

NFT OWNERSHIP AND COPYRIGHTS

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Non-fungible tokens (NFTs) have made enormous waves in the art, music, entertainment, and collectibles world, but the backwash of this blockchain technology has inundated and overwhelmed many peoples' understanding of intellectual property (IP) law in general and copyright law in particular when it comes to NFTs and blockchains. Artists and creatives who mint NFTs often have very different understandings and expectations from collectors and investors who purchase and use them when it comes to the copyrights associated with the content linked to an NFT. Art law attorneys may not have gone fully down the rabbit hole that is the current crypto community and future metaverse and are striving to become familiar with how a public ledger registration tool has turned digital assets, including digital artwork, into scarce and valuable investments. This guide seeks to educate each of these audiences and bring clarity to the issues of copyrights in the world of NFTs and blockchains.¹

I. COMING TO AN UNDERSTANDING OF WHAT NFTS ARE AND WHAT THEY ARE NOT

Before discussing the interaction of NFTs and copyright, it is necessary to understand what non-fungible tokens are and what they are not:

- NFTs are not art but rather record the creation and ownership of an asset that could be artwork.²
- NFTs are a cryptography tool defined and operated by a “smart contract.” A smart contract is a small bit of code that makes up a simple computer program that runs the operation of an NFT.³

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1. For additional reading on copyright issues relating to NFTs, see Michael D. Murray, *Transfers and Licensing of Copyrights to NFT Purchasers*, 6 STAN. J. BLOCKCHAIN L. & POL'Y (forthcoming 2023); Michael D. Murray, *Generative and AI Authored Artworks and Copyright Law*, 45 HASTINGS COMM. & ENT L.J. 27 (2023).

2. Mitchell Clark, *NFTs, Explained*, THE VERGE (Jun. 6, 2022, 8:30 AM), <https://www.theverge.com/22310188/nft-explainer-what-is-blockchain-crypto-art-faq>, [<https://perma.cc/U7J6-FHRG>].

3. *What Are Smart Contracts on Blockchain?*, IBM, <https://www.ibm.com/topics/smart-contracts> [<https://perma.cc/X33N-MN88>] (last visited Apr. 6, 2022). Smart contracts are often written in the Solidity programming language because that is a language specially adapted for use on Ethereum, the most popular blockchain for NFTs. See *Solidity*, <https://docs.soliditylang.org/en/v0.8.13/> [<https://perma.cc/3WFA-UFGN>] (last visited Apr. 6, 2022).

- Smart contracts use blockchain technology⁴ to verify and record the existence and ownership of digital assets and physical three-dimensional⁵ assets.⁶
- An NFT owner owns the smart contract that defines and operates the functions of the NFT. The smart contract creates a registry entry on the blockchain that is understood in the NFT industry and crypto community to represent proof of ownership of the asset linked to the NFT, whether that be an artwork, a piece of real estate, or other assets.⁷
- An NFT does not automatically provide ownership or control of the copyright to the artwork linked to the NFT.⁸

Each of these concepts deserves to be unpacked to understand the role NFTs can play with copyrights.

A. Tokens on a Blockchain

Breaking down the term “non-fungible token” itself will help to define its place within the greater world of blockchains. A “token” is an asset encrypted into the blocks on a blockchain.⁹ The process of creation of a token often is called “minting” the token.¹⁰ A blockchain is the background architecture onto

4. *What is Blockchain Technology?*, IBM, <https://www.ibm.com/topics/what-is-blockchain> [<https://perma.cc/K6MA-SJKJ>] (last visited May 23, 2022).

5. I am using the term “physical three-dimensional” assets instead of “real-world” assets because I do not want to suggest that NFTs are not real and not in the world. NFTs and all other aspects of blockchains are very much real and very much making a difference in the world.

6. *See What is Blockchain Technology?*, LIQUID, <https://blog.liquid.com/what-is-blockchain-technology> [<https://perma.cc/V7J7-NVGH>] (last visited Mar. 30, 2022).

7. Dominic Chalmers, Christian Fisch, et al., *Beyond the Bubble: Will NFTs and Digital Proof of Ownership Empower Creative Industry Entrepreneurs?*, 17 J. BUS. VENTURING INSIGHTS 309 (Feb. 2022), available at <https://doi.org/10.1016/j.jbvi.2022.e00309> [<https://perma.cc/UG7B-SB5U>].

8. *See* Harrison Jordan, *No, NFTs Aren't Copyrights*, TECHCRUNCH (Jun. 16, 2021, 11:15 AM), <https://techcrunch.com/2021/06/16/no-nfts-arent-copyrights/> [<https://perma.cc/7MSZ-7NSW>].

9. Jake Frankenfield, *What Are Crypto Tokens, and How Do They Work?*, INVESTOPEDIA (May 20, 2022), <https://www.investopedia.com/terms/c/crypto-token.asp> [<https://perma.cc/CV32-P7RJ>].

10. *See Minting Crypto*, CORP. FIN. INST., <https://corporatefinanceinstitute.com/resources/knowledge/data-analysis/minting-crypto/> (Oct. 25, 2022) [<https://perma.cc/43EW-LBX3>]. Sometimes the process is called “mining” if the token is a unit of cryptocurrency, e.g., mining a bitcoin. In other contexts, it is called “forging.” *See What Is Crypto Staking and How Does It Work?*, N26 (Feb. 16, 2022), <https://n26.com/en-eu/blog/what-is-staking-crypto> [<https://perma.cc/6WKT-U8N4>]; *Proof of Stake: Crypto Staking vs. Crypto Minting*, MYCOINTAINER (July 15, 2020), <https://www.mycointainer.com/insight/proof-of-stake-crypto-staking-vs-crypto-minting/> [<https://perma.cc/8NJ4-3UHK>].

which a token is encrypted to make an immutable record of the existence and ownership of a digital asset such as an artwork.¹¹ Blockchains are built by cryptography in a process called hashing. The process of hashing records the creation, ownership, and transfer of different tokens encrypted into the blocks on the chain.¹² The blockchain serves as a ledger of the records of creation, transfer, and ownership of the tokens recorded on the blockchain.¹³

Tokens can be fungible, meaning a fungible token can be exchanged one-for-one with any other token of its kind.¹⁴ A perfect example of a fungible token is a unit of cryptocurrency, such as one bitcoin on the Bitcoin blockchain or one unit of ether on the Ethereum blockchain.¹⁵ One bitcoin can be exchanged for any other bitcoin.¹⁶ They are fungible and have the same value.¹⁷

But tokens also can be non-fungible, such as an NFT which represents a unique asset that is not the equivalent of any other asset or token.¹⁸ An NFT that records the existence and ownership of a work of art cannot be presumed to be worth the same or exchangeable for any other NFT in the same way that one 30X40 inch oil painting will not be presumed to be exchangeable for another 30X40 inch oil painting.

In this discussion, it is critical to understand that the NFT is not the artwork and does not become the artwork, but rather records the existence and ownership of the artwork onto the blockchain, and because no two NFTs are the same, and no two blockchain registrations can be the same, the tokenized asset linked to the NFT also can be considered unique and nonfungible.¹⁹

11. See Stephen J. Bigelow, *Blockchain: An Immutable Ledger to Replace the Database*, TECHTARGET (Sept. 9, 2021), <https://www.techtargget.com/searchitoperations/tip/Blockchain-Immutable-ledger-to-replace-the-database> [<https://perma.cc/4ZME-AC3D>].

12. See Lucian Constantin, *Hashing Explained: Why It's Your Best Bet to Protect Stored Passwords*, CSOONLINE (Jan. 13, 2021, 2:00 AM), <https://www.csoonline.com/article/3602698/ hashing-explained-why-its-your-best-bet-to-protect-stored-passwords.html> [<https://perma.cc/8TGW-U9PN>]; Jake Frankenfield, *What Is a Hash? Hash Functions and Cryptocurrency Mining*, INVESTOPEDIA (Jan. 13, 2022), <https://www.investopedia.com/terms/h/ hash.asp> [<https://perma.cc/YF9A-25GL>]; Adam Hayes, *Target Hash*, INVESTOPEDIA (June 29, 2021), <https://www.investopedia.com/terms/t/target-hash.asp> [<https://perma.cc/2T5V-9JC7>].

13. See Bigelow, *supra* note 11.

14. *Fungible vs Nonfungible Tokens: What's the Difference?*, COINTELEGRAPH, <https://cointelegraph.com/nonfungible-tokens-for-beginners/fungible-vs-nonfungible-tokens-what-is-the-difference> [<https://perma.cc/YN3U-X2JP>] (last visited May 23, 2022).

15. *Id.*

16. *Id.*

17. See *id.*

18. See Clark, *supra* note 2.

19. See Rakesh Sharma, *Non-Fungible Token (NFT) What It Means and How It Works*, INVESTOPEDIA (June 22, 2022), <https://www.investopedia.com/non-fungible-tokens-nft-5115211> [<https://perma.cc/SFL8-W7DZ>].

NFT registration makes a digital asset unique and non-fungible because the NFT itself is unique and non-fungible.

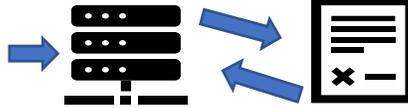
This is an exciting development for digital artworks because previously, claiming ownership of a digital file such as a .jpeg image felt like a hollow boast when the asset often could be found in many places on the Internet and copied just as easily. The NFT makes a unique registration which makes the tokenized digital artwork a unique asset.²⁰ There may be other, similar artworks in existence and some may even be registered by NFTs on a blockchain, but each creation of an NFT makes a unique record on the blockchain of a unique asset.

Artworks become “tokenized”—linked to a non-fungible token—in various ways, but the three most common ways are the following:

Example 1: A digital image with a tiny file size, such as a highly pixelated profile picture, can be encrypted and stored directly on the blockchain.²¹ Then the transaction hash address (blockchain address) of the image can be coded into the smart contract of the NFT, which also is recorded on the blockchain.²²



IMAGE



BLOCKCHAIN

SMART CONTRACT

Example 2: A digital image with a larger file size can be stored in an online location (e.g., uploaded to an online sales platform or a dedicated storage site), and then a link to the online image is coded into the smart contract of the NFT and recorded on the blockchain.



IMAGE

LINK TO
ONLINE SITESMART
CONTRACT

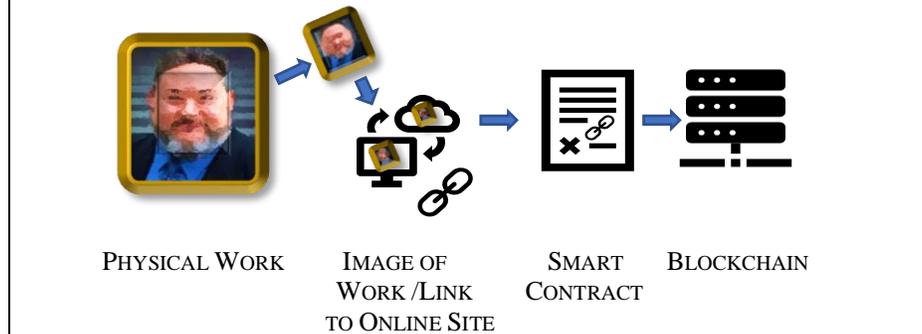
BLOCKCHAIN

20. *Id.*

21. *On-chain Cryptopunks*, LARVA LABS, <https://www.larvalabs.com/blog/2021-8-18-18-0/on-chain-cryptopunks> [<https://perma.cc/JE9V-48UP>] (last visited June 15, 2022).

22. The best example of NFT art that is encrypted and stored on a blockchain is CryptoPunks, which are hash encoded and stored on the Ethereum blockchain. *Id.* See also ETHERSCAN, <https://etherscan.io/address/0x16f5a35647d6f03d5d3da7b35409d65ba03af3b2#code>, [<https://perma.cc/MQF3-RT48>] (last visited Nov. 10, 2022) (Etherscan of the script of the encoded punks on Ethereum). See also *infra* note 30 and accompanying text.

Example 3: A photo or description of an “in real life” physical artwork is stored in an online location, and then a link to the online image or description is coded into the smart contract of the NFT and recorded on the blockchain.



In the case of **example 3**, the description does not mention whether the physical, three-dimensional artwork itself is being offered for sale to the buyer. In truth, some buyers may not want possession of the physical work,²³ in which case buying the NFT is just buying the blockchain registration listing the purchaser as “owner” of the artwork, as if one bought a deed of ownership and certificate of authenticity for a baseball card without ever taking possession of the baseball card. But if the physical work is being offered for sale, then instructions about whether and how the physical work would be claimed, and in the absence of a transfer of possession, the terms for storage, protection, and insurance for the physical asset should be provided either in the metadata of the smart contract itself or in the listing description of the NFT on the NFT exchange.²⁴

B. What You Purchase When You Purchase an NFT

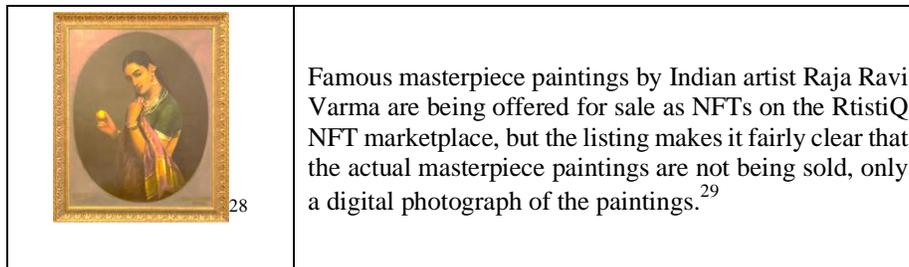
The examples in the chart above show three ways that artwork can be recorded on the public ledger of the blockchain using an NFT. When you buy the NFT for a tokenized digital asset, you are not obtaining sole possession of the artwork as if you walked into an NFT gallery, bought an NFT artwork, took it off the wall, and walked out with it. What you purchase with an NFT is sole access to and control of the smart contract of the NFT stored on the blockchain,

23. The well-known artist, Damien Hirst, created an NFT art series, *The Currency*, linked to physical works of art (sheets of paper with painted dots on them) that asked each purchaser after one year’s time to make an election to either keep the NFT and order Hirst to destroy the original artwork, or to “burn” the NFT (which means to send it to an address on the blockchain where no one has access to the smart contract of the NFT) and receive and keep the physical artwork. Caroline Goldstein, *Damien Hirst’s NFT Initiative, Which Asks Buyers to Choose Between a Digital Token and IRL Art, Has Already Generated \$25 Million*, ARTNET NEWS (Aug. 25, 2021), <https://news.artnet.com/market/damien-hirst-nft-update-2002582> [https://perma.cc/4Y9H-ZGRQ].

24. *Id.*

which has created a record that you are now the registered owner of the NFT and the artwork it is linked to.²⁵ You receive a cryptographic access tool called a private key that allows you to control the smart contract; when you decide to sell the NFT, it is the private key that is transferred to the new purchaser.²⁶

Ownership of the underlying asset described in the NFT listing is often a primary reason for purchasing an NFT. But the purchaser must be careful to read what exactly is listed for sale. If a physical artwork is mentioned, be sure the wording of the listing for the NFT makes it clear that this physical work is part of the sale or is something else being sold, such as support or patronage for cultural property.²⁷



Look for instructions about whether and how the physical work will be claimed, and in the absence of a transfer of possession, look for the terms for storage, protection, and insurance for the physical asset. If it is a digital asset, look for a link to the storage location of the asset. The link may be in the script of the smart contract itself, so check the script with a blockchain explorer.³⁰ In

25. Jordan, *supra* note 8.

26. Shelly Palmer, *Where Are Your NFTs?*, SHELLY PALMER (Jul. 23, 2022), <https://www.shellypalmer.com/2022/07/where-are-your-nfts> [<https://perma.cc/SCK2-KYDX>].

27. The Museum of Fine Arts Boston is selling NFTs linked to rarely exhibited impressionist paintings and drawings on the laCollection NFT marketplace, but the physical artworks themselves are not being offered for purchase. Dorian Batycka, *The Museum of Fine Arts, Boston Is Selling NFTs of Artworks in Its Collection to Fund the Conservation of Degas Paintings*, ARTNET NEWS (June 23, 2022), <https://news.artnet.com/art-world/mfa-boston-nfts-degas-2134839> [<https://perma.cc/UN3R-V4WB>]. The NFTs appear to be marketed as a limited series digital print of the paintings or drawings, and they are being sold for fundraising. *Id.* See also *Terms and Conditions*, LACOLLECTION, https://lacollection.io/terms_and_conditions [<https://perma.cc/4U2T-X2VZ>] (last visited Nov. 5, 2022).

28. Raja Ravi Varma, *The Coquette* (photograph of a painting), in RtistiQ NFT marketplace, <https://art.rtistiq.com/en/art/digital/the-coquette81> [<https://perma.cc/NNT4-V4ZV>], (Cropped thumbnail-sized version of photograph of Raja Ravi Varma, *The Coquette* (1893)).

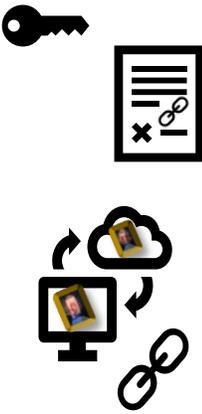
29. *Id.*

30. Etherscan is a very popular blockchain explorer for the Ethereum blockchain. See ETHERSCAN, <https://etherscan.io> [<https://perma.cc/J6UK-3NA4>] (last visited Nov. 5, 2022). A blockchain explorer reveals many things about an NFT—ownership, transfers, etc.—but for many smart contracts, one section of the scan will be called “Contract,” and within that section you can choose the tab to view “Code.” *E.g.*, *Contract*, ETHERSCAN, <https://etherscan.io/address/>

addition, look for the listing of the asset to discuss and describe whether any part of the copyright to the underlying asset is being assigned or licensed to the purchaser. In the absence of such assignment or licensing, no part of the copyright will transfer to the purchaser of the underlying asset.

*C. Comparison: Purchase of Physical Artwork vs. Digital Artwork
Linked to an NFT*

Buying a physical artwork is significantly different from buying a tokenized digital artwork.

Item Purchased		Exclusive Rights of Ownership	Rights Not Obtained
Purchase of physical artwork		<ul style="list-style-type: none"> • Possession, physical use of the artwork itself • The right to display the physical artwork • Bragging rights, increased reputation from ownership of the artwork • Right to resell the physical artwork 	<ul style="list-style-type: none"> • No rights to copy or make derivative works of artwork unless separately conveyed to purchaser
Purchase of tokenized digital artwork—i.e., purchase of a private cryptographic key to the smart contract of the NFT containing a link to the artwork stored elsewhere		<ul style="list-style-type: none"> • Bragging rights, increased reputation from being the registered owner of the artwork • Arguably, the right to display the digital work if, somehow, this does not require unauthorized copying of the work • Right to resell the NFT (which also updates the record of ownership of the linked artwork) 	<ul style="list-style-type: none"> • No rights to copy or make derivative works of artwork unless separately conveyed to purchaser • No actual possession of digital artwork (i.e., at best, you only possess a copy)

Ownership of personal property such as a painting implies exclusive possession and the right to exclude others from possessing the painting, but it does not work that way with digital art. The difference between having sole

ownership and possession of an actual artwork versus owning a cryptographic key to a small computer program on a blockchain that records the existence and ownership of the linked artwork stored somewhere else is more than just a semantic distinction. With an NFT purchase, the NFT creates a record on the blockchain that the purchaser is the registered owner of the artwork linked to the NFT. But this does not guarantee that the purchaser will receive a copy of the artwork even for display purposes (again, look to the listing terms of the sale or information coded into the smart contract of the NFT).

The overall interaction of digital artworks and NFTs is beneficial to the digital art market. The registration of the digital work in an NFT, stored on the blockchain, means that the tokenized digital image is now a unique original image. When you purchased the NFT, you purchased a private key, giving you sole access to and control of the smart contract linked to that unique digital image.³¹ The NFT itself creates a record on the blockchain that you are the owner of the unique original image that is linked to the NFT.³² Once you sell the NFT, the smart contract updates the blockchain registration with the pseudonym of the new owner.³³ The blockchain retains the record of all owners from the creator of the NFT through the current owner in its public ledger.³⁴ In this respect, the NFT is akin to a **deed of ownership** and a **certificate of authenticity** all in one.³⁵

When a digital artwork file is tokenized, all other copies of that tokenized digital image are just copies of the now officially designated, original image recorded in the NFT. At best, the purchaser will also possess a “copy” because whatever file was downloaded by or emailed to the purchaser is only a copy. The act of downloading or creating an email attachment does not transfer the designated “original” file, it creates a new file—a copy of the designated original file—that is transmitted to the purchaser. It is conceivable that the creator of the NFT could send the first copy of the .jpeg created to the purchaser on some kind of portable media, but from my observations this would be an unusual undertaking in this marketplace.

Purchasing a physical artwork, a digital artwork, or the NFT of a tokenized physical or digital artwork does not imply that the copyright to the artwork has been transferred to the purchaser.³⁶ Unless the copyright is separately

31. See Evelyse Carvalho Ribas, *NFTs – Digital Certificate, License of Use, Ownership*, ARTLAW.CLUB (Oct. 18, 2021), <https://artlaw.club/en/artlaw/nfts-digital-certificate-license-of-use-ownership-1> [<https://perma.cc/X87T-J7ME>].

32. *See id.*

33. *See id.*

34. *See id.*

35. *Id.* The record of ownership can be used to establish provenance of the NFT and its linked artwork at least from the date of creation of the NFT. *See How Do NFTs Work?*, ETHEREUM, <https://ethereum.org/en/nft/#how-nfts-work> [<https://perma.cc/349T-Y6K7>] (last visited Apr. 6, 2022); Michael D. Murray, *NFTs and the Artworld: What’s Real, and What’s Not*, 29 UCLA ENT. L. REV. 25, 40 (2022).

36. *See* 17 U.S.C. § 202.

transferred to the purchaser, the purchaser cannot make copies or derivative works (works derived from the content of the original work).³⁷ The purchaser also cannot stop others from making copies, whether these are unauthorized or authorized by the copyright owner. Therefore, owning the NFT to a work of digital art does not preclude anyone from right-clicking on the digital image and making a copy of it.³⁸ But if that happens, the copyist only has a copy, while the NFT owner is the registered owner of the designated original copy. This is similar to owning a physical painting or sculpture that is displayed in a public place—for example, you loaned it to a museum or consigned it at a gallery. If you do not own the copyright to the work, you cannot stop visitors to the museum or the gallery from taking a snapshot of the work or taking a selfie in front of it—but all the viewers come away with is a copy of the original. However, you could have a say in trying to prevent this kind of copying of digital and physical art if you obtained the copyright to the artwork.

II. COPYRIGHT BASICS

Property as a concept in the law means the right to own and control something and to exclude others from using and controlling it.³⁹ This concept often is expressed as the rights owner having a monopoly over the thing that is owned.⁴⁰ When the term “intellectual” is added to the concept of property, it means that the thing protected is a non-tangible item devised, imagined, developed, or invented by a person or group, and that thing has value deserving of protection in the law.⁴¹ Copyright is one form of intellectual property; others include trademarks, trade secrets, patents, right of publicity, moral rights, economic rights.⁴²

Copyright is the right to own and control the duplication and use of an original, creative work of expression.⁴³

Crypto- and blockchain-minded people have a strong tendency to equate the

37. 17 U.S.C. §§ 105, 106.

38. Ribas, *supra* note 31.

39. See Anna di Robilant, *Property: A Bundle of Sticks or a Tree?*, 66 VAND. L. REV. 869 (2013).

40. See *id.* at 905.

41. See *Intellectual Property*, LEGAL INFO. INST., https://www.law.cornell.edu/wex/intellectual_property [<https://perma.cc/HX29-ATMR>] (last visited Dec. 15, 2022).

42. See *id.*; *Moral Rights*, LEGAL INFO. INST., https://www.law.cornell.edu/wex/moral_rights [<https://perma.cc/M9ZA-7WEV>] (last visited Dec. 28, 2022); Michael O’Hare, *Copyright and the Protection of Economic Rights*, 6 J. CULTURAL ECON. 33 (1982).

43. See *Copyright*, LEGAL INFO. INST., <https://www.law.cornell.edu/wex/copyright> [<https://perma.cc/T4KW-UWWZ>] (last visited Dec. 15, 2022).

term intellectual property with copyrights,⁴⁴ but that is incorrect. This error is similar to the tendency of technological and scientific natives to equate intellectual property with patent law.⁴⁵ Copyrights and patent rights are separate intellectual property rights, and they are very different from each other.

Copyright is the right to own and control the duplication and use of an original, creative work of expression.⁴⁶ There are several concepts⁴⁷ fundamental to the understanding of copyright law discussed in the sections below.

A. Obtaining a Copyright

Getting a copyright is not complicated. All you need to do is write something, paint something—do something that creates something. Copyright protects works in every expressive media, and even media in which it is hard to appreciate what has been created without the aid of a machine or other device, such as in the source code of a computer program. Writings, paintings, drawings, musical compositions and musical recordings, literature, plays, poems, motion pictures, pantomimes, and computer programs are copyrightable once the author finishes them.⁴⁸

B. Originality and Creativity

Copyright has two basic conceptual requirements:

- original
- creation.⁴⁹

I could write these two conceptual requirements in a more typical copyright law phrasing: the “originality” requirement and the “creativity” requirement. However, although accurate, the use of the terms “originality” and “creativity” does not clarify the concept of what copyright law requires, and in fact leads to confusion among lawyers, judges, clients, and laypersons. First, to understand the terms original and originality, and creation and creativity, you must understand that they are legal terms of art, meaning they do not mean exactly

44. See, e.g., *What IP Rights Are Present in NFTs?*, HARRIS BRICKEN BLOG (Mar. 15, 2022), <https://harrisbricken.com/blog/what-ip-rights-are-present-in-nfts/#page=1> [<https://perma.cc/GCP9-CMKE>].

45. See, e.g., *Protect Your Visionary Idea!*, BOLD PATENTS, <https://boldip.com/nationwide-patent-lawyers-trademark-attorneys/> [<https://perma.cc/T6KC-HHHT>] (last visited May 23, 2022); see also, INVENTIV FOUND., <https://www.inventiv.org/> [<https://perma.cc/4HUA-6EU4>] (last visited May 23, 2022).

46. See *Copyright*, *supra* note 43.

47. MICHAEL D. MURRAY, *A SHORT AND HAPPY GUIDE TO COPYRIGHT* chs. 1, 2 (2022) (describing the contents of this chapter further).

48. See 17 U.S.C. § 102(a).

49. See *id.* (“Copyright protection subsists . . . in original works of authorship fixed in any tangible medium of expression . . .”).

what you might expect them to mean. In copyright law, original means one thing: not copied.⁵⁰ It does not mean unique, clever, ingenious, or inventive. It only means that the work originates with the author and is not copied from another author's work. And creation means that the author created the work as a conception and work of the mind that is then produced and fixed by the author in some observable, perceptible media. Creation, creative, or creativity in copyright law also do not mean unique, clever, ingenious, or inventive. Creative means "created by the author," not found, not borrowed, and not naturally occurring.⁵¹

C. Expression and Fixation in Media

The formal requirements of copyright (meaning, parts that relate to the form of the work) are: expression and fixation in media.⁵² "Expression" means the work must have some communicative potential for one of the senses. It does not matter what you are trying to communicate just as long as you are communicating something. Copyright is broad and it only is looking for an author to communicate a concept that can exist as an idea in the mind of the author and be communicated to the mind of someone else through some communicative media.

In order for copyright to apply, the expression must not remain as an idea or concept in the mind of the author. "Fixation in media" means that the expression has to be rendered into existence in some form in which it can be perceived by one of the senses for long enough that other people can tell what the creation is and receive its communication. The law defines "fixed" in a tangible medium as:

A work is "fixed" in a tangible medium of expression when its embodiment in a copy or phonorecord, by or under the authority of the author, is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.⁵³

If you conceive of a work and fix it in some perceptible media so that it can communicate your conception to others, then you have a copyright over that work—whatever it is you created.

50. *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345-46 (1991) ("Original, as the term is used in copyright, means only that the work was independently created by the author (as opposed to copied from other works . . .").

51. See *In re Trade-Mark Cases*, 100 U.S. 82, 94 (1879).

52. See *Feist*, 499 U.S. at 345, 355.

53. 17 U.S.C. § 101 (defining "fixed").

D. An Author

Copyright law uses the term “author” to mean anyone who creates things in expressive media. So, author can be used to mean artist, composer, playwright, photographer, cinematographer, or musician, or a publisher who publishes, sells, and distributes creative works (and owns the copyright to the works). It can mean a scientist who writes reports of her findings and generates charts and diagrams. It can mean a computer programmer (coder) who produces works in a computer language of source code and object code for the express purpose of communicating a result in that computer language. It can mean a business that creates a new visual or auditory design for cloth, textiles, flooring, toys, or other products.⁵⁴ In the context of NFTs, the term “artist” or “creator” is interchangeable with “author.”⁵⁵

E. The Work

The work is the expression that the author creates. The variety of works that may be subject to copyright protection matches the list above of the possible activities and professions of copyright authors. Anything that is expressive and created by an author may be protected by copyright.⁵⁶

The term “work” is not reflective of a certain level of effort, although the work must be “authored,” which as mentioned above means conceived of in the mind of the author and then created in a form in which the work can be perceived. The “conception” part is as important as the “creation” part. Happy accidents not conceived of and not brought into existence by a deliberate act of the author do not count as works. Things already in existence, and not brought into existence by an author do not count. But the law does not require any particular level of effort or “work” for a work to qualify as a work.⁵⁷

III. THE COPYRIGHT IS NOT THE SAME AS THE WORK

Copyright protects “the Work” but it is not the same thing as “the Work,” meaning the creation, the expression created by the Author.⁵⁸ This may be the first “Ah ha!” concept that will help to clarify why NFTs do not automatically convey copyright rights to an NFT purchaser:

54. 17 U.S.C. § 101 (describing different types of mediums that can have copyright protection).

55. *See, e.g., Feist*, 499 U.S. at 345.

56. *See* 17 U.S.C. § 102.

57. *Feist*, 499 U.S. at 345.

58. 17 U.S.C. § 202.

The copyright is a completely separate property from the work itself.⁵⁹

The United States and, in general, the rest of the world, holds that in a property law sense, the copyright is a separate item of property from the object or file that embodies the work protected by the copyright.⁶⁰ The law actually describes the copyright as a separate “bundle” of property rights different from the property right over the artistic creation itself—the painting, the digital art, the musical composition, the sculpture—because a copyright has several separate rights, each of which could be exercised separately or even licensed or sold separately.⁶¹ Further, and most importantly for this discussion, the object embodying the work can be sold separately from all of the copyright rights.⁶²

The object embodying the copyrighted work is called a “copy” of the work. The actual “work” is the “expression” itself, so it always is embodied and fixed in at least one copy. The law defines a “copy” that way—it is any example of an object, thing, or medium in which the expression of the work is fixed.⁶³ The statutory language is:

“Copies” are material objects . . . 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. The term “copies” includes the material object . . . in which the work is first fixed.⁶⁴

The second sentence of the above definition states that “copies” includes the first copy of the expression made, which typically is called the original work, but for copyright purposes it is just the first copy of the work. In the case of a painting or sculpture, it may be the only copy of the work made, but it still is defined in the law as a copy.

IV. THERE IS A PRESUMPTION THAT THE COPYRIGHT STAYS WITH THE CREATOR OF THE WORK

In addition to the rule that the object embodying the work can be sold or transferred separately from all of the copyright rights, there is a presumption under current copyright law that the copyright does not transfer to the purchaser of the object embodying the work unless the copyright owner takes an

59. *Id.*

60. *Id.*

61. *See* di Robilant, *supra* note 39.

62. *See* 17 U.S.C. § 202.

63. *See* 17 U.S.C. § 101 (defining “copies”).

64. *Id.*

affirmative step to transfer or license the copyright to the purchaser.⁶⁵

Many artists very intentionally do not want to let go of the copyright to the artwork. As discussed in the next section, there are many valuable things you can do when you own the copyright to an artistic work, and most of them can be summed up in the concept of “control”—control over the artistic creation, which again is what owning property, intellectual or physical, is all about.

V. THE RIGHTS OF THE OWNER OF THE OBJECT OR FILE COMPARED TO THE RIGHTS OWNED BY THE COPYRIGHT HOLDER

A. *Rights of the Copyright Owner*

The owner of the copyright to the expressive work gets the following rights under 17 U.S.C. § 106 of the Copyright Code:

- (1) to reproduce the copyrighted work in copies or phonorecords;
- (2) to prepare derivative works based upon the copyrighted work;
- (3) to distribute copies of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending;
- (4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly;
- (5) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly; and
- (6) in the case of sound recordings, to perform the copyrighted work publicly by means of a digital audio transmission.⁶⁶

B. *Rights of the Owner of a Copy of the Work (but Not the Copyright)*

The owner of a physical copy of a work of art, but not the copyright to the work, typically gets several rights that are important:

- possession and physical use of the artwork itself;
- the right to display the physical artwork (the actual item);⁶⁷
- bragging rights and increased reputation from ownership of the artwork; and
- the right to resell the physical artwork.⁶⁸

There is a **digital artwork** distinction to be noted here: the owner of a digital

65. 17 U.S.C. § 202.

66. 17 U.S.C. § 106.

67. 17 U.S.C. § 109(c).

68. 17 U.S.C. § 109(a).

artwork, but not the copyright to the work, has similar rights of ownership, but they are harder to exercise than the rights of an owner of physical artwork. The owner of a digital copy of artwork who does not own the copyright to the work (which is to say many NFT art owners) has the following rights:

- bragging rights and increased reputation from being the registered owner of the artwork;
- arguably, a right to display the digital artwork, if this can be accomplished without making an unauthorized copy of the digital artwork;⁶⁹
- arguably, a right to resell the digital artwork, if this can be accomplished without making an unauthorized copy of the digital artwork.⁷⁰

If a work is linked to an NFT, the linking itself does not change the above equations of the rights of the copyright owner compared to the rights of owners of physical copies or digital copies of works. The NFT is separate from the copyright in the same manner that ownership of the underlying object or file bearing the expression of the work is separate from the copyright to the work.

C. What Copyrights Are Needed to Mint an NFT

There have been several complaints and even lawsuits filed over attempts to mint NFTs when the minter does not own or license the copyright to the underlying work. Perhaps the most publicized suit was between film producer Miramax, LLC and Quentin Tarantino, the director of some of Miramax's most famous movies, over Tarantino's attempt to create and sell NFTs that tokenize portions (scenes) from Tarantino's personal handwritten drafts of his screenplay of the 1994 film, *Pulp Fiction*.⁷¹ The questions the lawsuit raised were hinged on the interpretation of the copyrights for the movie and screenplay assigned from Tarantino to Miramax when the movie was produced, the rights regarding the screenplay reserved by Tarantino, and whether Tarantino's production of the NFTs exceeds Tarantino's reserved rights to further publish the screenplay in

69. 17 U.S.C. § 109(c). I have to preface this statement with “arguably” because the right to display comes from 17 U.S.C. § 109, and certain courts have held that the rights described in § 109 do not trump the reproduction rights of 17 U.S.C. § 106. *See infra* Section VI. This means that if the very act of displaying the file requires the making of an unauthorized copy of that file, as would be the case if a copy of the file was uploaded to the internet for display, then this form of display would be precluded unless authorized by the copyright owner. *Id.*

70. 17 U.S.C. § 109(a). As with the prior footnote, I have prefaced this statement with “arguably” because certain courts have held that there is no automatic right to resell a digital file under 17 U.S.C. § 109(a) if the very act of transferring the file requires the making of an unauthorized copy of that file. *See infra* Section VI.

71. *See* Complaint, Miramax, LLC v. Tarantino, 2:21-cv-08979-FMO-JC (C.D. Cal. Nov. 16, 2021), available at <https://www.thetmca.com/files/2021/12/miramax-v.-tarantino.pdf> [<https://perma.cc/SJ2G-J7FK>].

audio and electronic formats.⁷² The suit also raised the question of whether Tarantino’s scanning his handwritten drafts that led to the screenplay actually was an act of copying of the final screenplay of the movie—the copyrighted work itself.⁷³ The lawsuit settled in early September 2022,⁷⁴ but the questions it raised still are worth considering.



If the creator of an NFT owns the copyright to the digital or physical item being tokenized, there is nothing inherent in any of the three methods of linking I have previously discussed that would exceed the rights of the copyright holder. However, if the creator of the NFT does not own the copyright to a digital artwork or have permission to copy from the owner of the copyright, it would be difficult to mint the NFT to the work because the three methods⁷⁶ contemplate making a copy of the work at some point in the process:

- Example 1 – for a small image file, a copy of the digital file is encrypted and stored on blockchain itself,⁷⁷ and in most instances a copy will be uploaded to the sales platform for the listing of what is being offered for purchase.
- Example 2 – for a larger image file, a copy of the work is uploaded to a storage site, and a link to the copy is coded into the smart contract or provided in the NFT listing. An additional a copy most likely will be uploaded to the sales platform for the

72. *Id.* at 4-12 (Miramax also raises trademark claims regarding the mark “Pulp Fiction” in the suit).

73. Emily Behzadi, *The Fiction of NFTs and Copyright Infringement*, 170 U. PA. L. REV. ONLINE, <https://www.pennlawreview.com/2022/04/12/the-fiction-of-nfts-and-copyright-infringement/> [<https://perma.cc/PJZ9-QK9M>].

74. Jack Queen, *Tarantino, Miramax Settle Copyright Suit Over 'Pulp Fiction' NFTs*, REUTERS (Sept. 9, 2022, 2:19 PM), <https://www.reuters.com/legal/tarantino-miramax-settle-copyright-suit-over-pulp-fiction-nfts-2022-09-09> [<https://perma.cc/SAA3-8DN4>].

75. Photograph (cropped and modified) of Tarantino NFT home page, in *Tarantino NFTs*, <https://tarantinonfts.com> [<https://perma.cc/4KGL-QX95>] (last visited Dec. 29, 2022).

76. See discussion *supra* Section I.A.

77. Being insufficiently technically knowledgeable, I do not know if the method of uploading used to encode and store an image on the blockchain actually makes a copy of the work. Perhaps if the metadata or coding of the image itself is simply broken down into script that is coded into a smart contract, then a copy has not been made. But the listing for the NFT on a sales platform will almost assuredly feature a visual depiction of the image whose ownership is offered for purchase through the purchase of the NFT, and that image will be the product of copying.

listing of what is being offered for purchase.

- Example 3 – for a physical artwork, a digital photograph (copy) of the work is uploaded to a storage site along with a description of the physical work, and a link to the photograph and description is coded into the smart contract or provided in the NFT listing. An additional copy most likely will be uploaded to the sales platform for the listing of what is being offered for purchase.

Because the steps of creating an NFT often involve making copies of the asset that is to be tokenized, to avoid an infringement charge the minter of the NFT should own the copyright to the underlying work, or a license to create copies of the work for the purpose of creating the NFT, or receive permission from the rights owner. Only if there is no unauthorized copying of the original work can a minter of an NFT who does not own the copyright to the underlying digital or physical work be assured that their action in minting the NFT does not violate the copyright holder's rights.

Although I disclaim that this discussion constitutes legal advice in any form to any person, and although the lawsuit of *Miramax v. Tarantino* has settled, it appears from the known facts of the *Miramax v. Tarantino* dispute that Tarantino may have been able to tokenize pieces of paper on which Tarantino handwrote drafts of scenes of what eventually became the screenplay of the movie *Pulp Fiction* and then the motion picture itself. Miramax brought the suit to enforce its copyright ownership of the “work”—the expression fixed in the final screenplay and in the motion picture produced from that screenplay.⁷⁸ But Tarantino invited people to purchase the status of becoming the registered owner of one or more pieces of paper that have handwritten text on them.⁷⁹ The marketing of the NFTs glossed over the technical details so that the listing suggested that the purchaser would “own” a scene of *Pulp Fiction*, such as the “Royale with Cheese” scene.⁸⁰ But that really meant that the NFT purchaser would become the registered owner of pieces of paper that have handwritten notes and drafts of dialogue relating to what became the “Royale with Cheese” scene.⁸¹ The NFT itself does not incorporate the expression of the final work or even the expression in the drafts of the final work that appears on the pages; the NFT simply registers that the purchaser is now the owner of those pages. The

78. See *supra* notes 70-73 and accompanying text.

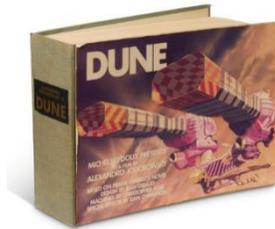
79. See Complaint, *supra* note 71, at 10, 13.

80. TARANTINO NFTS, *Royale with Cheese* listing, <https://tarantinonfts.com/nft/1> [<https://perma.cc/TAR6-NKB7>] (last visited Jun. 17, 2022). See also Movieclips, *Royale with Cheese – Pulp Fiction (2/12) Movie Clip (1994) HD*, YOUTUBE, https://www.youtube.com/watch?v=6Pkq_eBHXJ4 [<https://perma.cc/R8K7-9PCW>] (last visited Jun. 17, 2022).

81. See Karu F. Daniels, *Quentin Tarantino's 'Pulp Fiction' NFT Sells for \$1.1 Million*, N.Y. DAILY NEWS (Jan. 24, 2022, 4:25 PM), <https://www.nydailynews.com/snyde/ny-quentin-tarantino-pulp-fiction-nft-1-million-royale-with-cheese-scr-t-labs-20220124-2jv2qja2prhulmwoa3yi4doeje-story.html> [<https://perma.cc/M54S-KP3V>]. This status was worth \$1.1 million to the purchaser of the “Royale with Cheese” scene. See *id.*

NFT does not change the ownership of the copyright to these pages, or the expression on them, or any part of the copyright to the screenplay and motion picture that was ultimately produced from these notes and drafts.

Another case that drew attention in the NFT community in 2022 is that of a decentralized autonomous organization, Spice DAO, that invested in an historic book describing director Alejandro Jodorowsky's ambitious but failed attempt to make a fourteen-hour film of the saga of *Dune*, Frank Herbert's 1965 sci-fi masterwork.⁸² Spice DAO's founders apparently were unclear on the rights necessary to copy the work and make derivative works from the copy they purchased.⁸³ The group wanted to copy the work and "make [it] public" digitally and also wanted to make an animated series inspired by the book.⁸⁴ Although Spice DAO paid €2.6 million (\$3 million) at auction for the physical copy of the book, it did not purchase the copyright to the work.⁸⁵



86

Although I disclaim that this in any way constitutes legal advice, based on the limited facts known, Spice DAO could have tokenized the hard copy of the book they purchased without having to copy any part of the book. The listing on the sales platform could describe the physical book verbally, and if a small image of just the cover of the book was also posted with the NFT sales listing, it most likely would be a permitted display of the copy or a fair use for purposes of effectuating the resale right at least under United States law.⁸⁷ It is also

82. Gabriella Angeleti, *Crypto Group Shamed for Spending \$3m on 'Dune' Book, Mistakenly Believing It Had Acquired Copyright to Produce NFTs*, THE ART NEWSPAPER (Jan. 17, 2022), <https://www.theartnewspaper.com/2022/01/17/nft-group-shamed-jodorowsky-dune-book-copyright> [https://perma.cc/MY3U-7W99].

83. *See id.*

84. *Id.*

85. *Id.*

86. Photograph of Alejandro Jodorowsky's adaption of Frank Herbert's science fiction novel *Dune*, in Gabriella Angeleti, *Crypto Group Shamed for Spending \$3m on 'Dune' Book, Mistakenly Believing It Had Acquired Copyright to Produce NFTs*, THE ART NEWSPAPER (Jan. 17, 2022), <https://www.theartnewspaper.com/2022/01/17/nft-group-shamed-jodorowsky-dune-book-copyright> [https://perma.cc/MY3U-7W99].

87. *See Zorikova v. Kineticflix, LLC*, No. 2:19-cv-04214, 2022 WL 1266662, at *7 (C.D. Cal. Apr. 28, 2022) ("Displaying the front cover of the DVD [to facilitate resale] is no more copyright infringement than a video rental store displaying its physical copy of a videocassette on the shelf to make it available for rental, an act which, as far as this Court is aware, has never been

probable that Spice DAO could sell a fractionalized interest in the book through NFTs. For example, they could mint and sell an NFT to certify ownership of page fifteen of the book, and mint and sell another NFT to certify ownership of page sixteen of the book, and this would not violate the copyright if the pages were described verbally as I have done in this sentence. But making a high-resolution scan of each page of the book to show exactly what the NFT purchaser would be bidding on to become the registered owner of would be an unauthorized act of copying the work or making a new work that is an unauthorized derivative work.⁸⁸

VI. REALE OR DISPLAY OF DIGITAL WORKS WHEN YOU DO NOT OWN THE COPYRIGHT TO THE WORKS

NFTs may have made digital art a valuable collectible or investment by creating true scarcity—uniqueness—in the tokenized artwork and allowing one person to be registered on the blockchain as the creator of the art and another person to be registered as the owner of the artwork. But the digital nature of the work presents problems of its own for purchasers of a digital work who do not also purchase the copyright to the work.

A. *First Sale Doctrine and the Right to Resell Copyrighted Digital Items*

The “first sale” doctrine states that the owner of a lawfully made copy of the work has the right to resell the copy without seeking any further permission or license from the copyright owner of the work.⁸⁹ If you own a lawfully made copy of a copyrighted book, you can sell that copy without contacting the author or publisher for permission.

At this point, I will remind you that the copyrighted “work” is the “expression” itself, so it always is embodied and fixed in at least one copy.⁹⁰ The law defines a “copy” that way—it is any example of an object, thing, or medium in which the expression of the work is fixed.⁹¹ The first copy of the expression made typically is called the original work, but for copyright purposes it is just the first copy of the work. In the case of a painting or sculpture, it may

held to constitute copyright infringement.”) (interpreting 17 U.S.C. §§ 107 (fair use rights), 109(a),(c) (resale and display rights for owners of a copy of a work)). *See also* Listing for Herbert, Jodorowsky, and Giraud’s *Dune*, CHRISTIE’S, <https://www.christies.com/lot/lot-6345488> [https://perma.cc/E4VC-PN5H] (last visited Jun. 17, 2022) (advertising the auction of the book).

88. *See e.g.*, *Cambridge Univ. Press v. Patton*, 769 F.3d 1232, 1241-42 (11th Cir. 2014); *Harvester, Inc. v. Rule Joy Trammell + Rubio, LLC*, 716 F. Supp. 2d 428, 445 (E.D. Va. 2010); *Tiffany Design, Inc. v. Reno-Tahoe Specialty, Inc.*, 55 F. Supp. 2d 1113, 1118 (D. Nev. 1999).

89. 17 U.S.C. § 109(a).

90. *See* 17 U.S.C. § 101; *supra* Part III.

91. *See* 17 U.S.C. § 101 (defining “copies”).

be the only copy of the work made, but it still is defined in the law as a copy.⁹²

The resale right works fine with tangible, physical media. You can sell your physical copy of a book or a painting with no problem. But the digital nature of some copies creates a problem with the resale right.

How you do you sell and transfer a digital file without making an unauthorized copy of it?

The problem of how to sell a digital artwork without copying it is easy to answer if your lawfully made copy is a .jpeg, .gif, .wav or .mp3 file that resides on a tangible, physical object such as a compact disk, thumb drive, or DVD, or a motion picture on a VHS tape or DVD. You can sell and hand over the tangible medium with the digital file on it. No copy of the digital file needs to be created for this transfer to occur.⁹³ (Remember that this paragraph stated that digital copies on the disk or drive were lawfully created before you came to own the disk or drive; after that you can hand over the disk or drive to the purchaser without having to copy the digital files on it.)

But in this third decade of the twenty-first century world, digital artworks do not live their entire existence or, in general, any part of their existence on a tangible removable medium such as a disk or thumb drive. Digital files exist on the creator's hard drive, or a lawfully made copy exists on the web exchange's storage site or another internet storage site because the creator and copyright owner uploaded it in order to mint an NFT or list the digital work for sale.

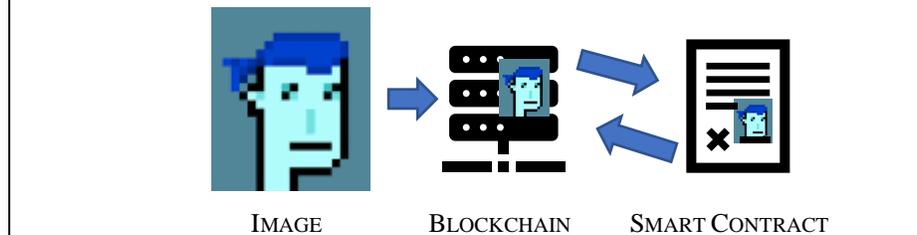
Now, the issues concerning digital works come to the front when the purchaser of the NFT would like to possess a copy of the digital artwork. In some instances (example 1 below), the code defining the artwork was stored on the blockchain and the transaction hash address was included in the smart contract of the NFT, so the owner of the smart contract of the NFT already "possesses" the artwork because no one has greater access or rights to the code than the NFT owner. This only is possible for very small, very pixelated image files such as CryptoPunks, which are only 24X24 pixels.⁹⁴

92. *Id.*

93. *Id.*

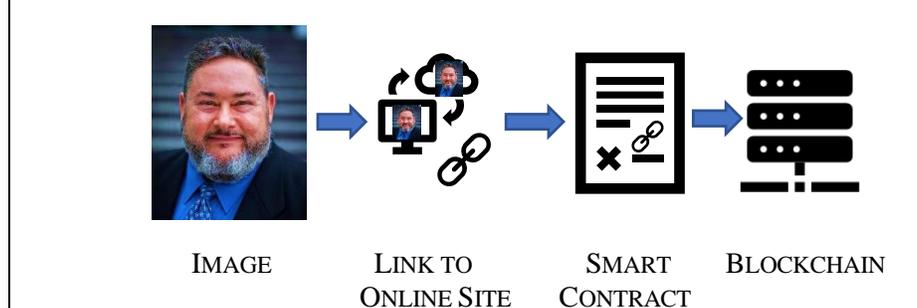
94. See *On-chain Cryptopunks*, *supra* note 21.

Example 1: A digital image with a tiny file size, such as a CryptoPunk, can be encrypted and stored directly on the blockchain, and then the transaction hash address (blockchain address) of the image can be coded into the smart contract of the NFT, which also is recorded on the blockchain.⁹⁵



In other instances (example 2), the NFT purchaser receives a link to the image file coded into the smart contract.

Example 2: A digital image with a larger file size can be stored in an online location (e.g., uploaded to an online sales platform or a dedicated storage site), and then a link to the online image is coded into the smart contract of the NFT and recorded on the blockchain.



Transferring an access code and a link to an online location is not an act of making an unauthorized copy.⁹⁶ However, using the access code or the link will create a copy of the file stored elsewhere—you cannot just use the link to pluck the .jpeg file from its storage site; what really happens is the internet transfer protocol (FTP – File Transfer Protocol, for example) will make a copy of it. The transfer protocol breaks down the file for transmission and reception over the internet protocol (e.g., HTTP – Hypertext Transfer Protocol) which creates a

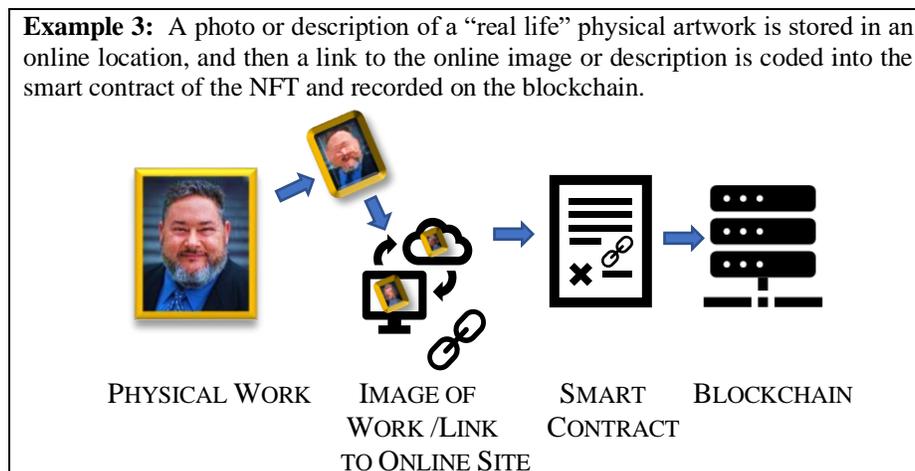
95. The best example of NFT art that is encrypted and stored on a blockchain is CryptoPunks where the art is hash-encoded and stored on the Ethereum blockchain. See *On-chain Cryptopunks*, *supra* note 21. See also *CryptoPunks Data Contract*, ETHERSCAN, <https://etherscan.io/address/0x16f5a35647d6f03d5d3da7b35409d65ba03af3b2#code> [https://perma.cc/48TU-TETH] (last visited Dec. 29, 2022) (Etherscan of the script of the encoded punks on Ethereum).

96. *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1161 (9th Cir. 2007); *Pearson Educ., Inc. v. Ishayev*, 963 F. Supp. 2d 239, 250-52 (S.D.N.Y. 2013). See also Behzadi, *supra* note 73.

fragmented copy of the image file, which is then reassembled into a complete image file on the recipient's end—hence, an act of copying has occurred.

What this means is that in example 2, under the strict terms of the law, the purchaser of the NFT does not automatically receive a copy of the digital artwork whose location is linked into the NFT, and if the purchaser wants a copy, they should ask the copyright owner first. Again, this is the legal answer; in practical terms, it would be a strange set of circumstances where the creator of the NFT, who is the owner of the copyright to the artwork, did not want the purchaser of the NFT to be able to obtain a copy of the very artwork whose ownership is registered on the blockchain as belonging to the purchaser.

In the case of a tokenized physical artwork (example 3), it is likely that the creator of the NFT took a digital photo or some other kind of representation or description of the item that was tokenized. If the NFT creator also owned the copyright, this is not an act of unauthorized copying.



Example 3 does not discuss whether the offer in the sale was for the physical artwork itself or just the status of becoming the registered owner of the physical artwork. If the sale was for the physical item, the purchaser should be offered a means to obtain and possess the physical, real-world artwork. After that, resale of a physical artwork, with or without the NFT, will proceed as with any other physical copy of a copyrighted work.

B. Display of a Copyrighted Digital Artwork When the Owner Does Not Own the Copyright to the Work

Section 109(c) of the U.S. Copyright Code grants the owner of a copy of a copyrighted work the right to display their copy of the work.⁹⁷ As with the first

⁹⁷ 17 U.S.C. § 109(c).

sale doctrine, the display right is complicated if the copy is a digital rendering of the work. The section reads:

[T]he owner of a particular copy lawfully made under this title . . . is entitled, without the authority of the copyright owner, to display that copy publicly, either directly or by the projection of no more than one image at a time, to viewers present at the place where the copy is located.⁹⁸

This provision was written in the 1970s, so it is no wonder that the display of digital creations was not foremost in Congress's mind when it wrote the section.⁹⁹ With digital art, it is difficult to answer the question of where the art is "located" if it is stored on the web or in cloud storage. If the digital file is located on a hard drive of a computer located in the owner's home or office, then presumably you can display it on a monitor in the home or office. However, most owners of digital art tokenized by an NFT want to display it publicly, widely, on the web and on social media. Many owners will want to make a profile picture out of their favorite or most valuable NFT-linked artwork. All of these additional uses require copying.

The conference report of the House committee drafting the Copyright Act explained that Section 109(c) (which was first drafted in § 109(b)) anticipated telecommunications over the air and wires, and stated that:

[S]ection 109(b) takes account of the potentialities of the new communications media, notably television, cable and optical transmission devices, and information storage and retrieval devices, for replacing printed copies with visual images. First of all, the public display of an image of a copyrighted work would not be exempted from copyright control if the copy from which the image was derived were outside the presence of the viewers. In other words, the display of a visual image of a copyrighted work would be an infringement if the image were transmitted by any method (by closed or open circuit television, for example, or by a computer system) from one place to members of the public located elsewhere.¹⁰⁰

Thus, transmission via the internet, which uses telephone wires, cable systems, and fiber optic cables, would be a transmission from one location to a "public located elsewhere," and thus not protected by Section 109(c).

The long and short of it is that the right to display copyrighted digital artworks is limited unless the copyright owner grants the purchaser of an NFT the right to display. It is true that the copyright owner who minted and sold the NFT will most likely be happy to allow, and might even encourage, the

98. *Id.*

99. *See* Pub. L. No. 94-553, § 109(b), 90 Stat. 2541, 2548 (1976) (The current language of § 109(c) was first located at § 109(b)).

100. H.R. REP. No. 94-1476, at 80 (1976) (Conf. Rep.). *See also* Video Pipeline, Inc. v. Buena Vista Home Ent., Inc., 192 F. Supp. 2d 321, 334 (D.N.J. 2002).

purchaser to display the artwork on social media or as their profile picture. However, this guide is discussing the actual legal relationship of the parties in the scenario of the sale of a digital artwork and not simply opining on who is likely to get a take-down letter or be sued.

CONCLUSION

Looking solely at the artwork in an NFT and its aesthetic or enduring value as artistic expression misses the point of this medium. NFTs are generally regarded as valuable because they are unique and you can own them, they have historical significance and connection to important figures in the crypto community, and at present, they are easier to buy and sell with cryptocurrency than other luxury items.¹⁰¹ The status of ownership, the clout, and the prestige it brings is perhaps the greatest explanation of NFTs' high valuation in the collectibles market.¹⁰² There also is a sense of "belonging" because many NFT projects offer participation in a community to purchasers of the tokens.

The developers of the metaverse currently contemplate using NFTs as a medium of exchange, a ticket to events, a calling card allowing entrance to gatherings, and, of course, as artistic expression to literally and figuratively color in the alternative reality experience. Digital artistic expression will be ubiquitous in the metaverse, and one question to answer will be who will be able to exploit the value of these creations now and in the future. Copyright is one answer to this question.

101. See Michael D. Murray, *NFTs and the Art World: What's Real and What's Not*, 29 UCLA ENT. L. REV. ____ (forthcoming 2023), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4082646 [<https://perma.cc/CTV6-BQAR>].

102. See generally Brian L. Frye, *After Copyright: Pwning NFTs in a Clout Economy*, 45 COLUM. J.L. & ARTS 341 (2022); Brian L. Frye, *How to Sell NFTs Without Really Trying*, 13 HARV. J. SPORTS & ENT. L. 113 (2022); Brian L. Frye, *Pwnership in the NFT Art Market*, SSRN (March 18, 2022), <https://ssrn.com/abstract=4060481> [<https://perma.cc/EW67-F6KD>].