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NON-FUNGIBLE TOKENS (NFTS) AND COPYRIGHT LAW*

Tyler T. Ochoa**

The concept of using non-fungible tokens (NFTs) to facilitate and authenticate sales of digital art dates back to 2014; but it took several years before the concept really captured public attention. Since copyright law governs the reproduction of works of art, including digital images, the connection to NFTs seems obvious. Yet, copyright law is only tangentially related to NFTs, for two reasons. First, buying an NFT does not, by itself, convey any rights to reproduce or display the work associated with that token. Instead, those rights are governed entirely by the contract that accompanies the sale. Second, minting and selling an NFT, by itself, likely does not violate any of the exclusive rights provided by copyright. As a result, although copyright may provide a useful tool for artists seeking to monetize their art, it is probable that its usefulness will be limited in lawsuits concerning NFTs. Ultimately, other legal tools (such as trademark law) may provide better relief when litigation concerning NFTs becomes necessary.

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I. INTRODUCTION

The concept of using non-fungible tokens (NFTs) to facilitate and authenticate sales of digital art dates back to 2014;¹ but it took several years before the concept really captured public attention. The market for NFTs began to grow in 2017, with the release of two large-scale NFT projects, CryptoPunks² and CryptoKitties.³ By October 2020, when the National Basketball Association (NBA) paired with Dapper Labs to launch Top Shot, collectible NFT-based digital trading cards,⁴ a speculative bubble had begun to build in the market for NFTs. The NFT craze exploded in March 2021, when auction house Christie's sold an NFT of a collage of 5,000 images by digital artist Mike Winkelmann, known professionally as Beeple, to a Singaporean investor for \$69 million.⁵ Suddenly, it seemed like NFTs were everywhere.

Shortly after the sale, Winkelmann described the NFT market as “extremely speculative,” and he warned: “This is for people who are looking to take some risks, because a lot of this stuff will absolutely go to zero And I believe it's absolutely in an irrational exuberance bubble.”⁶ Winkelmann was prescient: in May 2022, *The Wall Street*

¹ See *infra* Part III.

² CryptoPunks is a collection of NFTs of 10,000 unique, algorithmically generated images. It was released on the Ethereum blockchain in June 2017. See Brian L. Frye, *Are CryptoPunks Copyrightable?*, 2021 PEPP. L. REV. 105, 108–10 (2022).

³ CryptoKitties is a blockchain-based game in which buyers purchase, “breed,” and sell NFTs of cartoon kittens. It was released on the Ethereum blockchain in November 2017, but is now hosted on Dapper Labs' Flow blockchain. See Nellie Bowles, *CryptoKitties, Explained ... Mostly*, N.Y. TIMES (Dec. 28, 2017), <https://www.nytimes.com/2017/12/28/style/cryptokitties-want-a-blockchain-snuggle.html>.

⁴ See David Gerard & Amy Castor, *NBA Top Shot: A Short History of the Largest Mainstream NFT Project*, ATTACK 50 FOOT BLOCKCHAIN (Apr. 17, 2022), <https://davidgerard.co.uk/blockchain/2022/04/17/nba-top-shot-a-short-history-of-the-largest-mainstream-nft-project/>.

⁵ See Scott Reyburn, *JPG File Sells for \$69 Million, as 'NFT Mania' Gathers Pace*, N.Y. TIMES (Mar. 11, 2021), <https://www.nytimes.com/2021/03/11/arts/design/nft-auction-christies-beeple.html>.

⁶ See Anthony Cuthbertson, *NFT Millionaire Beeple Says Crypto Art is Bubble and Will 'Absolutely go to Zero'*, INDEPENDENT (Mar. 24, 2021), <https://www.independent.co.uk/tech/nft-beeple-cryptocurrency-art-b1821314.html>.

Journal reported that “[t]he NFT market is collapsing.”⁷ Average daily sales of NFTs had fallen 92% from September 2021, and the number of active “wallets” (active buyers) had fallen 88% from November 2021.⁸ By October 2022, “NFT sales were down by more than 90% in nearly every metric — including volume and price — compared to the year before.”⁹

Anytime people are making or losing large amounts of money, lawsuits are inevitable; so, it is hardly surprising that 2021 and 2022 also saw the first wave of lawsuits concerning NFTs. Many of those lawsuits either alleged copyright infringement or sought a declaration of copyright ownership. Since copyright law governs the reproduction of works of art, including digital images, the connection to NFTs seems obvious. Yet, as this article will explain, copyright law is only tangentially related to NFTs, for two reasons. First, buying an NFT does *not*, by itself, convey *any* rights to reproduce or display the work associated with that token. Instead, those rights are governed entirely by the contract that accompanies the sale. Second, minting and selling an NFT, by itself, likely does *not* violate any of the exclusive rights provided by copyright. As a result, although copyright may provide a useful tool for artists seeking to monetize their art, it is probable that its usefulness will be limited in lawsuits concerning NFTs.

II. BACKGROUND: COPYRIGHT LAW

Copyright law governs the rights of authors, publishers, and users in literary and artistic works, including paintings, drawings, and digital art.¹⁰ In the United States, copyright grants to the author the exclusive rights to reproduce and distribute copies of the work, to

⁷ See Paul Vigna, *NFT Sales Are Flatlining*, WALL. ST. J. (May 3, 2022), <https://www.wsj.com/articles/nft-sales-are-flatlining-11651552616>.

⁸ See *id.*

⁹ Danny Parisi, *2022 Was the Year of the NFT Reality Check*, GLOSSY (Dec. 27, 2022), <https://www.glossy.co/fashion/2022-was-the-year-of-the-nft-reality-check/>.

¹⁰ In the United States, copyright is governed by the Copyright Act of 1976, as amended, and is codified in Title 17 of the United States Code [hereinafter 17 U.S.C.]. The subject matter of copyright includes “pictorial, graphic, and sculptural works,” 17 U.S.C. § 102(a)(5), the definition of which includes “two-dimensional and three-dimensional works of fine, graphic, and applied art.” 17 U.S.C. § 101. In the United Kingdom, copyright is governed by the Copyright, Designs and Patents Act 1988 § 16, c. 48 (UK), as amended [hereinafter CDPA 1988]. The subject matter of copyright includes “artistic works,” CDPA 1988, § 1(1)(a), the definition of which includes “a graphic work [or] photograph.” CDPA 1988, § 4(1)(a). A “graphic work” is defined to include “any painting [or] drawing.” CDPA 1988, § 4(2)(a).

publicly perform or display the work, and to prepare derivative works based on the work.¹¹ In the United Kingdom, copyright grants the exclusive rights to copy the work, to issue copies to the public, to rent or lend the work to the public, to perform, show, or play the work in public, to communicate the work to the public (by broadcasting or electronic transmission), and to make an adaptation of the work.¹² Member states of the European Union are required to provide authors the exclusive rights of reproduction, public distribution, communication to the public (by wire or wireless means), and making the work available to the public, so that members of the public may access the work from a time and place individually chosen by them.¹³ Although phrased somewhat differently, these rights are largely the same in each of the three jurisdictions.¹⁴

U.S. copyright law carefully distinguishes between the work (an intangible selection and arrangement of words, images, or pixels) and the tangible embodiments of the work (which are either copies or phonorecords).¹⁵ For example, a literary work is a sequence of words

¹¹ See 17 U.S.C. § 106.

¹² See CDPA 1988, §16.

¹³ See Council Directive 2001/29/EC, art. 2, 3, 4, 2001 O.J. (L 167) 10, 16 [hereinafter Directive 2001/29/EC]. These are augmented by Council Directive 2006/115/EC, art. 3, on rental right and lending right and on certain rights related to copyright in the field of intellectual property, 2006 O.J. (L376) 28, 29–30; see also Council Directive 2001/84/EC, on the resale right for the benefit of the author of an original work of art; Council Directive 93/83/EEC art. 2, 8, 1993 O.J. (L 248) 15, 19–20, on the coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission.

¹⁴ For example, in the United Kingdom, “communication to the public” includes “the making available to the public of the work by electronic transmission in such a way that members of the public may access it from a place and at a time individually chosen by them.” CDPA 1988 § 20(2)(b). In the United States, to perform or display a work “publicly” includes “to transmit or otherwise communicate a performance or display . . . to the public, by means of any device or process, whether the members of the public capable of receiving the performance or display receive it in the same place or in separate places and at the same time or at different times.” 17 U.S.C. § 101.

¹⁵ “The Copyright Act establishes a ‘fundamental distinction’ between the original work of authorship and the material object in which that work is ‘fixed.’” *Matthew Bender & Co. v. West Publ’g Co.*, 158 F.3d 693, 702 (2d Cir. 1998). “Phonorecords” are material objects in which only sounds are fixed, while “copies” are material objects in which any other type of work is fixed. 17 U.S.C. § 101 (definitions of “copies” and “phonorecords”). Both terms include the material object in which the work is first fixed (the tangible original). See *id.*

that is fixed initially in a manuscript (if handwritten or typed) or hard drive (if written on a computer), and can be reproduced in the form of books (copies) or as an audiobook in the form of CDs or cassettes (phonorecords).¹⁶ An audiovisual work is a series of related images, together with any accompanying sounds, that can be fixed or reproduced in the form of film, videotapes, or DVDs (copies).¹⁷ A musical work is a selection and arrangement of notes (with or without words) that is fixed initially in a manuscript or master recording and can be reproduced in the form of sheet music (copies) or vinyl discs, CDs, or cassettes (phonorecords).¹⁸ A pictorial or graphic work is a selection and arrangement of lines and shapes or pixels that is fixed initially in a tangible medium (such as oil on canvas, pencil on paper) and can be reproduced in the form of posters, greeting cards, or other tangible objects.¹⁹ Thanks to digital encoding, any of these works can be represented as a sequence of 1s and 0s (a work) and can be fixed initially and/or reproduced in an electronic storage medium (such as a hard drive or flash drive).²⁰

A fundamental principle of copyright law is that “[o]wnership of a copyright, or of any of the exclusive rights under a copyright, is distinct from ownership of any material object in which the work is embodied.”²¹ As a result:

¹⁶ See *id.* (“‘Literary works’ are works . . . expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects, such as books, periodicals, manuscripts, phonorecords, film, tapes, disks, or cards, in which they are embodied.”).

¹⁷ See *id.* (“‘Audiovisual works’ are works that consist of a series of related images . . . , together with accompanying sounds, if any, regardless of the nature of the material objects, such as films or tapes, in which the works are embodied.”).

¹⁸ See U.S. COPYRIGHT OFF., COMPENDIUM COPYRIGHT OFF. PRACS. § 802.1 (3d ed. rev. 2021) [hereinafter *Compendium III*] (“musical works . . . are original works of authorship consisting of music and any accompanying words. Music is a succession of pitches or rhythms, or both, usually in some definite pattern.”); see also *id.* § 802.4(A) (“Copies of musical works” include sheet music and non-audio digital files); *id.* § 802.4(B) (“Phonorecords of musical works” include “compact discs, vinyl records, and tapes” and “Digital audio files embodying recorded sound”).

¹⁹ See 17 U.S.C. § 101 (definition of “pictorial, graphic, and sculptural works”); see also *Compendium III* § 903.1 (listing examples of pictorial, graphic, and sculptural works); *id.* § 904 (listing examples of fixation of visual art works, including canvas, paper, prints, and photographic film).

²⁰ See *Compendium III* § 705 (literary works fixed in “a computer file”); see also *id.* § 802.4(A–B) (musical works); *id.* § 807.4 (audiovisual works); *id.* § 904 (pictorial or graphic works) (“digital files”).

²¹ 17 U.S.C. § 202.

Transfer of ownership of any material object, including the copy or phonorecord in which the work is first fixed, does not of itself convey any rights in the copyrighted work embodied in the object; nor, in the absence of an agreement, does transfer of ownership of a copyright or of any exclusive rights under a copyright convey property rights in any material object.²²

Thus, if a person writes and mails a letter, the recipient owns the letter itself (a manuscript), but the author owns the right to reproduce the letter (the copyright).²³ Similarly, if an artist makes and sells a painting, the buyer owns the painting itself (the canvas), but the artist owns the right to reproduce the painting.²⁴ This principle was not without controversy; in 1942, the New York Court of Appeals held that the unconditional sale of a painting, without reservation of the copyright, included the right to reproduce the painting.²⁵ But the legislative history of the 1976 Copyright Act specifically explains that it was the intent of Congress to overrule that decision.²⁶ This was accomplished in part by requiring that any transfer of copyright ownership, in whole or in part, must be memorialized in a signed writing.²⁷

²² *Id.*

²³ *See, e.g., Werckmeister v. American Lithographic Co.*, 142 F. 827, 830 (S.D.N.Y. 1905) (“For instance, a person who has received a letter, voluntarily sent him by the writer, owns the piece of paper upon which the letter is written; but the writer of the letter continues to be the owner of the copyright, and can, by injunction, prevent the person who has received the letter from publishing it.”), *aff’d*, 148 F. 1022 (2d Cir. 1906).

²⁴ *See id.* (“The author of a painting, when it is finished, . . . owns a material piece of personal property, consisting of the canvas and the paint upon it. He also owns an incorporeal right connected with it; that is, the right to make a copy of it. These two kinds of property, although growing out of the same intellectual production, are in their nature essentially and inherently distinct . . . , [so] that the owner of a painting may then sell the painting to one person, and the copyright to another.”).

²⁵ *See Pushman v. New York Graphic Soc’y, Inc.*, 287 N.Y. 302, 308 (1942).

²⁶ *See* H.R. Rep. No. 94–1476, at 124 (1976) (“Under [*Pushman*], authors or artists are generally presumed to transfer common law literary property rights when they sell their manuscript or work of art, unless those rights are specifically reserved. This presumption would be reversed under the [Copyright Act], since a specific written conveyance of rights would be required in order for a sale of any material object to carry with it a transfer of copyright.”).

²⁷ *See* 17 U.S.C. § 204(a).

III. USING NFTs TO CERTIFY “OWNERSHIP”

In the market for fine art, a tangible original work of art has an economic value that far exceeds the value of any reproductions. The scarcity of original works helps create value, and people also value the status of owning an original work of art and its connection to the artist. To maintain that value, an original work of art must be recognized as genuine by art experts. Usually this requires careful documentation of the work’s provenance, or history of ownership. Original works that are recognized as genuine are often compiled in a *catalogue raisonné*, a comprehensive, annotated listing of all of the known artworks of an artist.

With works of art created in a digital medium, however, the distinction between the “original” and reproductions vanishes, because the “original” work (a collection of 1s and 0s fixed in an electronic storage medium) is identical to every other copy. In other words, an “original” digital artwork and each of its copies are completely fungible. This limitation meant that digital artists and works typically could not achieve the status and value associated with traditional artists and their original paintings and sculptures.²⁸

To try to create and capture the value of scarcity that comes with owning an “original” work of art, in 2014 artist Kevin McCoy and consultant Anil Dash hit upon the idea of using a unique digital identifier, stored in a blockchain, to certify authenticity and “ownership” of a digital work.²⁹ They called their idea “monetized graphics”; but in time, such digital identifiers came to be known as “non-fungible tokens,” or NFTs.³⁰

²⁸ See Anil Dash, *NFTs Weren’t Supposed to End Like This*, ATLANTIC (Apr. 2, 2021), <https://www.theatlantic.com/ideas/archive/2021/04/nfts-werent-supposed-end-like/618488/> (“By default, copies of a digital image or video are perfect replicas—indistinguishable from the original down to its bits and bytes. Being able to separate an artist’s initial creation from mere copies confers power.”).

²⁹ *Id.*

³⁰ An NFT is “a unique digital identifier . . . that is recorded in a blockchain, and that is used to certify authenticity and ownership.” MERRIAM-WEBSTER DICTIONARY ONLINE, <https://www.merriam-webster.com/dictionary/NFT> (last visited Sept. 1, 2023). An NFT is a “token” because it is a digital record that represents something else; and it is “non-fungible” because it cannot be copied, substituted, or subdivided. This makes an NFT different from cryptocurrency tokens, such as bitcoin, which are “fungible”: each bitcoin has the same value as any other bitcoin and can be subdivided into fractions.

An NFT is simply an encoded digital file that contains specified types of information. The most commonly-used NFT standard is known as ERC-721, and NFTs generated using this standard are stored on the Ethereum blockchain.³¹ An NFT is unique (non-fungible) because it comprises a unique combination of two numbers: a tokenID (a number generated when the NFT is created, or “minted”) and a contract address (an “address” for the transaction protocol (code) that is stored and can be viewed on the blockchain).³² Optional elements that usually are also included are the wallet address of the creator (which “authenticates” the token), a “hash” value (a unique hexadecimal number generated by applying an algorithm to the digital data representing the work), and a link to a URL (a web address) where the digital work is stored.³³ In addition, an NFT may contain other information, such as the title of the work, the name of the author or artist, the copyright status of the work, and perhaps even legal terms and conditions.³⁴

Importantly, a copy of the digital work itself is *not* one of the components of the typical NFT. Instead, the typical NFT contains only a link (or pointer) to the digital work, along with a “hash” value that is generated from the original work.³⁵ As Dash later observed:

This means that when someone buys an NFT, they’re not buying the actual digital artwork; they’re buying a link to it. And worse, they’re buying a link that, in many cases, lives on the website of a new start-up that’s likely to fail within a few years. Decades from

³¹ See *ERC-721 Non-Fungible Token Standard*, ETHEREUM, <https://ethereum.org/en/developers/docs/standards/tokens/erc-721/> (last visited Sept. 1, 2023). The technical specifications for the ERC-721 standard are set forth in William Entriken, et al., *EIP-721: Non-Fungible Token Standard*, Ethereum Improvement Proposals, no. 721 (Jan. 24, 2018), <https://eips.ethereum.org/EIPS/eip-721> (last visited Sept. 1, 2023).

³² See Andres Guadamuz, *The Treachery of Images: Non-Fungible Tokens and Copyright*, 16 J. INTELL. PROP. LAW L. & PRAC. 1367, 1370 (2021).

³³ See *id.*

³⁴ See *id.* at 1370–71. If included, this additional information meets the definition of “copyright management information,” see 17 U.S.C. § 1202(c), which is legally protected against intentional removal or alteration if those acts are done with the specified intent. See 17 U.S.C. § 1202(b).

³⁵ See Guadamuz, *supra* note 32, at 1371. Although one *can* store the digital work itself as part of the NFT (and there are a few examples of such “on-chain works”), in practice this is very rarely done, because it is prohibitively expensive to do so. *Id.* at 1371–72. See also Dash, *supra* note 28.

now, how will anyone verify whether the linked artwork is the original?

All common NFT platforms today share some of these weaknesses They still depend on the old-fashioned pre-blockchain internet, where an artwork [will] suddenly vanish if someone [forgets] to renew a domain name.³⁶

“The idea behind NFTs was, and is, profound[:] . . . enabling [digital] artists to exercise control over their work, to more easily sell it, [and] to more strongly protect against others appropriating it without permission.”³⁷ Unfortunately, NFTs have utterly failed to achieve these goals. There is nothing that prevents someone from “minting” and selling an NFT to a work they did not create and do not own. Moreover, anyone can mint and sell multiple NFTs of the same work, depriving them of the scarcity that was supposed to give them value. The result was a speculative market for NFTs that many commentators likened to a Ponzi scheme.³⁸

IV. COPYRIGHT, “OWNERSHIP,” AND NFTS

As noted above, a fundamental principle of copyright law is that “[o]wnership of a copyright, or of any of the exclusive rights under a copyright, is distinct from ownership of any material object in which the work is embodied.”³⁹ Thus, under copyright law, the traditional art market must keep track of ownership of three different things: ownership of the tangible original artwork (as a piece of tangible personal property);⁴⁰ ownership of any reproductions or “copies” of the

³⁶ Dash, *supra* note 28, ¶¶ 9–10.

³⁷ *Id.* ¶¶ 6.

³⁸ See, e.g., Shanti Escalante-De Mattei, *Bloomberg’s Massive Crypto Article Derides NFTs as Nothing More Than a Ponzi Scheme*, ARTNEWS (Oct. 25, 2022), <https://www.artnews.com/art-news/news/bloomberg-crypto-nfts-matt-levine-1234644343/>.

³⁹ 17 U.S.C. § 202.

⁴⁰ See *id.* (“Transfer of ownership of any material object . . . does not of itself convey any rights in the copyrighted work embodied in the object; nor, in the absence of an agreement, does transfer of ownership of a copyright . . . convey property rights in any material object.”). Because single original artworks are often quite valuable, they are usually transferred with formal contracts, and ownership is typically recorded in the artist’s *catalogue raisonné*.

work,⁴¹ and ownership of the copyright (as a piece of intangible personal property).⁴² The copyright, in turn, is a bundle of exclusive rights that can be subdivided in any way the copyright owner chooses, and each stick in the bundle can be transferred and owned separately.⁴³

Which of these things do you get when you buy an NFT? All too often, the answer is “none of the above.” As one cynical-but-accurate commentator explained:

An NFT is a crypto-token on a blockchain. The token is virtual — the thing you own is a cryptographic key to a particular address on the blockchain — but legally, it’s property that you can buy, own or sell like any other property

When I buy an NFT, what do I get? The art itself is not in the blockchain — the NFT is just a pointer to a piece of art on a website. You’re buying the key to a crypto-token. You’re not buying anything else. An NFT doesn’t convey copyright, usage rights, moral rights, or any other rights, unless there’s an explicit licence saying so

Without a specific contract saying otherwise, an NFT *does not* grant ownership of the artwork it points to in any meaningful sense. All implications otherwise are lies to get your money.⁴⁴

⁴¹ “Copies” are defined as material objects in which a reproduction of a work is fixed. *See id.* § 101. Because most copies (other than the original) have only a small monetary value, “ownership” of such copies is typically transferred merely by transfer of possession. Under the first-sale doctrine, also known as the doctrine of exhaustion, the owner of a lawfully made copy has the right to redistribute and to publicly display *that copy* only. *See id.* §§ 109(a), 109(c).

⁴² *See id.* § 201(d)(1) (“The ownership of a copyright may be transferred in whole or in part by any means of conveyance or by operation of law, and may be bequeathed by will or pass as personal property by the applicable laws of intestate succession.”).

⁴³ *See id.* § 201(d)(2) (“Any of the exclusive rights comprised in a copyright, including any subdivision of any of the [exclusive] rights specified by section 106, may be transferred . . . and owned separately.”). To be valid, however, a transfer of copyright ownership must be made in a signed writing. *See* 17 U.S.C. § 204(a).

⁴⁴ *See* David Gerard, *NFTs: Crypto Grifters Try to Scam Artists, Again*, ATTACK OF THE 50 FOOT BLOCKCHAIN (Mar. 11, 2021), (emphasis in

In other words, an NFT is like a digital “Certificate of Authenticity” that can be transferred and owned separately from the thing that it supposedly authenticates. That means in the digital art market, one must now potentially keep track of ownership of *four* different things: ownership of the tangible original artwork (if any exists); ownership of any digital reproductions or “copies” of the work; ownership of the copyright; and ownership of any NFTs (tokens) associated with the artwork.⁴⁵

One supposed benefit of NFTs is that ownership of the token itself is easily verified: every transaction in which the NFT changes hands is recorded permanently on the blockchain, so one can easily determine current ownership simply by ascertaining the owner of the digital “wallet” who was the most recent purchaser of the token. Even this benefit, however, turns out to be illusory. Although blockchain technology frequently is touted as being “unhackable,” that is not entirely the case.⁴⁶ In the most prominent example, on May 17, 2022, actor Seth Green announced on Twitter that he had four NFTs “stolen” by a scam artist who used a “phishing” attack to gain control of his cryptographic wallet.⁴⁷ The scammer immediately “flipped” one of the NFTs (Bored Ape #8398) to a pseudonymous buyer, Mr. Cheese, known by his Twitter handle @DarkWing84, for \$200,000.⁴⁸ Although

original), <https://davidgerard.co.uk/blockchain/2021/03/11/nfts-crypto-grifters-try-to-scam-artists-again/> (last visited Sept. 1, 2023).

⁴⁵ For a thorough explanation of different permutations of ownership, see Michael D. Murray, *NFT Ownership and Copyrights*, 56 IND. L. REV. 367 (2023).

⁴⁶ See, e.g., Werner Vermaak, *Crypto Basics: Why Nobody Can Hack a Blockchain*, COIN MKT. CAP, <https://coinmarketcap.com/alexandria/article/why-nobody-can-hack-a-blockchain> (last visited Sept. 1, 2023); Mike Orcutt, *Once Hailed as Unhackable, Blockchains Are Now Getting Hacked*, MIT TECH. REV. (Feb. 19, 2019), <https://www.technologyreview.com/2019/02/19/239592/once-hailed-as-unhackable-blockchains-are-now-getting-hacked/>.

⁴⁷ “Well frens it happened to me. Got phished and had 4NFT stolen [P]lease don’t buy or trade these while I work to resolve[.] @DarkWing84 looks like you bought my stolen ape - hit me up so we can fix it.” Seth Green (@SethGreen), X (May 17, 2022, 8:40 AM), <https://twitter.com/SethGreen/status/1526588358859759617> (last visited Sept. 1, 2023); see also Daniel Van Boom, *Seth Green Loses \$200K Bored Ape Yacht Club NFT in Phishing Scam*, CNET (May 18, 2022), <https://www.cnet.com/personal-finance/seth-green-loses-200k-bored-ape-yacht-club-nft-in-phishing-scam/>.

⁴⁸ See Jessica Rizzo, *A Bored Ape Lawsuit Won’t Set the NFT Precedent Seth Green Wants*, WIRED (May 26, 2022), <https://www.wired.com/story/seth-green-bored-ape-nft-stolen/> (last visited

Green initially threatened litigation, he ended up repurchasing his Bored Ape (which he had named Fred the Simian) from @DarkWing84 for \$297,000, almost \$100,000 more than the buyer had paid to the scammer for it.⁴⁹

Similarly, in February 2022, a British citizen named Lavinia Osbourne alleged that two NFTs from the “Boss Beauties” collection were stolen from her online wallet by an unknown person or persons, and were transferred to other unknown persons. She successfully obtained an *ex parte* order from the High Court of England and Wales requiring Ozone Networks, Inc., the U.S.-based owner of the NFT marketplace OpenSea, to freeze the NFTs (to prevent their further transfer) and to disclose information concerning the identity of the alleged wrongdoers.⁵⁰ OpenSea disclosed the users’ email addresses to Osbourne, but she received no reply to emails sent to those addresses.⁵¹ The High Court subsequently permitted the plaintiff to effect service of the amended complaint and interim injunction on the defendants by depositing NFTs comprising hyperlinks to the legal documents into their cryptographic wallets.⁵² This was “the first occasion on which service by NFT had been approved by a court in England and Wales as the sole method of service of documents.”⁵³

Disputes have also arisen about the meaning of “ownership” of an NFT. The very first artwork for which Kevin McCoy “minted” an NFT (Token ID: 0) was a five-second animated GIF of colored octagonal patterns titled *Quantum*, created by Kevin McCoy and his wife Jennifer.⁵⁴ As McCoy publicly stated in 2021, *Quantum* was

Sept. 1, 2023); Sarah Emerson, *Seth Green’s Stolen Bored Ape is Back Home*, BUZZFEED NEWS (June 9, 2022), <https://www.buzzfeednews.com/article/sarahemerson/seth-green-bored-ape-nft-returned>.

⁴⁹ See Emerson, *supra* note 48, ¶ 3.

⁵⁰ See *Osbourne v. Persons Unknown*, [2022] EWHC 1021 (Comm).

⁵¹ See *Osbourne v. Persons Unknown Category A*, [2023] EWHC 39 (KB), ¶7. Following the disclosure, OpenSea was dismissed as a defendant. See *id.*

⁵² See *id.* ¶¶ 12, 23, 47.

⁵³ *Id.* at 48. The interim injunction was continued and extended, and service by means of NFT was confirmed, in a third written opinion. See *Osbourne v. Persons Unknown Category A*, [2023] EWHC 340 (KB).

⁵⁴ *Quantum* may be viewed at <http://static.mccoyspace.com/gifs/quantum.gif> (last visited Sept. 1, 2023). Contrary to many reports, however, *Quantum* was *not* the GIF that was sold to Anil Dash for \$4 at the demonstration in May 2014. That GIF (created by Kevin McCoy from a video shot by Jennifer McCoy) was a short video of cars in a parking lot. See Jennifer & Kevin McCoy, *Cars* (2014),

“[o]riginally minted on May 3, 2014 on [the] Namecoin blockchain,” and was later “preserved on a token minted on May 28, 2021 by the artist.”⁵⁵ Why was the *Quantum* NFT “re-minted” on the Ethereum blockchain in 2021? Entries in the Namecoin blockchain had to be renewed periodically to keep them current, and McCoy had never renewed the original entry in the Namecoin blockchain.⁵⁶ According to the “Condition Report” commissioned by Sotheby’s in 2021, “this specific Namecoin entry was removed from the system after not being renewed, and was effectively burned from the chain.”⁵⁷ Since then, the Ethereum blockchain had become the most popular location for new NFTs, so McCoy apparently hoped to capitalize on the speculative bubble in NFTs by re-minting and selling the “first-ever” NFT at auction.⁵⁸

On June 10, 2021, the *Quantum* NFT on the Ethereum blockchain was sold at auction by Sotheby’s for \$1.47 million to Alex Amsel, known by his Twitter handle @sillytuna.⁵⁹ Two months earlier, however, a Canadian corporation named Free Holdings, Inc. (owned by an anonymous user with the Twitter handle @EarlyNFT) allegedly had “claimed the Quantum blockchain record on Namecoin.”⁶⁰ Eight months after the auction, Free Holdings sued McCoy and Sotheby’s for slander of title, deceptive trade practices, and commercial

<https://www.mccoyspace.com/project/126/> (last visited Sept. 1, 2023). This is documented in a video recording of the May 2014 demonstration. *See* Seven on Seven 2014: Kevin McCoy & Anil Dash, at 20:02, <https://vimeo.com/96131398> (last visited Sept. 1, 2023).

⁵⁵ *See* Description of *Quantum*, SOTHEBY’S, <https://www.sothebys.com/en/buy/auction/2021/natively-digital-a-curved-nft-sale-2/quantum> (last visited Sept. 1, 2023).

⁵⁶ *See Sotheby’s Sued Over Quantum NFT Auction*, LEDGER INSIGHTS (Feb. 4, 2022), <https://www.ledgerinsights.com/sothebys-sued-over-quantum-nft-auction/>.

⁵⁷ *See* Kevin McCoy’s *Quantum*: Condition Report, SOTHEBY’S, <https://www.sothebys.com/en/buy/auction/2021/natively-digital-a-curved-nft-sale-2/quantum> (last visited Dec. 1, 2022). As explained below, the Condition Report was later withdrawn by its author, the Nameless Corporation. *See infra* note 61.

⁵⁸ *See* Felix Salmon, *Exclusive: The First-Ever NFT from 2014 is on Sale for \$7 Million Plus*, AXIOS (Mar. 25, 2021), <https://www.axios.com/2021/03/25/nft-sale-art-blockchain-millions>.

⁵⁹ *See* Felix Salmon, *First-Ever NFT Sold for \$1.47 Million*, AXIOS (June 10, 2021), <https://www.axios.com/2021/06/10/first-nft-sold>; *see also* Complaint ¶¶ 54–55, *Free Holdings, Inc. v. McCoy*, Case No. 1:22-cv-00881-LGS (S.D.N.Y. filed Feb. 1, 2022) [hereinafter *Free Holdings Complaint*].

⁶⁰ *Free Holdings Complaint*, ¶ 24.

disparagement, seeking damages and an injunction prohibiting defendants from “advertising, marketing, or otherwise promoting the sale of the New Quantum NFT as the Original Quantum NFT,” and “requiring [them] to engage in corrective advertising.”⁶¹ In an amended complaint, it added a claim for false advertising under section 43(a) of the Lanham Act.⁶²

According to one commentator, Free Holdings’ claim can be analogized to re-registering a domain name that was not renewed by its previous owner:

If you look at the blockchain entries, when EarlyNFT registered the name in 2021, it [was registered] as a ‘new’ name. He subsequently updated the entry contents (the metadata) to copy the exact text as the original entry, which points to the McCoy art. Compare this to acquiring a domain name. If a domain name lapses, someone else can claim it. But they can’t claim the contents of the old website because the domain [name] and the website are not the same things.

EarlyNFT currently owns the NameCoin ‘name’. It’s not-very-user-friendly:

“d41b8540cbacdf1467cdc5d17316dcb672c8b43235fa16cde98e79825b68709a”. But the question is whether he has rights to the original metadata associated [with that name] when the ‘name’ was first registered.⁶³

On March 17, 2023, the district court granted the defendant’s motion to dismiss the action.⁶⁴ The court reasoned that the original NFT

⁶¹ *Id.* ¶ 101. The complaint also originally named the buyer Amsel and the Nameless Corporation, which had prepared the “Condition Report” for the Sotheby’s auction. Free Holdings later dismissed its claims against both of those defendants after Nameless retracted its condition report. *See Free Holdings, Inc. v. McCoy*, 2023 WL 2561576, at *7 (S.D.N.Y. Mar. 17, 2023), *appeal pending*, No. 23-644 (2d Cir. filed Apr. 19, 2023).

⁶² *See Free Holdings, Inc. v. McCoy*, 2023 WL 2561576, at *7.

⁶³ *See* LEDGER INSIGHTS, *supra* note 56, ¶¶ 10–13. According to a Namecoin entry made by Free Holdings, the “name” referred to in the quote is the “hash value” of the digital file of *Quantum*, generated using the SHA256 hash algorithm. *See* NAMEBROW.SE, <https://namebrow.se/name/d41b8540cbacdf1467cdc5d17316dcb672c8b43235fa16cde98e79825b68709a/> (last visited Sept. 1, 2023). For a definition of “hash value,” *see infra* note 79.

⁶⁴ *See Free Holdings, Inc. v. McCoy*, 2023 WL 2561576, at *1, 18.

on the Namecoin blockchain and the new NFT on the Ethereum blockchain were two “different NFTs” (two separate objects of property); and because Free Holdings only claimed an ownership interest in the Namecoin NFT, it lacked standing to challenge the Sotheby’s sale because it did not adequately allege an ownership interest in the artwork *Quantum* itself (the copyright) or in the Ethereum NFT that was sold.⁶⁵ The court also held that Free Holdings did not adequately allege an injury in fact, because a) it did not have an interest in the Ethereum NFT that was sold; b) it never tried to market the Namecoin NFT, so any allegation that it had lost value was purely speculative; and c) any money it spent to “correct the record” was self-inflicted, “based on . . . fears of hypothetical future harm.”⁶⁶

In the alternative, the district court held that Free Holdings’ complaint failed to state a claim. It could not show unjust enrichment, because the sale proceeds went to McCoy, the artist that had created *Quantum*.⁶⁷ It could not show slander of title or commercial disparagement, because Free Holdings admitted that the status of a Namecoin name that was not renewed was a matter of dispute within the NFT community, and because McCoy and Sotheby’s had publicly explained that the *Quantum* NFT it sold on the Ethereum blockchain was different from the first NFT on the Namecoin blockchain (even though both pointed to the same artwork).⁶⁸ Moreover, Free Holdings had not adequately alleged “actual malice” (knowledge of or reckless disregard of falsity) or damages.⁶⁹ It could not show deceptive trade practices because there was no harm to the public interest, such as public health or safety.⁷⁰ And it could not maintain an action for false advertising because none of the statements made by McCoy or Sotheby’s were literally false.⁷¹ Free Holdings has filed an appeal with the U.S. Court of Appeals for the Second Circuit.⁷²

The *Quantum* NFT lawsuit is a cautionary tale. NFTs were designed to avoid ownership disputes by keeping a permanent record of all transactions concerning the token on a blockchain, avoiding the need for art experts to opine on authenticity and provenance. But the

⁶⁵ See *id.* at *10–11.

⁶⁶ *Id.* at *11.

⁶⁷ See *id.* at *12–13.

⁶⁸ See *id.* at *13–14.

⁶⁹ *Id.* at *15.

⁷⁰ See *Free Holdings, Inc. v. McCoy*, 2023 WL 2561576, at *16.

⁷¹ See *id.* at *17.

⁷² See *Free Holdings, Inc. v. McCoy*, No. 23-644 (2d Cir. filed Apr. 19, 2023).

design of the Namecoin blockchain wasn't conducive to that purpose; and it wasn't until 2017, when the popular ERC-721 standard was created on the Ethereum blockchain, that the NFT market really took off. It is undisputed by the parties that *Quantum* was the first artwork to have an NFT "minted" for it.⁷³ But whether that NFT still exists, who "owns" or controls that NFT, who has "title" to the "work," and exactly what any of those terms actually means, still had to be mediated by artistic and technical experts and resolved in a court of law.

V. DOES COPYRIGHT GRANT THE EXCLUSIVE RIGHT TO "MINT" AN NFT?

As noted above, there is nothing in the technical specifications that prevents someone from "minting" and selling an NFT to a work they did not create and do not own. There are numerous news reports of sellers (usually scammers) who have attempted to do just that.⁷⁴ Such conduct naturally raises the question: is it a copyright violation to "mint" an NFT of an artwork without the authorization of the copyright owner?

A. *United States*

Copyright gives the owner the right to reproduce the copyrighted work and to distribute copies of the copyrighted work.⁷⁵ If

⁷³ Again, however, it should be noted that the first transfer of ownership of an NFT from one person to another, as documented in the first public demonstration of the idea that would later be named NFTs, involved a different artwork: a GIF derived from a video of cars in a parking lot. *See supra* note 54.

⁷⁴ *See, e.g.,* Kevin Collier, *NFT Art Sales Are Booming. Just Without Some Artists' Permission*, NBC NEWS (Jan. 10, 2022), <https://www.nbcnews.com/tech/security/nft-art-sales-are-booming-just-artists-permission-rcna10798>; Edward Ongweso, Jr., *Site Sells Famous Songs as NFTs Without Permission, Sparks Global Outrage*, MOTHERBOARD: TECH BY VICE (Feb. 2, 2022), <https://www.vice.com/en/article/pskqyy/site-sells-famous-songs-as-nfts-without-permission-sparks-global-outrage>.

⁷⁵ *See* 17 U.S.C. § 106(1) (exclusive right "to reproduce the copyrighted work in copies or phonorecords"); *see also* 17 U.S.C. § 106(3) (exclusive right "to distribute copies or phonorecords of the copyrighted work to the public, by sale or other transfer of ownership, or by rental, lease, or lending"). "Copies" are defined as "material objects . . . in which a work is fixed by any method . . . , and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device," while "phonorecords" are defined as "material objects in which [only] sounds . . . are fixed." 17 U.S.C. § 101.

the work itself is stored in digital form with the NFT on the blockchain, this constitutes a reproduction of the work,⁷⁶ and the sale of the NFT would be a “distribution” of the work.⁷⁷ As noted above, however, the typical NFT does *not* contain a copy of the copyrighted work. Instead, the typical NFT contains only a link (or pointer) to the digital work, along with a “hash” value that is generated from the original work.⁷⁸ Are either of those things a “reproduction” of a copyrighted work?

A “hash” value is an alphanumeric sequence that is generated by applying an algorithm to a digital copy of a work.⁷⁹ The hash value itself does not meet the definition of a “copy.” In the United States, a “copy” is defined as a “material object[] . . . 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.”⁸⁰ A hash value is *not* reversible: even if one knows the algorithm used to derive the hash value, one *cannot* “perceive, reproduce, or otherwise communicate”

⁷⁶ A digital file stored on an electronic storage medium is a “copy” or a “phonorecord.” See *Matthew Bender & Co. v. West Publ’g Co.*, 158 F.3d 693, 703 (2d Cir. 1998) (“[T]he definition of ‘copies’ . . . include[s] material objects that embody works capable of being perceived with the aid of a machine . . . [such as] reproductions of copyrighted works contained on media such as floppy disks, hard drives, and magnetic tapes.”); see also *London-Sire Recs., Inc. v. Doe I*, 542 F. Supp. 2d 153, 171 (D. Mass. 2008) (“The electronic file (or, perhaps more accurately, the appropriate segment of the hard disk) is therefore a [“copy” or] “phonorecord” within the meaning of the statute.”); cf. *New York Times Co. v. Tasini*, 533 U.S. 483, 498 (2001) (“It is clear” that computer databases and CD-ROMs “reproduce . . . copies” of news articles.).

⁷⁷ Transmission of a digital file from one person to another constitutes a distribution. See *London-Sire Recs.*, 542 F. Supp. 2d at 172–74; cf. *Tasini*, 533 U.S. at 498 (2001) (“It is clear” that by selling CD-ROMs and access to computer databases containing copies of news articles, defendants “distribute copies” of the Articles “to the public by sale.”).

⁷⁸ See Guadamuz, *supra* note 32, at 1371.

⁷⁹ See *United States v. Reddick*, 900 F.3d 636, 637 (5th Cir. 2018) (“[A] hash value is a string of characters obtained by processing the contents of a given computer file . . . us[ing] a complex mathematical algorithm to generate a relatively compact numerical identifier (the hash value) unique to that data.”) (internal quotes omitted); *United States v. Stevenson*, 727 F.3d 826, 828 (8th Cir. 2013) (“A hash value is an algorithmic calculation that yields an alphanumeric value for a file.”); Fed. R. Evid. 902(14) advisory committee’s note (“A hash value is a number that is often represented as a sequence of characters and is produced by an algorithm based upon the digital contents of a drive, medium, or file.”).

⁸⁰ 17 U.S.C. § 101 (definition of “copies”) (emphasis added).

the original work from the hash value.⁸¹ Thus, a hash value is different from encoding⁸² or encryption,⁸³ both of which are reversible and are therefore reproductions (or derivative works) of the copyrighted work.

Copyright also grants the copyright owner the exclusive right to prepare derivative works. A derivative work is defined as: “a work based upon one or more preexisting works, such as a translation. . . art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted.”⁸⁴ One could plausibly argue that a “hash” value is “based upon” a preexisting work, and that it is an “abridgement [or] condensation” of a work. Ordinarily, however, we think of an “abridgement [or] condensation” of a work as containing some of the original expression of the work, which a “hash value” does not. This is consistent with case law in the United States,

⁸¹ See *Surety Techs., Inc. v. Entrust Techs., Inc.*, 74 F. Supp. 2d 632, 634 (E.D. Va. 1999) (“A ‘one-way hash function’ has a quite remarkable property: when applied to a digital document, it yields a hash value . . . that is unique to the document, and from which it is impossible to reproduce the original document. It is, in this latter respect, ‘one-way;’ the hash function applied to the digital document yields the hash value, but one cannot recreate the document from the hash value.”); cf. *Unwired Planet, LLC v. Apple, Inc.*, 829 F.3d 1353, 1361 (Fed. Cir. 2016) (“[Plaintiff’s] expert admitted that it is impossible to determine from the hashed password what the password is ‘[A] hash is designed so that the original input into the hash function cannot be derived from the hash value, and thus [it] can be used for validation only’”).

⁸² “Encode” means “to convert data into code according to a specified coding scheme,” while “decode” means “to convert data by reversing the effect of some previous encoding.” *Network Appliance, Inc. v. Bluearc Corp.*, 2004 WL 5651036, at *8 (N.D. Cal. Nov. 30, 2004). By definition, all digital data is “encoded,” because it has been converted from words or images into 1s and 0s, and it must be “decoded” from 1s and 0s back into words or images using a known algorithm. ASCII, JPEG, and MP3 formats are all examples of digital encoding.

⁸³ “Encryption” means “an operation performed on digital data in conjunction with an associated algorithm and digital key to render the digital data unintelligible or unusable,” while “decryption” means “a method that uses a digital key in conjunction with an associated algorithm to decipher (render intelligible or usable) digital data.” *Personalized Media Comms., LLC v. Apple, Inc.*, 2016 WL 6247054, at *9–*10 (E.D. Tex. Oct. 25, 2016). See also *Junger v. Daley*, 209 F.3d 481, 482 (6th Cir. 2000) (defining “encryption”); *Bernstein v. U.S. Dept. State*, 974 F. Supp. 1288, 1292 (N.D. Cal. 1997) (defining “encryption” and “decryption”), *aff’d*, 176 F.3d 1132, 1137 (9th Cir. 1999) (adopting district court’s definitions), *reh’g granted and opinion withdrawn*, 192 F.3d 1308 (9th Cir. 1999). According to the docket, the *Bernstein* appeal was later dismissed without prejudice and the case was remanded to the district court.

⁸⁴ 17 U.S.C. § 101 (definition of “derivative work”).

which indicates that an infringing work must be “substantially similar to protected expression” in the original work.⁸⁵ A “hash value” does not consist of or comprise any original expression; it is meaningless gibberish. Nor can any of the original expression from the original work be “perceived, reproduced, or otherwise communicated” from the hash value.⁸⁶ Thus, if this case law is taken seriously, a “hash value” cannot be considered a “reproduction” or a “derivative work” based upon the copyrighted work.

Likewise, a “link” is not itself a reproduction of a copyrighted work. A link is a pointer to a location where the digital data representing the copyrighted work is stored. The digital data is a “copy” of the work, but the link itself is not. Depending on the type of link, however, a link may enable, or even cause, a copy to be reproduced. A hyperlink, for example, requires the active participation of a user: when the user clicks on a hyperlink, the user’s browser software will retrieve the digital data from the linked location and download it into the RAM of the user’s computer. In such a case, the user is making a “copy,” although courts disagree whether it is an infringing copy.⁸⁷ If it is an infringing copy, the provider of the link may be held liable for contributory infringement, if it has knowledge of the infringement.⁸⁸ By contrast, an “embedded” link will cause the user’s browser software to download the digital data into the RAM of the user’s computer

⁸⁵ See, e.g., *Rentmeester v. Nike, Inc.*, 883 F.3d 1111, 1117 (9th Cir. 2018) (“To infringe, the defendant must also copy enough of the plaintiff’s expression . . . to render the two works ‘substantially similar.’”); *Blehm v. Jacobs*, 702 F.3d 1193, 1202 (10th Cir. 2012) (a court “must determine whether the protected elements [in the copyrighted work] are substantially similar to the accused work”); *Tufenkian Imp./Exp. Ventures, Inc. v. Einstein Moomjy, Inc.*, 338 F.3d 127, 131 (2d Cir. 2003) (plaintiff “must establish ‘substantial similarity’ . . . [including] that it was protected expression in the earlier work that was copied”).

⁸⁶ See *supra* notes 80–81.

⁸⁷ Compare *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1169 (9th Cir. 2007) (assuming that automatic “cache” copies of linked images could constitute direct infringement, making such copies facilitates browsing the internet and is a fair use), with *Intell. Rsrv., Inc. v. Utah Lighthouse Ministry, Inc.*, 75 F. Supp. 2d 1290, 1294 (D. Utah 1999) (browsing an infringing website makes a temporary RAM copy that is infringing).

⁸⁸ See *Perfect 10*, 508 F.3d at 1172; *Intell. Rsrv.*, 75 F. Supp. 2d at 1293–95. Note, however, that “referring or linking users to an online location containing infringing material or infringing activity” is subject to the statutory safe harbor for online service providers if the service provider complies with the statutory conditions, including the notice-and-takedown procedure. 17 U.S.C. § 512(d).

automatically, without any additional action by the user.⁸⁹ In either case, however, if the link points to an authorized copy of the work, it is difficult to conclude that the RAM copy required to view the authorized copy is somehow unauthorized.⁹⁰

In the United States, the copyright owner also has the exclusive right to publicly display the copyrighted work,⁹¹ and there is an active debate whether providing an “embedded” link to a copy of a work is a public display of that work. In *Perfect 10 v. Amazon.com, Inc.*, the U.S. Court of Appeals for the Ninth Circuit held that in order to publicly display a work, one must have a copy of the work in one’s possession.⁹² (This is the so-called “server” test, meaning that the only person who is directly liable for public display is the person who controls the server on which the data representing the copyrighted work resides.⁹³) Under the “server” test, providing a link to a copy in someone else’s possession is not a direct infringement.⁹⁴ Many district courts in the Second Circuit, however, have distinguished the *Perfect 10* case on the ground that it involved search engines, and that users had to click on a link to access the full-size images.⁹⁵ Those courts have held that because providing an “embedded” link automatically causes the user’s browser to display the work, the provider of the link directly infringes the public display right, even if the “copy” that is displayed resides on someone else’s server.⁹⁶ Nonetheless, the Ninth Circuit recently reaffirmed the “server” test and held that it applied to “embedded” links as well as ordinary hyperlinks.⁹⁷

It is not necessary to resolve this conflict to apply the public display right to NFTs, because it is clear that the “link” that is

⁸⁹ See, e.g., *Hunley v. Instagram, LLC*, 73 F.4th 1060, 1062–64 (9th Cir. 2023); *Goldman v. Breitbart News Network*, 302 F. Supp. 3d 585, 587 (S.D.N.Y. 2018).

⁹⁰ See *Field v. Google, Inc.*, 412 F. Supp. 2d 1106 (D. Nev. 2006) (granting summary judgment to Google for unauthorized linking on four different grounds: automated, non-volitional conduct; implied license; estoppel; and fair use). Arguably, however, each of those grounds could come out differently if the link accompanied an unauthorized NFT.

⁹¹ See 17 U.S.C. § 106(5).

⁹² See *Perfect 10*, 508 F.3d at 1160–61.

⁹³ See *id.* at 1159 (describing the district court’s ruling as the “server” test).

⁹⁴ See *id.* at 1160–61.

⁹⁵ See, e.g., *Goldman*, 302 F. Supp. 3d at 595–96; *Nicklen v. Sinclair Broad. Grp., Inc.*, 551 F. Supp. 3d 188, 194–95 (S.D.N.Y. 2021).

⁹⁶ See, e.g., *Goldman*, 302 F. Supp. 3d at 593–94; *Nicklen*, 551 F. Supp. 3d at 193–94.

⁹⁷ See *Hunley v. Instagram, LLC*, 73 F.4th 1060 (9th Cir. 2023).

incorporated into an NFT is *not* the kind of link that automatically causes the underlying work to be displayed. Instead, a user must actively find and use the link in order to display the work.⁹⁸ Thus, the person who mints and sells a typical NFT is *not* directly infringing any of the exclusive rights provided by U.S. copyright law.

B. *United Kingdom and European Union*

The European Union requires its member states to grant authors “the exclusive right to authorise or prohibit direct or indirect, temporary or permanent reproduction by any means and in any form, in whole or in part.”⁹⁹ The EU also requires its member states to grant authors “the exclusive right to authorise or prohibit any form of distribution to the public by sale or otherwise.”¹⁰⁰ Although it is no longer a member state, the United Kingdom provides to authors “the exclusive right . . . to copy the work,”¹⁰¹ “to issue copies of the work to the public,”¹⁰² and “to rent or lend the work to the public.”¹⁰³ “Copying in relation to a literary, dramatic, musical, or artistic work means reproducing the work *in any material form*,” including “storing the work in any medium by electronic means.”¹⁰⁴ Again, however, except in the rare case where the work itself is encoded and stored on the blockchain, an NFT “is *not* a reproduction of the work in any sense of the word: there is no literal embodiment of anything resembling the original in the NFT.”¹⁰⁵

The Berne Convention requires that member states provide to authors “the exclusive right of authorizing adaptations, arrangements, and other alterations of their works,”¹⁰⁶ including “the translation of

⁹⁸ See Guadamuz, *supra* note 32, at 1381 (“In order to extract the link, one has to have some knowledge of the technology, and sometimes one may require knowing both the unique tokenID and the smart contract address.”).

⁹⁹ Parliament and Council Directive 2001/29, 2001 O.J. (L 167), art. 216 (EC), on the harmonisation of certain aspects of copyright and related rights in the information society, [hereinafter Directive 2001/29/EC].

¹⁰⁰ *Id.* at art. 4.

¹⁰¹ CDPA 1988, § 16(1)(a).

¹⁰² *Id.* § 16(1)(b).

¹⁰³ *Id.* § 16(1)(b)(a).

¹⁰⁴ *Id.* § 17(2) (emphasis added). “Copying” also “includes the making of copies which are transient or are incidental to some other use of the work.” *Id.* § 17(6). The requirement of a “material form” appears to correspond to the “fixation” requirement in the United States. Such a requirement does not appear in the law of most EU countries.

¹⁰⁵ Guadamuz, *supra* note 32, at 1379 (emphasis added).

¹⁰⁶ Berne Convention for the Protection of Literary and Artistic Works, 1971 Paris Text, as amended, art. 12 [hereinafter Berne Convention]. The

their works.”¹⁰⁷ In the UK, “[t]he making of an adaptation of the work is an act restricted by the copyright.”¹⁰⁸ The British statute, however, defines “adaptation” more narrowly than does the corresponding “derivative work” concept in U.S. law.¹⁰⁹ As with derivative works in the United States, moreover, “[i]n most cases where there is some form of transformation of a work into another format or medium, there is often a recognizable element of the original work,” an element that is lacking in a typical NFT.¹¹⁰ Finally, the British adaptation right applies only to “a literary, dramatic or musical work,”¹¹¹ so it does not apply to an artistic work.

In the United Kingdom, there is no “public display” right as such. Instead, the copyright owner has the exclusive right “to communicate the work to the public,”¹¹² including “making [the work] available to the public . . . in such a way that members of the public may access it from a place and at a time individually chosen by them.”¹¹³ The case law of the Court of Justice of the European Union has been somewhat inconsistent on whether providing a link constitutes a “communication to the public.” Where the copyright owner has made the work available to the public, providing a link to an authorized copy is *not* a “communication to the public,” unless it makes the work available to a “new public,” i.e., a public that was not already taken into account by the copyright holder when it authorized the initial communication to the public of its work.¹¹⁴ Providing a link to an unauthorized copy *is* a “communication to the public,” unless the person providing the link did not know, and could not reasonably have known, that the copy to which it linked is infringing.¹¹⁵ If the person

Directive 2001/29/EC does not attempt to harmonize the national laws of the EU member states concerning the adaptation right.

¹⁰⁷ Berne Convention, art. 8.

¹⁰⁸ CDPA 1988, § 21(1); *see also* CDPA 1988, § 16(1)(e).

¹⁰⁹ *See id.* § 21(3); Patrick R. Goold, *Why the U.K. Adaptation Right is Superior to the U.S. Derivative Work Right*, 92 NEB. L. REV. 843, 871–74, 878–81 (2013).

¹¹⁰ Guadamuz, *supra* note 32, at 1379.

¹¹¹ CDPA 1988, § 21(1).

¹¹² *Id.* § 16(1)(d).

¹¹³ *Id.* § 20(2)(b).

¹¹⁴ *See Svensson v. Retriever Sverige AB*, Case C-466/12 (ECJ 2014). Making a work available to a “new public” could occur if, for example, the link bypasses technical measures used by the copyright owner to prevent “framing” or to otherwise limit access to the work. *See VG Bild-Kunst v. Stiftung Preußischer Kulturbesitz*, Case C-392/19 (ECJ 2021).

¹¹⁵ *See GS Media DV v. Sanoma Media Netherlands BV*, Case C-160/15 (ECJ 2016).

providing the link has a profit motive in doing so, there is a rebuttable presumption that the person has the requisite knowledge.¹¹⁶

Although the UK is no longer a member of the European Union, its courts have ruled that the preexisting case law of the Court of Justice still has precedential effect.¹¹⁷ Since NFTs are sold for profit, there is therefore a rebuttable presumption that minting and selling an NFT that contains a link to an unauthorized copy of a work violates the public communication right. (One scholar questions that result, however, pointing out that the link embedded in an NFT is not an ordinary hyperlink; instead, it is code that a user must deliberately find and extract in order to use, so it is accessible only to “a small number of technical enthusiasts” rather than to “the public.”¹¹⁸) If the NFT contains a link to an authorized copy, however, or if it contains a link to a copy that no longer exists (a phenomenon known as “link rot”), it is doubtful that the link violates the public communication right.

Finally, one should note that the European Union’s concept of “the exclusive right to authorise or prohibit *any form of distribution* to the public *by sale or otherwise*” is limited by the clause “in respect of the original of their works or of copies thereof.”¹¹⁹ Similarly, the United Kingdom’s implementation of that right grants the rights “to issue copies of the work to the public”¹²⁰ and “to rent or lend the work to the public.”¹²¹ The Court of Justice has indicated that the distribution right refers only to physical or electronic copies of the work,¹²² and that it does *not* include allowing the public to use a copy of the work or to publicly display the work.¹²³ The distribution right *does* include

¹¹⁶ *See id.*

¹¹⁷ *See, e.g., TuneIn, Inc v Warner Music UK, Ltd.*, [2021] EWCA Civ 441, ¶¶ 89, 184, 197.

¹¹⁸ Guadamuz, *supra* note 32, at 1381.

¹¹⁹ Directive 2001/29/EC, art. 4(1) (emphasis added).

¹²⁰ CDPA 1988, § 16(1)(b).

¹²¹ CDPA 1988, § 16(1)(ba). Note that although this section refers to renting or lending the *work*, the explication of this right refers to “rental or lending of *copies* of the work” (emphasis added). CDPA 1988, § 18A(1).

¹²² *See Peek & Cloppenburg KC v. Cassina SpA*, Case No. C-456/06 (ECJ 2008) (“The concept of distribution to the public . . . of the original of a work or a copy thereof . . . applies only where there is a transfer of the ownership of that object.”); *see also UsedSoft GmbH v. Oracle Int’l Corp.*, Case No. C-128/11 (ECJ 2012) (electronic copies of computer programs under both Directive 2001/29/EC, art. 4(1) and Directive 2009/24/EC of 23 April 2009 on the legal protection of computer programs, O.J. 2009, L. 111, art. 4(1)(c)).

¹²³ *See Peek & Cloppenburg* (“As a result, neither granting to the public the right to use reproductions of a work protected by copyright nor exhibiting

advertising or offering a copy of the work for sale, even if no sale is actually consummated.¹²⁴ The Court of Justice has defined a “sale” as “an agreement by which a person, in return for payment, transfers to another person his rights of ownership in an item of tangible or intangible property belonging to him,”¹²⁵ and a British court has indicated that NFTs should be treated as “property” under English law.¹²⁶ However, although the commercial nature of an NFT transaction might tempt the court to read the distribution right broadly, a typical NFT simply cannot be considered a “copy” of the work, for the reasons discussed above.

C. *Ancillary Copyright Violations*

Even assuming that minting and selling an NFT is not itself an infringing act, there may still be ancillary violations of the copyright owner’s exclusive rights. One must have access to a digital copy of a work to mint an NFT or to generate a hash value.¹²⁷ If one makes an unauthorized copy for that purpose, that is a reproduction of the work that is likely infringing.¹²⁸ But the digital copy could be an authorized copy; and if it is an unauthorized copy, it could have been made and posted on the internet by someone other than the person generating the hash value. In both such cases, the person who mints the NFT or generates the hash value would not be liable for direct infringement,¹²⁹ nor would they be liable for contributory infringement unless they actively collaborated with the person who made the unauthorized copy.¹³⁰

to the public those reproductions without actually granting a right to use them can constitute such a form of distribution.”).

¹²⁴ See *Dimensione Direct Sales Srl v. Knoll Int’l SpA*, Case No. C-516/13 (ECJ 2015).

¹²⁵ *UsedSoft*, Case No. C-128/11 (ECJ 2012), ¶ 42.

¹²⁶ See *Osbourne v. Persons Unknown*, [2022] EWHC 1021 (Comm), ¶ 13 (“[A]s to whether non-fungible tokens constitute property for the purposes of the law of England and Wales, . . . I am satisfied . . . that there is at least a realistically arguable case that such tokens are to be treated as property as a matter of English law.”).

¹²⁷ See Guadamuz, *supra* note 32, at 1378.

¹²⁸ See 17 U.S.C. § 106(1).

¹²⁹ See *supra* notes 78–81.

¹³⁰ Contributory infringement requires that the defendant have knowledge of the direct infringement and that it induced, encouraged, or materially contributed to the direct infringement. See *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259, 264 (9th Cir. 1996); see also *Gershwin Pub. Corp. v. Columbia Artists Mgmt., Inc.*, 443 F.2d 1159, 1162 (2d Cir. 1971).

In addition, it is difficult to sell an NFT without displaying the underlying work of art in some way. After all, the purchaser will want to see the image associated with the NFT that they are buying. If the seller makes an unauthorized copy and publicly displays it in order to market the NFT, that action will be infringing,¹³¹ even if the act of minting and selling the NFT itself is not. If instead the seller uses a link to someone else's copy of the work (authorized or not) to display the work, then liability would depend on the resolution of the conflicting case law on the public display right in the United States,¹³² or the right of communication to the public in the United Kingdom and the European Union.¹³³

In the United States, one of the advantages of pleading an action for copyright infringement is that the federal courts have exclusive subject-matter jurisdiction over any claims "arising under" the copyright laws.¹³⁴ Moreover, if there is a federal claim, any state-law claims that are closely related may be heard in federal court as well.¹³⁵ Thus, assuming there are ancillary copyright violations involved in minting and selling the NFT, it gives the aggrieved party a basis for having the entire dispute between the parties heard in federal court rather than state court.

VI. OTHER COPYRIGHT IMPLICATIONS

A. *Disputes Regarding Copyright Ownership*

Copyright owners, of course, will take the position that minting and selling an NFT *is* one of the exclusive rights of the copyright owner. Indeed, if two or more parties claim an interest in the copyright, the legal question might be *which* of those parties has the legal right to mint and sell NFTs concerning a particular work. Two of the first lawsuits in the United States involving NFTs involved ownership disputes of this type.

In 1996, rapper Jay-Z (Shawn Carter), together with Damon Dash and Kareem Burke, incorporated Roc-a-Fella Records, Inc. (RAF, Inc.).¹³⁶ In 1996, RAF, Inc. released Jay-Z's first album,

¹³¹ See 17 U.S.C. § 106(5).

¹³² See *supra* Part V, § A.

¹³³ See *supra* Part V, § B.

¹³⁴ See 28 U.S.C. § 1338(a).

¹³⁵ See 28 U.S.C. § 1338(b) (unfair competition claims); see also 28 U.S.C. § 1367(a) (supplemental jurisdiction).

¹³⁶ See Complaint ¶¶ 19–20, *Roc-a-Fella Recs., Inc. v. Dash*, No. 1:21-cv-5411 (S.D.N.Y. filed June 18, 2021) (hereinafter *RAF v. Dash Complaint*).

Reasonable Doubt, which became a best-selling album.¹³⁷ In June 2021, Dash announced plans to sell his “ownership of the copyright to Jay-Z’s first album” as an NFT.¹³⁸ RAF, Inc. sued Dash for conversion, breach of fiduciary duty, and a declaratory judgment of copyright ownership; and the district court issued a preliminary injunction prohibiting Dash from “in any way disposing of any property interest in *Reasonable Doubt*, including its copyright.”¹³⁹ In June 2022, the parties announced a settlement, clarifying that “RAF, Inc. owns all rights to the album *Reasonable Doubt*, including its copyright,” but that Dash could sell his 1/3 ownership interest in RAF, Inc., if he chose.¹⁴⁰

In 1993, filmmaker Quentin Tarantino wrote the screenplay to the movie *Pulp Fiction*. To get the movie produced, Tarantino granted to Miramax “all rights (including all copyrights and trademarks) in and to the Film (and all elements thereof in all stages of development and production) now or hereafter known.”¹⁴¹ However, Tarantino reserved certain rights to himself, including “print publication (including without limitation screenplay publication . . . and novelization, in audio and electronic formats . . .)” and “interactive media.”¹⁴² The movie was released in 1994, and it won the Palme d’Or at the Cannes Film Festival.¹⁴³ In November 2021, Tarantino announced that he would sell seven NFTs based on parts of the *Pulp Fiction* screenplay.¹⁴⁴ Two weeks later, Miramax filed a lawsuit against Tarantino alleging copyright infringement, trademark infringement, unfair competition, and breach of contract.¹⁴⁵ Despite the legal action, Tarantino sold the

¹³⁷ See *Reasonable Doubt*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Reasonable_Doubt_\(album\)](https://en.wikipedia.org/wiki/Reasonable_Doubt_(album)) (last visited Sept. 1, 2023).

¹³⁸ *RAF v. Dash Complaint*, ¶¶ 23–26 & Exhibit B.

¹³⁹ See Joint Stipulation ¶ 2, *Roc-a-Fella Recs., Inc. v. Dash*, No. 1:21-cv-5411 (S.D.N.Y. filed June 24, 2022), at <https://law.justia.com/cases/federal/district-courts/new-york/nysdce/1:2021cv05411/562168/86/>.

¹⁴⁰ See Final Judgment ¶ 2, *Roc-a-Fella Recs., Inc. v. Dash*, No. 1:21-cv-5411 (S.D.N.Y. approved June 27, 2022), at <https://law.justia.com/cases/federal/district-courts/new-york/nysdce/1:2021cv05411/562168/86/>.

¹⁴¹ See Complaint ¶ 20, *Miramax, LLC v. Tarantino*, No. 2:21-cv-08979 (C.D. Cal. filed Nov 16, 2021).

¹⁴² *Id.* ¶ 21.

¹⁴³ See *id.* ¶¶ 16–17.

¹⁴⁴ See *id.* ¶ 35.

¹⁴⁵ See Complaint ¶¶ 51–72, *Miramax, LLC v. Tarantino*, No. 2:21-cv-08979 (C.D. Cal. Filed Nov 16, 2021).

first NFT in 2022 for \$1.1 million.¹⁴⁶ In September of that year, the parties announced that they had settled the case.¹⁴⁷ No further NFTs were issued, presumably because the market for NFTs had collapsed.¹⁴⁸

B. *Notice and Takedown Procedure*

Although the person who mints an NFT can sell it directly to the public, in practice, most NFTs are offered for sale on various “platforms” that act as marketplaces for NFT transactions, such as Foundation or OpenSea. These platforms typically host and publicly display images (or embedded links to images) of the works associated with those NFTs. To avoid liability to the copyright owners of any such images, such platforms will need to comply with the notice-and-takedown provisions of the Digital Millennium Copyright Act (DMCA) in the United States,¹⁴⁹ or its counterpart in the E-Commerce Directive of the European Union.¹⁵⁰ Consequently, as a practical matter, the copyright owner of the underlying work only has to *plausibly allege* that the sale of the NFT violates its exclusive rights, and the platform operator will respond by removing or disabling access to the listing. Moreover, a copyright owner cannot be held liable for a “material misrepresentation” unless “the takedown notice was submitted in subjective bad faith.”¹⁵¹

¹⁴⁶ See *Royale with Cheese*, TARANTINO NFTs, <https://tarantinonfts.com/nft/1> (last visited Sept. 1, 2023).

¹⁴⁷ See Gene Maddaus, *Quentin Tarantino Settles With Miramax Over ‘Pulp Fiction’ NFT Auction*, VARIETY (Sept. 8, 2022, 5:25 PM), <https://variety.com/2022/film/news/quentin-tarantino-miramax-pulp-fiction-nft-settlement-1235365550/>.

¹⁴⁸ See *id.* (“[T]he remaining six auctions were canceled due to ‘extreme market volatility.’”).

¹⁴⁹ See 17 U.S.C. § 512(c)(1)(C) (This section provides a “safe harbor” exemption from monetary liability if “upon notification of claimed infringement . . . , [the service provider] responds expeditiously to remove, or disable access to, the material that is claimed to be infringing or to be the subject of infringing activity.”).

¹⁵⁰ See Directive 2000/31/EC of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market, O.J. 2000, L. 178, art. 14. In the United Kingdom, the Directive was implemented by regulation, instead of by statute. See also The Electronic Commerce (EC Directive) Regulations 2002, art. 19(a)(ii) (“[U]pon obtaining such knowledge or awareness” of unlawful activity, the service provider must “act[] expeditiously to remove or to disable access to the information” to obtain the safe harbor).

¹⁵¹ *Yuga Labs, Inc. v. Ripps*, No. CV 22-4355-JFW, 2023 WL 3316748, at *15 (C.D. Cal. Apr. 21, 2023); see also 17 U.S.C. § 512(f). In *Yuga Labs*,

Digital artists complain that the notice-and-takedown procedure is insufficient, because it requires them to constantly search the internet for unauthorized copies or NFTs of their images in order to serve takedown notices.¹⁵² But the same thing is true for ordinary copyright violations (reproducing digital images is easily accomplished with the click of a mouse), and it would continue to be true even if it was clear that minting and selling NFTs without authorization was a copyright infringement. The notice-and-takedown system is imperfect, but it is currently the best tool that copyright owners have for policing and preventing unauthorized uses of digital works.

C. *Trademark as an Alternative*

As for other legal tools, trademark law may be more promising than copyright. In the United States, the Lanham Act prohibits any person from conduct that “is likely to cause confusion, or to cause mistake, or to deceive as to the affiliation, connection, or association of such person with another person, or as to the origin, sponsorship, or approval of his or her goods, services, or commercial activities by another person.”¹⁵³ The equivalent action in the United Kingdom is a common-law action for “passing off.”¹⁵⁴ If the unauthorized minting and sale of an NFT creates the false impression in the public mind that the NFT is authorized or endorsed by the artist (or anyone else), then these causes of action can provide relief (usually an injunction, and sometimes, damages).

In the United States, the Lanham Act was the basis of a complaint filed by Hermès International, “a luxury fashion company

plaintiff submitted twenty-five takedown notices against defendants’ NFT listings, but only four resulted in any content being removed. Although three of the notices were based only on trademark law, the court concluded that section 512(f) does not even apply unless copyright infringement is alleged. *See Yuga Labs*, 2023 WL 3316478, at *15. The fourth takedown notice was based on an unregistered work; but the court noted that a copyright arises automatically, so that “a registration is not required to own a copyright.” *Id.* at *16. Thus, the court granted partial summary judgment to Yuga Labs on Ripp’s counterclaim for a violation of section 512(f). *See id.*

¹⁵² *See, e.g.*, Graphic Artists Guild, *The DMCA Notice: “Take Dogwn” is Letting Down Artists*, at <https://graphicartistsguild.org/the-dmca-notice-take-down-is-letting-down-artists/>; *see also* U.S. COPYRIGHT OFF., SECTION 512 TITLE 17 78–81 (May 2020).

¹⁵³ 15 U.S.C. § 1125(a)(1)(A). This statute is known as Section 43(a) of the Lanham Act, after the section number in the original legislation, even though it has been amended since.

¹⁵⁴ *See, e.g., Irvine v. Talksport, Ltd.*, [2002] EWHC 367 (Ch).

known for . . . designing and producing the Birkin handbag,” against Martin Rothschild, a digital artist who “designed and marketed a collection of digital images depicting faux-fur-covered Birkin handbags titled ‘MetaBirkins’” and sold NFTs of his images.¹⁵⁵ The district court denied Rothschild’s motion to dismiss, holding that “the amended complaint includes sufficient allegations that Rothschild . . . intended to associate the ‘MetaBirkins’ mark with the popularity and goodwill of Hermès’s Birkin mark.”¹⁵⁶

On motion for summary judgment, the district court remarked that “[i]ndividuals do not purchase NFTs to own a ‘digital deed’ divorced from any other asset: they buy them precisely so that they can exclusively own the content associated with the NFT.”¹⁵⁷ Consequently, although Rothschild “had the technical ability to change the digital image associated with the NFT, essentially at will,”¹⁵⁸ the court found that “the relevant consumers did not distinguish the NFTs offered by Mr. Rothschild from the underlying MetaBirkins images associated with the NFTs and, instead, tended to use the term ‘MetaBirkins NFTs’ to refer to both.”¹⁵⁹ Because the digital images “were originated as a form of artistic expression,”¹⁶⁰ the court purported to apply the two-part *Rogers* test to the sale of the NFTs.¹⁶¹ Under *Rogers*, an:

¹⁵⁵ *Hermès Int’l v. Rothschild*, 590 F. Supp. 3d 647, 650 (S.D.N.Y. 2022).

¹⁵⁶ *Hermès Int’l v. Rothschild*, 603 F. Supp. 3d 98, 105 (S.D.N.Y. 2022).

The court later denied Rothschild’s motion to certify an interlocutory appeal to the U.S. Court of Appeals for the Second Circuit. *See Hermès Int’l*, 590 F. Supp. 3d at 650, 657.

¹⁵⁷ *Hermès Int’l v. Rothschild*, 654 F. Supp. 3d 268, 278 (S.D.N.Y. 2023).

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *See Rogers v. Grimaldi*, 875 F.2d 994, 998–99 (2d Cir. 1989) (adopting a narrow construction of section 43(a) of the Lanham Act in the context of titles of artistic works). The Courts of Appeals have extended the *Rogers* test beyond titles to all artistic expression. *See, e.g., Cliffs Notes, Inc. v. Bantam Doubleday Dell Pub. Grp., Inc.*, 886 F.2d 490, 495 (2d Cir. 1989); *E.S.S. Ent. 2000, Inc. v. Rock Star Videos, Inc.*, 547 F.3d 1095, 1099 (9th Cir. 2008). The U.S. Supreme Court, however, recently narrowed the application of *Rogers*: “Without deciding whether *Rogers* has merit in other contexts, we hold that it does not [apply] when an alleged infringer uses a trademark . . . as a designation of source for the infringer’s own goods.” *Jack Daniel’s Props., Inc. v. VIP Prods., LLC*, 599 U.S. 140, 153 (2023). The Supreme Court held it was reversible error to apply *Rogers* to “a squeaky, chewable dog toy designed to look like a bottle of Jack Daniel’s whiskey” sold under the name “Bad Spaniels.” *Id.* at 144–45.

artistic work is not entitled to First Amendment protection . . . if the plaintiff can show that either (1) the use of its trademark in an expressive work was not “artistically relevant” to the underlying work or (2) the trademark is used to “explicitly mislead” the public as to the source or content of the underlying work.¹⁶²

Nonetheless, the district court held there were triable issues of fact as to both prongs of the *Rogers* test.¹⁶³ At trial, “the Court instructed the jury that even the modest elements of artistic expression contained in Rothschild’s works entitled him to total First Amendment protection against Hermès’ claims unless Hermès proved that Rothschild intentionally misled consumers into believing that Hermès was backing its products.”¹⁶⁴ The jury found Rothschild liable for trademark infringement and cybersquatting and awarded \$133,000 in damages; and the district court denied his post-trial motions for judgment as a matter of law or a new trial.¹⁶⁵ The court enjoined Rothschild “from using the Birkin marks or otherwise misleading the public about the source of the MetaBirkins NFTs,”¹⁶⁶ and it ordered him “to transfer the www.metabirkins.com domain name . . . to the plaintiffs”¹⁶⁷ and to disgorge any additional profits he had earned since the beginning of the trial.¹⁶⁸ However, it declined to order him to “transfer any MetaBirkins NFTs in his possession, including the smart contract, to Hermès (in order to be destroyed).”¹⁶⁹ Rothschild has filed an appeal in the U.S. Court of Appeals for the Second Circuit.¹⁷⁰ Given the jury’s factual findings, however, he is unlikely to prevail.

Similarly, Yuga Labs, the creators of the popular Bored Ape Yacht Club (BAYC) series of 10,000 NFTs, each associated with a cartoon drawing of an anthropomorphized ape,¹⁷¹ sued a conceptual artist named Ryder Ripps, who created a different series of 10,000

¹⁶² *Hermes Int’l v. Rothschild*, 654 F. Supp. 3d 268, 280 (S.D.N.Y. 2023).

¹⁶³ *See id.* at 280–82.

¹⁶⁴ *Hermes Int’l v. Rothschild*, No. 22-CV-384 (JSR), 2023 WL 4145518, at *1 (S.D.N.Y. June 23, 2023).

¹⁶⁵ *See id.* at *1, *7.

¹⁶⁶ *Id.* at *12.

¹⁶⁷ *Id.*

¹⁶⁸ *See id.* at *13.

¹⁶⁹ *Id.* at *12.

¹⁷⁰ *See Hermès Int’l v. Rothschild*, No. 23-1081 (2d Cir. filed July 24, 2023).

¹⁷¹ *See Bored Ape Yacht Club*, OPENSEA, <https://opensea.io/collection/boredapeyachtclub> (last visited Sept. 1, 2023).

NFTs that pointed to the exact same digital images.¹⁷² But Yuga Labs did not allege a claim of copyright infringement against Ripps.¹⁷³ Instead, it alleged claims for trademark infringement (false designation of origin), false advertising, cybersquatting, unfair competition, and various state-law claims.¹⁷⁴ After fending off defendant's anti-SLAPP motion to strike,¹⁷⁵ Yuga Labs successfully moved for partial summary judgment on its claims for false designation of origin (infringement of its unregistered trademarks) and cybersquatting,¹⁷⁶ and on Ripps' defenses, based on *Rogers* and the First Amendment, nominative fair use and unclean hands.¹⁷⁷

¹⁷² See *Yuga Labs, Inc. v. Ripps*, No. CV 22-4355-JFW, 2023 WL 3316748, at *1–*2. (C.D. Cal. Apr. 21, 2023).

¹⁷³ There are likely several reasons why Yuga Labs chose not to rely on copyright. First, it had not yet registered any copyrights in its cartoon images, a precondition to filing a lawsuit for “United States works.” See 17 U.S.C. § 411(a); see also *Fourth Est. Pub. Benefit Corp. v. Wall-Street.com, LLC*, 139 S. Ct. 881, 887–88 (2019). Second, there is at least a serious legal question whether algorithmically generated images are entitled to copyright protection. See Frye, *supra* note 2, at 121–26; see also *Thaler v. Perlmutter*, No. CV 22-1564 (BAH), 2023 WL 5333236 (D.D.C. Aug. 18, 2023) (affirming denial of registration to an AI-generated work “autonomously created by a computer algorithm running on a machine” without any human involvement). Third, as explained above, minting and selling NFTs of images created by others likely is not a copyright infringement under U.S. law. See *supra* notes 74–98 and accompanying text.

¹⁷⁴ See *Yuga Labs*, 2023 WL 3316478, at *2.

¹⁷⁵ See *Yuga Labs, Inc. v. Ripps*, 2022 WL 18024480 (C.D. Cal. Dec. 16, 2022), *aff'd*, No. 22-56199, 2023 WL 7123786 (9th Cir. Oct. 30, 2023). “SLAPP” is an acronym for “Strategic Lawsuit Against Public Participation.” *SLAPP suit*, CORNELL L. SCH. LEGAL INFO. INST., https://www.law.cornell.edu/wex/slapp_suit (last visited Sept. 1, 2023). An anti-SLAPP motion seeks to dismiss the lawsuit as an improper attempt “to chill the valid exercise of the constitutional rights of freedom of speech and petition for the redress of grievances.” Cal. Civ. Proc. Code § 425.16(a).

¹⁷⁶ See *Yuga Labs*, 2023 WL 3316478, at *4–5 (NFTs are “goods” for purposes of the Lanham Act); *id.* at *6 (defendant's use in commerce); *id.* at *6–*7 (no abandonment); *id.* at *7–*10 (likelihood of confusion); *id.* at *10–*11 (cybersquatting).

¹⁷⁷ See *id.* at *11–13 (First Amendment/*Rogers*); *id.* at *13–14 (nominative fair use); *id.* at *14 (unclean hands). The court also granted partial summary judgment to Yuga Labs on Ripps' counterclaim for a violation of § 512(f). See *id.* at *15*16; see also *supra* note 151.

VII. CONCLUSION

Although the speculative bubble in NFTs burst in 2022, NFTs will continue to challenge the legal system. Copyright law is one of the tools that artists and others can use in trying to ensure that the profits from this technological development go to those who created the works with which the NFTs are associated. But artists and investors should exercise caution for two reasons. First, buying an NFT does *not*, by itself, convey *any* rights to reproduce or display the work associated with that token. Instead, those rights are governed entirely by the contract that accompanies the sale, which should be drafted and agreed to with care. Second, careful analysis demonstrates that minting and selling an NFT, by itself, is not a violation of any of the exclusive rights provided by copyright. Copyright law may nonetheless provide a useful tool in policing any ancillary violations that occur when unauthorized NFTs are offered for sale.

Legislative clarification would be welcome; but in the meantime, we can expect that copyright law will remain on the margins in disputes between artists and investors concerning NFTs. The primary advantages of copyright law are that it helps artists get into federal court, and that the major NFT platforms have adopted notice-and-takedown policies that can assist artists who are vigilant in monitoring and sending notices to those platforms. Ultimately, however, other legal tools (such as trademark law) may provide better relief when litigation concerning NFTs becomes necessary.

