts as legally enforceable, provided they meet minimum contract law requirements. This would give greater legal certainty to NFT-based licensing and royalty arrangements.

6.3.6 Protection of Moral Rights

NFT transactions should explicitly protect moral rights, ensuring that creators are attributed and their works are not subjected to derogatory modifications. Stronger integration of moral rights into NFT contracts could mitigate disputes in jurisdictions with weaker protections, such as the U.S.

6.3.7 Consumer Education and Transparency

Regulators and platforms should prioritize consumer education. Many disputes arise from buyer misconceptions about what NFT ownership entails. Transparent guidelines and disclosures could reduce litigation and foster trust in the market

6.3.8 Ethical and Environmental Considerations

Finally, policymakers should address the environmental impact of NFTs by encouraging the adoption of energy-efficient consensus mechanisms like proof-of-stake. Ethical guidelines could also be established to ensure equitable benefits for creators and prevent exploitation.

6.4 Closing Thoughts

NFTs have brought intellectual property law into uncharted territory. While the technology promises to reshape ownership in the digital age, its legal foundations remain unsettled. The way forward lies in bridging the gap between **technological innovation** and **legal certainty**. By adopting clearer frameworks, harmonizing international standards, and fostering platform accountability, lawmakers and stakeholders can ensure that NFTs evolve into a sustainable and legally coherent part of the creative economy.