The Fiction of NFTs and Copyright Infringement

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In 2021, Non-Fungible Token (NFT) art sales reached over $22 billion. NFTs are unique digital assets that are recorded on a blockchain. The record-breaking sale of Beeple’s Everydays: The First 5000 Days brought NFTs out from the fringe of the art world. The arrival of NFTs in the mainstream art market has profoundly shaped the manner in which artists exploit their works. NFTs have not only opened up a new medium of expression, but also a new digital art market. This sensational boom has enticed some of the world’s biggest names across pop culture and sports, including celebrities such as Paris
Hilton, Reese Witherspoon, Jimmy Fallon, Steph Curry, and Eminem, to create their own NFT art. Director Quentin Tarantino has also capitalized on this craze through the creation of an NFT collection based on the film *Pulp Fiction*. Many, lawyers in particular, have watched the rise of this new medium of art with awe—not quite understanding its particular allure. Arguably many laws regulating tangible art still apply to NFTs. However, the extent to which intellectual property laws apply remains uncertain.

Despite the popularity of this new craze, many artists have taken to social media to complain that their works have been minted (i.e., created) into NFTs without their consent. For example, Production company Miramax has sued Tarantino over his *Pulp Fiction* NFTs, accusing him of violating the company’s copyright. This will be a case of first impression in which a court will have to address the issue of to what extent the creation of an unauthorized NFT may be considered copyright infringement. The juxtaposition of NFTs within the digital art marketplace has seemingly resulted in a growing fallacy that the minting of an NFT infringes on the copyright of the underlying work. Intellectual property lawyers have warned NFT creators that the unauthorized minting of an NFT will expose creators to copyright liability. As such, those seeking to capitalize on this sensation subsist in a state of legal purgatory until the courts resolve the extent to which copyright law applies to NFTs. Courts have suggested the judicial expansion of copyright protection should be avoided, even in light of new and important technologies. This Essay explores the
nature of NFTs and to what extent, if any, they may be considered unauthorized copies or derivatives of the underlying work. NFTs are digital tokens that do not themselves include a copy of an associated work. At best, NFTs might include a link to a digital copy of a work. As such, this Essay concludes that NFTs are not unauthorized copies or derivatives of the underlying work and as such are not subject to copyright infringement claims.

I. Framing NFTs: What Are They and Why Are They So Valuable?

Non-fungible tokens are unique digital assets that are recorded on a blockchain ledger. A blockchain is a cryptographic, distributed, and decentralized ledger that maintains a permanent record of transactions. In 2017, one of the first uses of the NFT was a set of unique pixelated images of “punk” characters aptly called “CryptoPunks.” Since then, various forms of works have been converted to NFTs and have been made available on the market. Indeed, almost anything can be transformed into an NFT, including music samples, video clips, animations, digitized artwork, photographs, or tweets, among many other works of authorship. While an NFT can be connected to a physical object, like a painting, the NFT “asset” is merely the token recorded on the blockchain and does not necessarily need to accompany a “real world” tangible object. The NFT is not the physical object itself and it does not contain a reproduction of the object. Instead, each “NFT[]” contain[s] metadata that describe the corresponding assets,” which are then
displayed, transferred, and stored digitally. The underlying work may be
specifically commissioned, or may be a preexisting work. Once an NFT is
created, the underlying work may be viewable to the public on a digital art
marketplace or gallery. The “non-fungible” nature of NFTs is what makes this
emerging art form so distinctive. Unlike cryptocurrencies, such as Bitcoin,
which are exchangeable, an NFT is non-fungible, meaning it is unique in that it
cannot be exchanged, interchanged, or replaced with another one of the
same value. For example, many individuals can buy or download a copy of a
work by Jean-Michel Basquiat. However, only one can claim ownership of any
given work. Unlike other digital assets, NFTs carry “unique information and
varying levels of rarity,” denoting that each single token is different from the
other. The NFT’s value derives from its unique proof of “ownership” and
“authenticity” rather than the image itself. Because of the inherent scarcity of
these unique tokens, purchasers expect the assets to appreciate and
thereafter generate large profits when sold.

NFTs are often minted on the Ethereum blockchain. The underlying artwork
minted into an NFT is secured on a digital art marketplace, such as Opensea,
Rareable, or SuperRare. In order to secure the artwork on the blockchain, an
artist must pay “gas fees” in Ethereum cryptocurrency, which provide for the
costs associated with minting the NFT and placing it for sale. Each artist must
usually have a “digital wallet,” such as one from Metamask, Coinwallet, or
Coinbase, which allows the artist to connect to the NFT marketplace and
authenticate their identity. In addition, in order to mint an NFT, an artist must write a contract by coding it on the blockchain. These so-called “smart contracts,” written in a language called Solidity, follow the NFT as it transfers ownership from one account to another. Each smart contract must implement criteria written through the ERC-721 token standard smart contract. The smart contract allows the blockchain to keep track of the unique identification of each NFT, while simultaneously implementing functions that permit the NFT owner to authorize transfers of NFTs, to charge fees for certain transactions, and to block certain transferees from receiving an NFT.

The owner of an NFT, whether a creator or purchaser, has the ability to sell it on the secondary market for a profit. Because of the intricacies involved in minting, maintaining, selling, and reselling NFTs, there are multiple parties involved in a single NFT transaction. These parties include the creator of the NFT, the minter of the NFT, the blockchain (like Ethereum), the marketplace (like Superare or Opensea), the purchasers of the NFT (both primary and secondary), and the blockchain wallet service that effectuates the transfer (such as Metamask). As a result, the collector selling the NFT is not the only one who benefits from the sale transaction. Because of the unique nature of smart contracts, the original minter and, perhaps, subsequent parties may derive resale royalties from any given NFT sale transaction. For example, on Superare, the artist minter will make 85% of the sale price directly from the “mint sale.” SuperRare will take the remaining 15% as a commission fee. After
the original mint sale, the secondary seller will receive 90% of the profits derived from that sale and the original artist or minter retains a royalty of 10%. The unique identifier of an NFT results in the blockchain recordation of the token, which makes it easy to track. This allows for multiple parties to derive profits each time the NFT is sold.

II. Are NFTs “Copies” of Underlying Works?

As articulated in the seminal case of Mazer v. Stein, “[a]bsent copying there can be no infringement of copyright.” Determining whether a “copy” is made is the raison d’être of an infringement action. An unauthorized “copy” must in fact be a reproduction of the original work. As such, the unauthorized copy must “embody” the underlying work. Under 17 U.S.C. § 101, copies are defined as “material objects, other than phonorecords, in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.” From this definition, it can be surmised that a “copy” of the underlying work must significantly represent the original work, or, at the very least, the copyrightable aspects of the original work.

To date, there is no case law precedent that establishes the criteria for determining whether an NFT is considered a copy of the underlying work. The most pertinent cases which may provide guidance are those which refer to digital technology and copyright. At least one federal court has recognized
that electronic files, that are fixed in a tangible medium, are considered “material objects” and therefore are considered copies under the copyright. In White-Smith Music Publishing Co. v. Apollo Co., the Supreme Court rejected the argument that the copyright for a piece of music applied to the perforated sheets used to instruct a player piano, holding that it was limited to sheet music from which a person could read and reproduce the music. Because the perforated sheets were not intelligible to a person, the court held, that they were not “copies.” Congress later defined the term “copies” to comport to new and future technological advances. The statutory text delineates that “copies” include those works that can be perceived only with the aid of a machine.

Unlike computer programs, NFTs do not reproduce the entire work, even with the aid of a machine. The distinguishing factor between NFTs and electronic files is the presence of the underlying work. The NFT “asset” is a token recorded on the blockchain, not a copy of the physical object itself. Each NFT contains metadata that describes the corresponding assets in order to prove the physical object’s authenticity or rarity. Unlike an electronic file of work—whether it is a film or a sound recording, etc.—the NFT represents the physical object in code that is written into the blockchain that contains various information. This information frequently contains the name of the creator of the NFT, a URL linking to a representation of the underlying work of the NFT, the date it was minted, and any contractual terms that follow the NFT after it is sold.
The motivation for minting and thereafter buying an NFT is its rarity. One NFT cannot copy, nor can it be a copy of, another NFT. There are two distinctive factors of NFTs that make them imperviously rare: the so-called “tokenId,” which is created upon the creation of the actual token, and the contract address, which is the location of the NFT on the blockchain. This technical jargon essentially means that an NFT allows the buyer access to a unique digital file. The crux of this distinction, however, is that the buyer is not actually buying a digital piece of artwork. Instead, the encrypted data on the digital ledger merely identifies who owns the artwork and purports to authenticate it. The unique digital file contains code in the form of a smart contract that exists on the blockchain. While the token has information enumerated on the chain, it is too expensive to place and maintain anything larger than a string of code on the blockchain. Thus, the underlying work (or any images associated with it) is not the NFT itself.

The inapplicability of copyright infringement to minting of NFTs is similar to how courts treat hyperlinking. Hyperlinking, similar to NFTs, is composed of letters, numbers, and words, which allow a consumer to find the underlying work on another platform. However, the actual “hyperlink” does not involve any copying itself. Instead, a customer is automatically transferred to a particular website, whether it is the page of the original author or an infringer. The hyperlink itself is not the infringement, but rather the hyperlink may direct one to a page with infringing content.
Similarly, while an image of the underlying work might help advertise or identify the NFT, there is no connection to the underlying work. Mere association is not sufficient to invoke copyright infringement. For example, each of Quentin Tarantino’s Pulp Fiction NFTs do not contain a reproduction of the underlying work. According to Miramax’s complaint, Tarantino’s planned collection consists of “7 NFTs, each containing a high-resolution digital scan of Quentin’s original handwritten screenplay pages for a single scene from his screenplay for Pulp Fiction.” This statement is incorrect: the token located on the blockchain is not the scene from Pulp Fiction. Instead, the NFT itself is a token on the blockchain, which allows the NFT purchaser to view the full resolution version of the scene by clicking a separate URL. While the separate URL embedded in the NFT contains a link to a copy of the underlying work, it is not itself a copy of that work. Thus, an NFT is not a reproduction of content; it is merely a token that authenticates the source of the content. For this reason, NFTs themselves are not “copies” and thus not subject to copyright infringement.

III. Unauthorized Derivative Works & the NFT Dichotomy

Because the NFT is not a representation of the underlying work, it is also not a derivative of the underlying work. Section 106(2) of the Copyright Act grants the owner of a copyright the exclusive right “to prepare derivative works based upon the copyrighted work.” The exclusive right to prepare derivative
works frequently overlaps with the exclusive right of reproduction. Section 101 defines a “derivative work” in broad terms as “a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted.” While courts have recognized this definition as “hopelessly overbroad,” it seemingly requires some sort of variation of a copy of the preexisting work. The preexisting work—whether in physical or digital form—is often embodied in the new derivative work. Courts have found works to be unauthorized derivatives when they “contain[] a substantial amount of material” from a preexisting work. This means that a derivative work must require some “copying” of the underlying work, and not merely a vague connection to it. While judicial guidance on the confines of derivative works have been applied unevenly, there seems to exist agreement among commentators that derivative work can either contain a copy of the preexisting work or it can alter the existing work. Likewise, the legislative history of the Copyright Act explains that “the infringing work must incorporate a portion of the copyrighted work in some form.”

Cases of particular relevance are those in which enhancements to videogames exist. In Lewis Galoob Toys, Inc. v. Nintendo of America, Inc., the court recognized that mere improvements or enhancements, rather than replacements, are not considered infringement. The Game Genie altered the
play of the plaintiff’s copyrighted work by speeding up the game, but it did not copy or incorporate any of the existing work itself. In more modern cases, claimants have asserted that pop-up windows and advertisements on websites modify the appearance and presentation of the plaintiffs’ websites and are consequently unauthorized derivative works. Courts have similarly found that pop-up windows and advertisements do not infringe the derivative right because again, there is no modification or copy of the existing work—i.e. the sites. Simply put, regardless of the type of technology, a work cannot be derivative without a derivation from the underlying work.

While sellers advertise their NFTs as attached to the underlying work, the actual NFT, the encrypted data on the digital ledger, does not incorporate or embody the underlying work. The encrypted data merely contains URLs, which allow access to digital content. If the digital content found on the links contains a substantial copy of the preexisting work, then that content would be considered the infringing material. However, the token itself is merely a set of metadata validating the authenticity and ownership of a particular work. It can be argued that the minting of this NFT can be a translation of the work itself from representation to computer code. However, such an argument misconstrues the content of NFTs. The metadata does not contain any recognizable content of the underlying work, nor does it describe the work’s contents. Similarly, the metadata does not add, transform, or recast any of the underlying work. At most, the token incorporates a URL link that a consumer
may click to find the content associated with the NFT. As such, the only possible “derivative” work is the content with which the NFT is associated, and not the token existing on the blockchain.

**Conclusion**

The NFT boom has bedeviled many in the art market. From emerging artists to international celebrities, many have sought to capitalize on this billion-dollar sensation. While NFTs have dominated the news cycle, the application of copyright law to this enigmatic trend has remained uncertain. Courts have yet to answer the question of whether the law should extend copyright protection to those assets that, while inherently connected to a preexisting work, do not have the requisite “embodiment” to constitute a “copy” or derivative under the Copyright Act. At their core, NFTs are not compatible with the current construction of the Copyright Act.

NFTs are not unauthorized copies or derivatives of the underlying work and thus are not subject to copyright infringement claims about the underlying work. When courts are tasked with deciding issues that may adversely impact innovative technological markets, courts tend to favor the dissemination of new technology. However, this does not necessarily foreclose amendments to the Copyright Act to comport the uniqueness of NFTs to contemporary copyright doctrine. Certainly, when the framers wrote the copyright clause of the Constitution, and when their contemporary predecessors wrote the 1976
Copyright Act, neither fathomed the impermeable impact that tokens on a blockchain could have on the ability to encourage the “useful arts and and sciences.” While technology has changed, the Copyright Act, its purpose, and the law remain steadfast.

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5 Tarantino NFTs, https://tarantinonfts.com [https://perma.cc/74U4-52N8].


9 Complaint at 2, Miramax, LLC v. Quentin Tarantino, No. 21-08979 (C.D. Cal. Nov. 16, 2021) [hereinafter Miramax Complaint].


11 See Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 421 (1984) (concluding that an expansion of the copyright privilege to the sale of videotape recorders is “beyond the limits of the grants authorized by Congress”).
12 Werbach, supra note 2, at 14.


16 NFTs are displayed and transferred digitally through NFT marketplaces online or virtual galleries. The sale of an NFT to another person would transfer the NFT to another wallet where the NFT would be stored unless and until the purchaser chooses to display it digitally or physically via projection. For a detailed explanation of this process, see infra notes 23–24; see also Connor Blenkinsop, Nonfungible Tokens, Explained, Cointelegraph (July 26, 2018), https://cointelegraph.com/explained/non-fungible-tokens-explained [https://perma.cc/B3PS-CMSJ], for an overview of the NFT sale process and storage of NFTs in wallets.


18 Blenkinsop, supra note 16.

19 Diana Qiao, This is Not a Game: Blockchain Regulation and its Application to Video Games, 40 N. Ill. U. L. Rev. 176, 187 (2020).


21 A single ETH is currently valued at around $3,494 USD. Ethereum Price, coinbase, https://www.coinbase.com/price/ethereum [https://perma.cc/M7SC-UHNX]. An artist will need to purchase at least a fractional amount of Ether in order to mint an NFT.


25 Id.

26 Kyle R. Fath, Alan L. Friel & Carlton Daniel, Your NFT Playbook, Nat’l L. Rev. (July 1, 2021), https://www.natlawreview.com/article/your-nft-playbook [https://perma.cc/E5BA-YH27]. Both the creator of the underlying work and the subsequent minter of the NFT can be the same person or group. Id.


28 Id.

29 Id.


34 209 U.S. 1, 18 (1908).
35 Id.
37 Id.
38 Entriken, supra note 24 (“The [contract address and tokenID comprising the NFT] is a unique and fully qualified identifier for a specific asset on an Ethereum chain.”).
41 Absent proof of some incorporation of a portion of the underlying work, there is no copying. Merely using the title of the work or a hyperlink connected to an infringing portion of the work is not sufficient to give rise to copyright infringement. Erickson, supra note 32, at 1309 (explaining longstanding precedent of “copying” as an element of copyright infringement).
42 Miramax Complaint, supra note 9, at 13.
47 Micro Star v. Formgen Inc., 154 F.3d 1107, 1110 (9th Cir. 1998).
48 See Mirage Editions, Inc. v. Albuquerque A.R.T. Co., 856 F.2d 1341, 1343 (9th Cir. 1988) (finding that the creation of another version of a physical work of art “amounts to preparation of a derivative work”).
49 See Midway Mfg. Co. v. Artic Int’l, Inc., 704 F.2d 1009, 1012 (7th Cir. 1983) (holding that video games are copyrightable as audiovisual works).
50 Twin Peaks Prods., Inc. v. Publ’ns Int’l, Ltd., 996 F.2d 1366, 1373 (2d Cir. 1993).
51 See, e.g., 2 Melville B. Nimmer & David Nimmer, Nimmer on Copyright § 8.09[A] (Matthew Bender, rev. ed. 2021) (stating that, to constitute infringement, the subsequent work must incorporate the preexisting work); Daniel Gervais, The Derivative Right, or Why Copyright Law Protects Foxes Better than Hedgehogs, 15 Vand. J. Ent. & Tech. L. 785, 801 (2013) (“A derivative work transforms or recasts something protectable in the primary work (something other than the unprotected ideas) by adding or transforming it.”); Lydia Pallas Loren, The Changing Nature of Derivative Works in the Face of New Technologies, 4 J. Small & Emerging Bus. L. 57, 62–63 (2000) (“[C]ourts have attempted to confine the application of the derivative work right . . . requiring the work either to be substantially similar to the copyrighted work or to substantially incorporate protectable material from the underlying work.”).
53 964 F.2d 965, 969 (9th Cir. 1992) (finding that “products that enhance, but do not replace, copyrighted works” are not infringing derivative works).
54 Id. at 967 (noting that the Game Genie did not alter the data stored in the game cartridge and created only temporary effects).
56 Erickson, supra note 32, at 1290 (suggesting that several federal district courts have found that website-advertising technologies do not represent derivative works).

57 See Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 160–62 (1975) (stating that a technologically rigid regime of copyright law that would be both “wholly unenforceable and highly inequitable”).