

## NFTS AND THEIR DIGITAL FIRST SALE DOCTRINE APPLICABILITY

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### ABSTRACT

*The long-standing first sale doctrine, codified at 17 U.S.C. § 109, provides that the owner of a reproduction of a work receives the right to sell, display, or otherwise dispose of that particular copy, notwithstanding the exclusive rights of the copyright owner in the work. The emergence of blockchain technology raises new questions in copyright law and whether the time has now come for Congress to address the creation of a digital first sale doctrine. The digital goods exception created in *Capitol Records L.L.C. v. ReDigi Inc.* established that under the Copyright Act, the downloading of digital music constitutes reproduction. Therefore, the first sale doctrine does not apply to digital goods because they are transferred via what the Copyright Office has determined to be a reproduction. Consequently, the first sale doctrine has been consistently found to be limited to material items, rather than intangible digital goods. Blockchain and non-fungible tokens (NFTs) bring up novel questions under the first sale doctrine of copyright. The nature of NFTs makes it so that they are not hounded by issues, such as “double spending,” that many other digital technologies create.*

*This article will explore how a digital sale first sale doctrine should be created to account for emerging technology and the development of the blockchain. Moreover, the digital goods first sale doctrine could be created to adhere to the goals of the first sale doctrine by*

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*considering solutions put forward by scholars, such as basing the first sale doctrine in rivalrousness rather than tangibility and by using the European Union’s First Download Doctrine. The current solution to the digital goods exception to the first sale doctrine is smart contracts. However, smart contracts and licensing are an imperfect solution to the digital goods exception. Copyright holders should consider the benefits of a digital first sale doctrine to NFTs, including how NFTs discourage piracy and “user proliferation,” while encouraging purchases and opening new markets.*

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## I. INTRODUCTION

In 2001, in a report on the Digital Millennium Copyright Act Section 104, the Copyright Office commented on the creation of a digital first sale doctrine that “[t]he time may come when Congress may wish to address these concerns should they materialize.”<sup>1</sup> Thirteen years later, the first known non-fungible token (NFT) was created by Kevin McCoy and Anil Dash, which consisted of a video clip made by McCoy’s wife Jennifer.<sup>2</sup> The creation of blockchain technology in 2008,<sup>3</sup> the subsequent application of digital files to it, and the creation of the NFT in 2014 have been described as “100% based on greater fool theory.”<sup>4</sup> However, many argue that the foundations of this technology have the “potential to create new foundations for our economic and social systems.”<sup>5</sup> The differing usage of NFTs in areas such as art, collectibles, music, gaming, educational records, supply chain tracking, property ownership, and health records continues to emerge and

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<sup>1</sup> U.S. COPYRIGHT OFF., DMCA SECTION 104 REPORT, at xx (2001) [hereinafter DMCA SECTION 104 REPORT].

<sup>2</sup> *Quantum – The First NFT Ever Minted*, DIGITAL ARTISTS (Jan. 11, 2023), <https://www.digitalartists.com/blog/first-nft-ever/> [https://perma.cc/24D8-B9FK].

<sup>3</sup> Marco Iansiti & Karim R. Lakhani, *The Truth About Blockchain*, HARV. BUS. REV. JAN.–FEB. 2017 <https://hbr.org/2017/01/the-truth-about-blockchain#:~:text=Blockchain%E2%80%94peer%2Dto%2D,transferring%20ownership%2C%20and%20confirming%20transactions> [https://perma.cc/M8EX-3CGE] (last visited Jan. 14, 2024).

<sup>4</sup> James Vincent, *Bill Gates says NFTs are ‘100 percent based on greater fool theory’*, THE VERGE (June 15, 2022), <https://www.theverge.com/2022/6/15/23169008/bill-gates-cryptocurrency-nft-greater-fool-theory> [https://perma.cc/H82Q-TXQC].

<sup>5</sup> Iansiti & Lakhani, *supra* note 3.

grow.<sup>6</sup> As of June 2022, revenues from NFTs are estimated to reach \$130 billion or more by 2030.<sup>7</sup>

As technology has continued to grow and develop, the United States has answered by developing copyright law. The United States first codified copyright law in 1790 with the Copyright Act, which established a fourteen-year copyright term, renewable for another fourteen years, in books, charts, and maps.<sup>8</sup> In 1865, the Copyright Act was amended to include photographs.<sup>9</sup> However, Congress soon recognized that technology was moving at a pace far faster than the law. Thus, the Copyright Act of 1909 was created, which extended copyright to periodicals, lectures, dramatic or dramatico-musical compositions, musical compositions, works of art, reproductions of a work of art, drawings or plastic works of a scientific or technical character, and prints and pictorial illustrations as well.<sup>10</sup> However, in 1912, developing technology required that the 1909 Copyright Act again be updated by adding motion pictures.<sup>11</sup> Nonetheless, yet again, Congress created the Copyright Act of 1976, which attempted to match the law with the pace of technology. Since 1976, we have again seen huge developments in technology. As technologies continue to emerge, they “raise novel questions about how copyright should apply and whether the law should be revised to fully realize the Founders’ goal that copyright ‘promote the Progress of Science.’”<sup>12</sup>

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<sup>6</sup> U.S. GOV’T ACCOUNTABILITY OFF., GAO-22-105990, SCIENCE & TECH SPOTLIGHT: NON-FUNGIBLE TOKENS (NFTs) (2022).

<sup>7</sup> *Id.*

<sup>8</sup> AARON SCHWABACH, INTERNET AND THE LAW 48 (2d ed. 2014).

<sup>9</sup> *Id.*

<sup>10</sup> Copyright Act of 1909, Pub. L. No. 60-349, § 41, 35 Stat. 1075, 1084.

<sup>11</sup> SCHWABACH, *supra* note 8, at 48.

<sup>12</sup> Brad Greenberg, *Copyright Law and New Technologies: A Long and Complex Relationship*, LIBRARY OF CONGRESS (May 22, 2017) (quoting U.S. CONST. art. I, § 8, cl. 8), <https://blogs.loc.gov/copyright/2017>

The emergence of blockchain technology once again raises new questions in copyright law and whether, as predicted by the Copyright Office, the time has now come for Congress to address the creation of a digital first sale doctrine. When the digital exception to the first sale doctrine was created in 2013 by the *Capitol Records, L.L.C. v. ReDigi, Inc.* opinion,<sup>13</sup> the technological advances that blockchain has brought had not been realized. As discussed further in Part V, because NFTs are in the blockchain, they have different characteristics than the downloaded music seen in *ReDigi*. However, because NFTs are digital goods, they do not meet the tangibility requirements that are necessary for the first sale doctrine to be applicable.

Part II will begin by discussing the basics of the first sale doctrine and the creation of the principles of the first sale doctrine, such as the tangibility requirement. Moreover, Part II explains the application of the first sale doctrine to digital goods and the development of the digital goods exception to the first sale doctrine. Part III discusses copyright interests and concerns regarding the first sale doctrine, including the goal of the first sale doctrine, the tangibility requirement, the interests promoted by the first sale doctrine, and the concerns that the digital first sale doctrine creates. This article, in Part IV, will then discuss NFTs and their unique and novel qualities as digital goods in the blockchain. Part V details how the concerns regarding the digital first sale doctrine interact with NFTs and the solutions put forward to solve these concerns. Part VI introduces smart contracts and how they are currently imperfect ways for NFT owners to avoid the digital first sale exception. Lastly, Part VII discusses the copyright holder's

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/05/copyright-law-and-new-technologies-a-long-and-complex-relationship/ [https://perma.cc/6FBM-DNKH].

<sup>13</sup> See generally *Capitol Records, L.L.C. v. ReDigi, Inc.*, 934 F. Supp. 2d 640 (S.D.N.Y. 2013).

potential interests in the first sale doctrine's applicability to NFTs.

## II. THE FIRST SALE DOCTRINE AND THE DIGITAL GOODS EXCEPTION: AN OVERVIEW

Today, a copyright owner has six exclusive rights: (1) reproduction; (2) preparation of derivative works; (3) distribution; (4) public performance; (5) public display; and (6) digital public performance of sound recordings.<sup>14</sup> However, after a copyright owner parts with a copyrighted work, they cannot subsequently restrict the transfer of that copy, and thus the distribution right is ended.<sup>15</sup> According to 17 U.S.C. § 109(a), “[n]otwithstanding the provisions of section 106(3), the owner of a particular copy or phonorecord lawfully made under this title, or any person authorized by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord.”<sup>16</sup> Thus, the Copyright Act gives a buyer an affirmative defense against copyright infringement by showing that the work was lawfully owned before being distributed.<sup>17</sup> However, the buyer is only able to distribute the particular copy owned.<sup>18</sup> Therefore, the buyer of the copyrighted work is not entitled to full rights to the work once purchased and consequently, the buyer cannot make copies of the work.<sup>19</sup>

Moreover, the right to distribute is limited to transfers of ownership that are considered first sales. As

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<sup>14</sup> 17 U.S.C. § 106.

<sup>15</sup> 17 U.S.C. § 109.

<sup>16</sup> 17 U.S.C. § 109(a).

<sup>17</sup> U.S. DEP'T. OF JUST., CRIMINAL RESOURCE MANUAL § 1854 (last updated Jan. 17, 2020), <https://www.justice.gov/archives/jm/criminal-resource-manual-1854-copyright-infringement-first-sale-doctrine> [<https://perma.cc/WST6-XKBM>].

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

seen in § 109(d): “[t]he privileges prescribed by subsections (a) and (c) do not, unless authorized by the copyright owner, extend to any person who has acquired possession of the copy or phonorecord from the copyright owner, by rental, lease, loan, or otherwise, without acquiring ownership of it.”<sup>20</sup> Thus, the Copyright Act does recognize transactions that do not involve the actual transfer of ownership.

The first sale doctrine in the United States was first established in *Bobbs-Merrill Co. v. Straus*.<sup>21</sup> Bobbs-Merrill printed a notice in a book titled *The Castaway* that “the price of this book at retail is \$1 net. No dealer is licensed to sell it at a less price, and a sale at a less price will be treated as an infringement of the copyright.”<sup>22</sup> Straus purchased copies of *The Castaway*, where 90% of them were below the retail price and 10% were at the retail price.<sup>23</sup> Straus then decided to resell *The Castaway* for eighty-nine cents each, below the one-dollar retail price set by Bobbs-Merrill.<sup>24</sup> The issue before the Supreme Court was whether “the sole right to vend . . . secure[s] to the owner of the copyright the right, after a sale of the book to a purchaser, to restrict sales of the book at retail . . . because of a notice in the book that a sale at a different price will be treated as an infringement.”<sup>25</sup> The Supreme Court concluded that the copyright owner lost their right to control their work after the first sale was completed, writing “one who has sold a copyrighted article, without restriction, has parted with all right to control the sale of

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<sup>20</sup> 17 U.S.C. § 109(d).

<sup>21</sup> See Sarah Reis, *Toward a “Digital Transfer Doctrine”?* *The First Sale Doctrine in the Digital Era*, 109 NW. U. L. REV. 173, 178 (2014) (“Scholars generally regard *Bobbs-Merrill Co. v. Straus* as establishing the first sale doctrine in the United States.”).

<sup>22</sup> *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339, 341 (1908).

<sup>23</sup> *Id.* at 341–42.

<sup>24</sup> *Id.*

<sup>25</sup> *Id.* at 350.

it.”<sup>26</sup> Thus, *Bobbs-Merrill* established the concept of the first sale doctrine in American law.

The *Bobbs-Merrill* decision generated debate within the Copyright Subcommittee on whether copyright owners should be allowed more control over the works following a sale.<sup>27</sup> In response, Robert Parkinson gave a speech in favor of the first sale doctrine, arguing that to give copyright owners control after the first sale would be tantamount to allowing copyright owners to compel retailers “to surrender his business entirely to their control.”<sup>28</sup> Thus, a year after the Supreme Court’s ruling in *Bobbs-Merrill*, the first sale doctrine was codified in the Copyright Act of 1909.<sup>29</sup> The Copyright Act of 1976 then set out the current first sale doctrine in § 109.<sup>30</sup>

The first sale doctrine first began to struggle with the implications of new technology with the creation of records and CDs. In 1981, the first American rental record shop opened.<sup>31</sup> From there, rental shops began to spread quickly

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<sup>26</sup> *Id.*

<sup>27</sup> Rachel Ann Geist, *A License to Read: The Effect of E-Books on Publishers, Libraries, and the First Sale Doctrine*, 52 *IDEA* 63, 67 (2012).

<sup>28</sup> *Id.* at 68 (quoting *Common-Law Rights as Applied to Copyright: Hearing on H.R. 21592 Before the H. Subcomm. on Copyright of the H. Comm. on Patents*, 60th Cong. 32 (1909) (statement of Rep. Robert H. Parkinson, H. Comm. on Patents)).

<sup>29</sup> Copyright Act of 1909, Pub. L. No. 60-349, § 41, 35 Stat. 1075, 1084 (“That the copyright is distinct from the property in the material object copyrighted, and the sale or conveyance, by gift or otherwise, of the material object shall not of itself constitute a transfer of the copyright, nor shall the assignment of the copyright constitute a transfer of the title to the material object; but nothing in this Act shall be deemed to forbid, prevent, or restrict the transfer of any copy of a copyrighted work the possession of which has been lawfully obtained.”).

<sup>30</sup> Copyright Act of 1976, Pub. L. No. 94-553, § 109, 90 Stat. 2541, 2548–49.

<sup>31</sup> Evan Hess, *Code-ifying Copyright: An Architectural Solution to Digitally Expanding the First Sale Doctrine*, 81 *FORDHAM L. REV.* 1965, 1987 (2013).



around the United States.<sup>32</sup> Under the Copyright Act of 1976, the copyright holder could prevent a rental store from making copies of a record, but could not stop the record from being rented (where then customers would make copies at home).<sup>33</sup> Consequently, Congress passed the Record Rental Amendment of 1984 to the first sale doctrine, which excepted commercial “rental, lease, or lending” from the rights of a phonorecord owner.<sup>34</sup> Similarly, in 1992, Congress passed the Audio Home Recording Act, which in response to copyright owners’ concerns that consumers would make digital copies of goods, required that all digital audio recording devices sold include the Serial Copy Management System (SCMS).<sup>35</sup> The SCMS places a “copy” bit into any copies created with it, which prevents copies from being made from a copy.<sup>36</sup>

However, as technology has improved, reselling digital goods continued to be a difficult topic. In December 1996, the World Intellectual Property Organization (WIPO) passed the Copyright Treaty to address electronic works eligible for copyright right protection and the Performances and Phonograms Treaty to normalize copyright protections for performed works among member states.<sup>37</sup> Congress then passed the Digital Millennium Copyright Act of 1998 (DMCA) to implement these treaties.<sup>38</sup> Congress sought to

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<sup>32</sup> *Id.*

<sup>33</sup> *Id.* at 1988.

<sup>34</sup> *Id.*

<sup>35</sup> 17 U.S.C. §§ 1001–1010.

<sup>36</sup> See generally Benton J. Gaffney, *Copyright Statutes That Regulate Technology: A Comparative Analysis of the Audio Home Recording Act and the Digital Millennium Copyright Act*, 75 WASH. L. REV. 611, 621 (2000); Joel L. McKuin, *Home Audio Taping of Copyrighted Works and the Audio Home Recording Act of 1992: A Critical Analysis*, 16 HASTINGS COMMUN. & ENT L.J. 311, 325 (1994).

<sup>37</sup> David Nimmer, *A Riff on Fair Use in the Digital Millennium Copyright Act*, 148 U. PA. L. REV. 673, 681 (2000).

<sup>38</sup> DMCA SECTION 104 REPORT, *supra* note 1, at 8.

not only fulfill the United States' treaty obligations but also to "move the nation's copyright law into the digital age."<sup>39</sup>

One component of the DMCA that was debated was the first sale doctrine.<sup>40</sup> In 1995, the Information Infrastructure Task Force concluded that to transmit a copy digitally, the technology required that the transmission be a reproduction of the original copy, rather than the original copy owned by the transmitter.<sup>41</sup> Thus, the first sale doctrine under the Copyright Act did not protect Internet users who distributed digital works. Subsequently, Congress addressed this issue by enacting 17 U.S.C. §§ 117 and 512.<sup>42</sup> Section 117 permits an owner of a copy of a computer program to make a copy for "purely archival purposes if all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful, or where the making of such a copy is an essential step in the utilization of the computer program in conjunction with a machine and this is used in no other manner."<sup>43</sup> Under § 512, a service provider is not liable for infringement of copyright when another uses the service provider's system or network to transmit material.<sup>44</sup> Consequently, little was done under the DMCA to truly address the issue of the first sale doctrine and digital goods.<sup>45</sup>

Following the passage of the DMCA, debate continued concerning the first sale doctrine. Most of the commentary on the DMCA reflected a worry that copyright owners would restrict the operation of § 109 if not updated under the DMCA.<sup>46</sup> Additionally, many proponents of

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<sup>39</sup> *Id.* at v.

<sup>40</sup> *See id.* at 33.

<sup>41</sup> Hess, *supra* note 31, at 1996; *see also* 17 U.S.C. § 109.

<sup>42</sup> Hess, *supra* note 31, at 1997.

<sup>43</sup> DMCA SECTION 104 REPORT, *supra* note 1, at viii.

<sup>44</sup> 17 U.S.C. § 512(a).

<sup>45</sup> *See* Hess, *supra* note 31, at 1995 ("[T]he DMCA consciously avoided one concern: the effects of the internet of the first sale doctrine.").

<sup>46</sup> DMCA SECTION 104 REPORT, *supra* note 1, at ix.

updating § 109 argued that allowing customers to transfer digital copyrighted works would foster principles of the first sale doctrine and promote growth and creativity.<sup>47</sup> Moreover, many commenters saw the requirement that DVDs include the Content Scrambling System (CSS) as interference with the free market.<sup>48</sup> Thus, at the time the DMCA was passed, there was already substantial debate regarding whether the exclusion of digital goods from the first sale doctrine would harm fundamental principles underlying copyright law.

Consequently, § 104 of the DMCA directed the Register of Copyrights and the Assistant Secretary for Communications and Information of the Department of Counsel to submit a report on the “development of electronic commerce and associated technology on the operation of sections 109 and 117 of title 17, United States Code . . . [and] the relationship between existing and emergent technology and the operation of sections 109 and 117 of title 17, United States Code.”<sup>49</sup> Thus, in 2001, the Copyright Office published the DMCA-mandated report, which ultimately recommended no change to the Copyright Act.

Adhering to the ideas expressed in the *Bobbs-Merrill Co.* decision, the Copyright Office opined that:

The tangible nature of the copy is not a mere relic of a bygone technology. It is a defining element of the first sale doctrine and critical to its rationale. This is because the first sale doctrine is an outgrowth of the distinction between ownership of intangible intellectual property (the copyright) and ownership of tangible personal property (the copy).<sup>50</sup>

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<sup>47</sup> *Id.* at xi.

<sup>48</sup> *Id.* at ix.

<sup>49</sup> Digital Millennium Copyright Act (DMCA), Pub. L. No. 105-304 § 104, 112 Stat. 2860, 2876 (1998).

<sup>50</sup> DMCA SECTION 104 REPORT, *supra* note 1, at 86.

The Copyright Office pointed out that the ownership of a copyright is distinct from the ownership of a material object.<sup>51</sup> Since the distribution of a digital good does not “implicate the alienability of a physical artifact,” the sender is not exercising control over a physical object.<sup>52</sup> Thus, the Copyright Office reaffirmed that because digital goods are not tangible objects, like paper copies or phonorecords, they do not meet the materiality requirement of the Copyright Act.

Moreover, as discussed later in this article, there are several substantive differences between digital goods and material goods underpinning the Copyright Office’s position that the first sale doctrine should not apply to digital goods. One difference concerns the concept of unlimited duplication of a file while the transmitter retains the original copy.<sup>53</sup> The Copyright Office deemed the solution of forward-and-delete technology (where the digital file is automatically deleted from a transferor’s computer upon transfer of the file) as “unworkable . . . because sufficient technology did not exist when the report was written.”<sup>54</sup> Moreover, the Copyright Office concluded that there were too many differences between digital goods and physical goods, such as the lack of degradation of digital goods and the increased risk of piracy of digital content.<sup>55</sup>

Additionally, in its DMCA Section 104 Report, the Copyright Office identified three arguments that proponents of the digital sale doctrine believed furthered the first sale

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<sup>51</sup> *Id.* at 87.

<sup>52</sup> *Id.*

<sup>53</sup> See Phillip Shaverdian, *Blockchain-based Digital Assets and the Case for Revisiting Copyright’s First Sale Doctrine*, UCLA L. REV. (Feb. 19, 2019).

<sup>54</sup> Reis, *supra* note 21, at 184; see DMCA SECTION 104 REPORT, *supra* note 1, at 98 (“Even assuming that it is developed in the future, the technology would have to be robust, persistent, and fairly easy to use.”).

<sup>55</sup> DMCA SECTION 104 REPORT, *supra* note 1, at 82, 97–98.

doctrine and refuted each in turn.<sup>56</sup> Firstly, commenters argued that the first sale doctrine results from a calculation of incentives to create.<sup>57</sup> The Copyright Office responded, arguing that this policy is not supported by legislation and may serve to harm the market through an increased risk of infringement.<sup>58</sup> Secondly, some commenters contended that the first sale doctrine's purpose is to promote the progress of science and the arts.<sup>59</sup> The Copyright Office responded fairly vaguely, writing that while this purpose may undergird the entire Copyright Act, "particular provisions of the law have more precise purposes, as is the case here."<sup>60</sup> Lastly, commenters argued that the first sale doctrine is rooted in the right of access.<sup>61</sup> The Copyright Office responded that neither *Bobbs-Merrill* nor the Copyright Act of 1909 supports the idea that the first sale doctrine is a stand-in for the right of access to copyrighted works.<sup>62</sup>

In March 2013, the Supreme Court strengthened the first sale doctrine's protection of customers. In *Kirtsaeng v. John Wiley & Sons, Inc.*, the Supreme Court looked at whether the first sale doctrine would protect a buyer or lawful owner of a copy of a copyrighted work that was printed abroad.<sup>63</sup> The Respondent, John Wiley & Sons, Inc., published academic textbooks and assigned its wholly-owned foreign subsidiary the rights to publish, print, and sell academic textbooks abroad.<sup>64</sup> Kirtsaeng, a citizen of Thailand, moved to the United States to study at Cornell, and then the University of Southern California.<sup>65</sup> While in the

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<sup>56</sup> *Id.* at 88–89.

<sup>57</sup> *Id.* at 88.

<sup>58</sup> *Id.*

<sup>59</sup> *Id.*

<sup>60</sup> *Id.* at 88–89.

<sup>61</sup> DMCA SECTION 104 REPORT, *supra* note 1, at 89.

<sup>62</sup> *Id.*

<sup>63</sup> *Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519, 524 (2013).

<sup>64</sup> *Id.* at 525–26.

<sup>65</sup> *Id.* at 527.

United States, he would have family and friends buy foreign copies of John Wiley & Sons' textbooks at lower prices than the American editions and mail them to him in the United States.<sup>66</sup> He would then sell these foreign editions in the United States, reimburse his family and friends, and keep the profit.<sup>67</sup> John Wiley & Sons brought a copyright infringement suit and argued that the first sale doctrine had geographical boundaries;<sup>68</sup> however, the court found in favor of *Kirtsaeng*, recognizing the importance of the secondary market and its benefits to consumers.<sup>69</sup> Specifically, the court recognized that through libraries, booksellers, retailers, and museums, the secondary market benefits consumers through the spread of information, technology, and art.<sup>70</sup> However, the court noted that § 109(a) "now makes clear that a lessee of a copy will *not* receive 'first sale' protection but one who *owns* a copy *will* receive 'first sale' protection, *provided*, of course, that the copy was '*lawfully made*' and not pirated."<sup>71</sup> Thus, *Kirtsaeng*, like the Copyright Office's Section 104 Report, suggests that the first sale doctrine is limited to physical copyrighted works.<sup>72</sup>

Just weeks after the *Kirtsaeng* decision, the United States District Court for the Southern District of New York found that the first sale doctrine did not apply to digital music files in *Capitol Records, L.L.C. v. ReDigi, Inc.*<sup>73</sup> *ReDigi* then went to the United States Court of Appeals for the Second Circuit, which affirmed that *ReDigi*'s operations

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<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

<sup>68</sup> *Id.* at 527–29.

<sup>69</sup> *Kirtsaeng*, 586 U.S. at 539, 554.

<sup>70</sup> *Id.* at 540.

<sup>71</sup> *Id.* at 535 (quoting 17 U.S.C. § 109(a)).

<sup>72</sup> *Reis*, *supra* note 21, at 180.

<sup>73</sup> *Capitol Records, L.L.C. v. ReDigi, Inc.*, 934 F. Supp. 2d 640, 648 (S.D.N.Y. 2013).

had resulted in copyright infringement.<sup>74</sup> ReDigi offered services where people could “sell their legally acquired digital music files, and buy used digital music from others at a fraction of the price currently available on iTunes.”<sup>75</sup> To sell music through ReDigi, users first had to download its “Media Manager” to their computer.<sup>76</sup> The Media Manager would then analyze the computer contents and validate music that was eligible for sale.<sup>77</sup> The ReDigi user was then required to put the music into ReDigi’s remote server, called the “Cloud Locker.”<sup>78</sup> A music file transferred to the Cloud Locker could not be accessed, played, or perceived,<sup>79</sup> and once the digital file was in the Cloud Locker, ReDigi software sent a command to delete the digital file from the permanent storage on the device.<sup>80</sup> Thus, “[o]nce all the packets of the source file [had] been transferred to ReDigi’s server, the Eligible File [was] entirely removed from the user’s device.”<sup>81</sup> Once the file was resold on ReDigi’s market, the new purchaser had exclusive access to the digital file and could stream the song from their Cloud Locker or download the song to their device, which would delete the file from the Cloud Locker.<sup>82</sup>

Moreover, the Media Manager guarded against a user retaining copies of a digital file by continuously monitoring a user’s computer’s hard drive and connected devices for the detection of copies.<sup>83</sup> If copies were then detected, the Media Manager would prompt the user to delete the copy of

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<sup>74</sup> *Capitol Records, L.L.C. v. ReDigi, Inc.*, 910 F.3d 649, 652 (2d Cir. 2018).

<sup>75</sup> *Capitol Records*, 934 F. Supp. 2d at 645.

<sup>76</sup> *Capitol Records*, 910 F.3d at 652.

<sup>77</sup> *Id.* at 652–53.

<sup>78</sup> *Id.* at 653.

<sup>79</sup> *Id.*

<sup>80</sup> *Id.*

<sup>81</sup> *Id.*

<sup>82</sup> *Capitol Records*, 910 F.3d at 654.

<sup>83</sup> *Id.*

the file.<sup>84</sup> If during the upload process to the Cloud Locker a duplicate file was detected, ReDigi blocked the upload.<sup>85</sup> After the upload, ReDigi continued to monitor for copies, and if detected, prompted the user to delete the copy.<sup>86</sup> If the user still did not delete the copy, ReDigi suspended the account.<sup>87</sup>

Under this set of facts, the court considered whether a digital music file may be resold by its owner through ReDigi under the first sale doctrine.<sup>88</sup> The District Court found that ReDigi's resale was infringing for two reasons: "[t]he first reason was that, in the course of ReDigi's transfer, the phonorecord has been reproduced in a manner that violates the Plaintiff's exclusive control of *reproduction* under § 106(1); the second was that the digital files sold through ReDigi, being unlawful reproductions, are not subject to the resale right established by § 109(a), which applies solely to a 'particular . . . phonorecord . . . lawfully made.'"<sup>89</sup> The Second Circuit agreed with the District Court on the first argument and thus found sufficient reason to rule in favor of Capitol Records.<sup>90</sup> It did not make a ruling on the District Court's second reason.<sup>91</sup>

Regarding the infringement of Capitol Records' reproduction right, the Second Circuit wrote that when a digital file was purchased, it was embodied "'for a period of more than a transitory duration' in a computer or other physical storage device."<sup>92</sup> Thus, when a digital file was transferred from a user's computer to a new purchaser

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<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*

<sup>88</sup> *Capitol Records*, 910 F.3d at 655.

<sup>89</sup> *Id.* at 656 (quoting 17 U.S.C. § 109(a)).

<sup>90</sup> *Id.*

<sup>91</sup> *Id.*

<sup>92</sup> *Id.* at 657 (quoting *Cartoon Network LP v. CSC Holdings, Inc.*, 546 F.3d 121, 127 (2d Cir. 2008)).



through ReDigi, “the digital file [was] first received and stored on ReDigi’s server and then, at the new purchaser’s option, may also be subsequently received and stored on the new purchaser’s device.”<sup>93</sup> Consequently, this process violated a copyright owner’s reproduction right because “[a]t each of these steps, the digital file [was] fixed in a new material object.”<sup>94</sup> To further explain this process, when a user downloads a song, it is encoded on a segment of the user’s hard disk.<sup>95</sup> That segment of the hard disk containing the data for the song is thus the “phonorecord” within the meaning of § 109(a).<sup>96</sup> When a song is then downloaded to a new computer, the file is reproduced and becomes a new phonorecord.<sup>97</sup> Accordingly, the District Court concluded that the transfer of digital music files from one hard disk to a new hard disk was a reproduction under the Copyright Act.<sup>98</sup>

In further explanation of why the first sale doctrine was not applicable, the court reasoned that the transfer of a digital file is a reproduction, rather than the same file being transferred, thus the first sale doctrine did not apply.<sup>99</sup> The court summarized this concept by stating that “[b]ecause it is therefore impossible for the user to sell her ‘particular’ phonorecord on ReDigi, the first sale statute cannot provide a defense. Put another way, the first sale defense is limited to material items, like records, that the copyright owner put into the stream of commerce.”<sup>100</sup> Thus, the first sale doctrine does not apply to the resale of digital music due to the intangible nature of digital goods.

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<sup>93</sup> *Id.*

<sup>94</sup> *Capitol Records*, 910 F.3d at 657.

<sup>95</sup> *Capitol Records*, 934 F. Supp. 2d at 649 (quoting *London-Sire Records, Inc. v. John Doe 1*, 542 F. Supp. 2d 153, 171 (D. Mass. 2008)).

<sup>96</sup> *Id.* at 649 (quoting *London-Sire Records, Inc.*, 542 F. Supp. 2d at 171).

<sup>97</sup> *Id.*

<sup>98</sup> *Id.*

<sup>99</sup> *Id.* at 655.

<sup>100</sup> *Id.*

### III. COPYRIGHT INTERESTS AND CONCERNS

#### A. *Copyright Interests as Articulated by Bobbs-Merrill*

In passing the Copyright Act in the 1790s, Congress sought to balance the desire to promote progress in the sciences and arts with the public’s interest in accessing this information and art.<sup>101</sup> The first sale doctrine acts as “a thumb on the scale in favor of access in this balancing test between public access and control for creator incentive.”<sup>102</sup> *Bobbs-Merrill Co. v. Straus* articulated this balance. The court stated that:

In our view the copyright statutes, while protecting the owner of the copyright in his right to multiply and sell his production, do not create the right to impose, by notice, such as is disclosed in this case, a limitation at which the book shall be sold at retail by future purchasers, with whom there is no privity of contract.<sup>103</sup>

Thus, the first sale doctrine from its conception was concerned with balancing the right of the copyright owner and the customer’s ability to make a return on a purchase. *Kirtsaeng* further elaborated on this balance, illustrating the “importance of leaving buyers of goods free to compete with each other when reselling or otherwise disposing of those goods” through the first sale doctrine.<sup>104</sup>

Moreover, it is important to recognize that this early decision on the first sale doctrine is deeply rooted in tangible property.<sup>105</sup> In the Section 104 Report, the Copyright Office

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<sup>101</sup> Hess, *supra* note 31, at 1982.

<sup>102</sup> *Id.* at 1971.

<sup>103</sup> *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339, 350 (1908).

<sup>104</sup> *Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519, 539 (2013).

<sup>105</sup> Hess, *supra* note 31, at 1999.

argued that the first sale doctrine as originally articulated in *Bobbs-Merrill* was rooted in the “‘common law rule against restraints on the alienation of tangible property,’ through which courts disfavored an owner conditioning the conveyance of their real property on restrictions to future conveyance of that property.”<sup>106</sup> Thus, according to the Copyright Office, the transfer of a digital work implicates the reproduction right rather than exercising dominion over the tangible property due to the intangible nature of digital works.<sup>107</sup> Therefore, the “tangible nature of the copy is not a mere relic of a bygone technology. It is a defining element of the first sale doctrine and critical to its rationale.”<sup>108</sup>

## B. Six Interests Promoted by the First Sale Doctrine

Out of the many different arguments formulated over the 100 years since the first sale doctrine was first articulated in American law in *Bobbs-Merrill*, scholars have identified six categories representing the interests that are fostered by the first sale doctrine: (1) access; (2) preservation; (3) privacy; (4) transactional clarity; (5) innovation; and (6) platform competition.<sup>109</sup>

The first of these policy arguments is access, which can be further split into affordability and availability.<sup>110</sup> The first sale doctrine improves access to art and information because it makes works more affordable and available.<sup>111</sup>

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<sup>106</sup> Chelsea Lim, *The Digital First Sale Doctrine in a Blockchain World: NFTs and the Temporary Reproduction Exception*, 91 *FORDHAM L. REV.* 721, 733 (2022) (quoting DMCA SECTION 104 REPORT, *supra* note 1, at xix).

<sup>107</sup> DMCA SECTION 104 REPORT, *supra* note 1, at 86; *see also* Lim, *supra* note 106, at 733.

<sup>108</sup> DMCA SECTION 104 REPORT, *supra* note 1, at 86.

<sup>109</sup> Hess, *supra* note 31, at 1971.

<sup>110</sup> Reis, *supra* note 21, at 189.

<sup>111</sup> Hess, *supra* note 31, at 1972.

The first sale doctrine does this by creating retail competition—once a copyright owner sells their work to a retailer, the retailer can then sell the work at any price. Thus, the retailers set prices in competition with each other.<sup>112</sup> Secondary markets are important because they place a “downward pressure on price,” which results in cheaper products for consumers, although preowned.<sup>113</sup> Moreover, the first sale doctrine allows copyrighted works to be more available because works can continue to be sold by those who have already purchased the work, even if the original copyright owner later decides to suppress or make the work unavailable.<sup>114</sup> Thus, the first sale doctrine allows the work to stay in circulation. As Reis writes, “[t]he Constitution states that the purpose of copyright is ‘[t]o promote the Progress of Science and useful Arts.’ Courts must remember this utilitarian purpose of copyright law and prioritize the public interest in accessing educational and written materials over copyright owners’ desire to assert control over a copy of a work after a first sale.”<sup>115</sup>

Second, the first sale doctrine promotes preservation by placing the preservation of the work into the hands of whoever has purchased it, rather than just the copyright owner.<sup>116</sup> At the current moment, if a book is only published digitally and the author decides to pull the book from its retailer, the work would be lost to any future reader.<sup>117</sup> Moreover, if a purchaser no longer wants a physical work, they may then sell it or pass it on to someone who does rather than discard the work.<sup>118</sup>

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<sup>112</sup> *Id.*

<sup>113</sup> Reis, *supra* note 21, at 189 (quoting Aaron Perzanowski & Jason Schultz, *Digital Exhaustion*, 58 UCLA L. REV. 889, 904 (2011)).

<sup>114</sup> Hess, *supra* note 31, at 1973–74.

<sup>115</sup> Reis, *supra* note 21, at 189–90 (quoting U.S. CONST. art. I, § 8, cl. 8.).

<sup>116</sup> Hess, *supra* note 31, at 1975.

<sup>117</sup> Reis, *supra* note 21, at 190.

<sup>118</sup> Hess, *supra* note 31, at 1975.

Third, privacy is promoted through the first sale doctrine because people are allowed to transfer works that they own without the permission of the copyright holder.<sup>119</sup> Accordingly, customers may transfer works privately between each other.<sup>120</sup> Thus, this “fosters privacy and anonymity.”<sup>121</sup>

Fourth, the first sale doctrine leads to transaction clarity by clarifying a purchaser’s rights when a copyrighted work is bought.<sup>122</sup> Licenses that apply to digital works “often confuse consumers and impose high information costs on consumers during transactions.”<sup>123</sup> This confusion is increased by how companies modify or update end-user licensing agreements or terms of use.<sup>124</sup> While the sale of a physical item, such as a book is very straightforward, “it is much less clear to a customer about what she can do with an e-book subject to various use restrictions that can change at any time.”<sup>125</sup>

Fifth, the first sale doctrine promotes innovation in three ways: (1) innovation by copyright holders; (2) innovation by secondary market providers; and (3) innovation by users.<sup>126</sup> Copyright holders have an incentive to innovate to keep a work competitive after the initial sale.<sup>127</sup> An example of this is seen in how academic textbook publishers update textbooks frequently to release new editions.<sup>128</sup> Moreover, the ability to resell creates new businesses and markets where customers can take advantage

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<sup>119</sup> Reis, *supra* note 21, at 190–91.

<sup>120</sup> *Id.* at 191.

<sup>121</sup> Hess, *supra* note 31, at 1975.

<sup>122</sup> *Id.* at 1976.

<sup>123</sup> Reis, *supra* note 21, at 191.

<sup>124</sup> *Id.*

<sup>125</sup> *Id.*

<sup>126</sup> *Id.*

<sup>127</sup> Hess, *supra* note 31, at 1976.

<sup>128</sup> Reis, *supra* note 21, at 191.

of the resale of copyrighted goods.<sup>129</sup> The first sale doctrine enables user innovation because users develop new uses for products or modify them to increase their value in ways they would otherwise not be able to do due to cost or worry regarding permission from the original copyright holder.<sup>130</sup> Thus, “[u]sers often experiment in unanticipated ways with goods they purchase, leading to new product advances and markets.”<sup>131</sup>

Lastly, the first sale doctrine stops a consumer from being locked-in to one platform.<sup>132</sup> Consumers become locked-in when it becomes too costly to switch from one platform to another.<sup>133</sup> This then stops competition and innovation between platforms because customers are unable to switch from one platform to another.<sup>134</sup> An example of lock-in is seen with Kindle.<sup>135</sup> Kindle e-books are only compatible with the Kindle.<sup>136</sup> This means that if a person’s Kindle stops working, they would likely find it too cost-prohibitive to switch to another e-reader device because they would be unable to transfer any of their previously purchased Kindle e-books to the new device.<sup>137</sup> Thus, the customer is locked-in to only one e-reading device. Preventing lock-in helps to promote competition and innovation by allowing customers to switch between platforms.<sup>138</sup>

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<sup>129</sup> Hess, *supra* note 31, at 1976–77.

<sup>130</sup> Aaron Perzanowski & Jason Schultz, *Digital Exhaustion*, 58 UCLA L. REV. 889, 898–900 (2011) (“For example, one study found that mountain bike users developed or modified their bikes, clothing, and equipment to create over forty new innovations in the sport.”).

<sup>131</sup> *Id.* at 898.

<sup>132</sup> Hess, *supra* note 31, at 1978.

<sup>133</sup> *Id.*

<sup>134</sup> *Id.*

<sup>135</sup> Reis, *supra* note 21, at 192.

<sup>136</sup> *Id.*

<sup>137</sup> *Id.*

<sup>138</sup> *Id.*

### C. *Digital First Sale Doctrine Concerns*

The court in *ReDigi* stated that one reason the first sale doctrine is only applicable to tangible, material goods is that they can degrade, thus making the copy less desirable.<sup>139</sup> As noted in the Digital Millennium Copyright Act Section 104 Report:

Physical copies of works degrade with time and use, making used copies less desirable than new ones. Digital information does not degrade, and can be reproduced perfectly on a recipient's computer. The "used" copy is just as desirable as (in fact, is indistinguishable from) a new copy of the same work. Time, space, effort and cost no longer act as barriers to the movement of copies, since digital copies can be transmitted nearly instantaneously anywhere in the world with minimal effort and negligible cost. The need to transport physical copies of works, which acts as a natural brake on the effect of resales on the copyright owner's market, no longer exists in the realm of digital transmissions. The ability of such "used" copies to compete for market share with new copies is thus far greater in the digital world.<sup>140</sup>

This quality of digital goods also factors into copyright owners' worries concerning piracy.<sup>141</sup> Digital works can be pirated and sold on a secondary marketplace for a cheaper cost with no difference in the quality of the goods.<sup>142</sup> Moreover, because digital goods do not degrade, copyright owners worry that consumers will not purchase new works; however, scholars argue that this fear is unfounded because people will continue to buy new works

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<sup>139</sup> Capitol Records, L.L.C. v. ReDigi, Inc., 934 F. Supp. 2d 640, 645 (S.D.N.Y. 2013).

<sup>140</sup> DMCA SECTION 104 REPORT, *supra* note 1, at 82–83.

<sup>141</sup> *Id.* at 83–84.

<sup>142</sup> Reis, *supra* note 21, at 195.

rather than wait for the work to appear on the secondary market.<sup>143</sup>

Additionally, the court in *ReDigi* was also worried about the forward-and-delete problem. While ReDigi's Media Manager did search for copies of the work, it would not be able to find or prevent copies that were stored in other locations.<sup>144</sup> Thus, "there was no way for ReDigi to detect or prevent the retention of duplicates after the resale."<sup>145</sup> Accordingly, the court was concerned that if the first sale doctrine applied, a "double spending" issue would be created, where people could sell a digital good and still retain it; this is impossible when reselling material goods and would give the customer a right to reproduce, not just distribute. Thus, the court in *ReDigi* and the Copyright Office in the Section 104 Report regarded forward-and-delete models of technology as ineffective at preventing the reproduction of digital works.<sup>146</sup> This has continued to be a worry of copyright owners, who are concerned that the risk of piracy is too high with forward-and-delete technology.<sup>147</sup>

#### IV. NFTS: AN OVERVIEW

An NFT is a digital identifier that represents a digital or physical asset.<sup>148</sup> To create an NFT, the creator uploads

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<sup>143</sup> *Id.* at 196 ("A secondary market, though digital, remains second best. New releases, which often constitute the greatest portion of a copyright holder's earnings, seldom appear on the secondary market until after their novelty and popularity have ebbed. . . . Consequently, even with a robust secondary market present, a copyright holder will retain the ability to capture the lion's share of revenues from initial sales to customers seeking access to the work sooner rather than later." (quoting Theodore Serra, Note, *Rebalancing at Resale: ReDigi, Royalties, and the Digital Secondary Market*, 93 B.U. L. REV. 1753, 1777 (2013))).

<sup>144</sup> *Capitol Records*, 934 F. Supp. 2d at 645.

<sup>145</sup> Shaverdian, *supra* note 53.

<sup>146</sup> Lim, *supra* note 106, at 739.

<sup>147</sup> *Id.*

<sup>148</sup> U.S. GOV'T ACCOUNTABILITY OFF., *supra* note 6.



a digital file to an NFT marketplace.<sup>149</sup> The marketplace then assigns the digital file a unique identifier, which is the NFT, and adds it to the blockchain.<sup>150</sup> The blockchain acts as a ledger to verify, store, and track the NFT.<sup>151</sup> Because NFTs are in the blockchain, they cannot be copied like other digital goods because a record of ownership is stored.<sup>152</sup> Moreover, blockchain technology also ensures that digital asset is transferred in their entirety.<sup>153</sup> Many NFTs are not the actual asset itself.<sup>154</sup> For physical assets, the NFT represents ownership of the asset.<sup>155</sup> In the case of digital assets, the NFT represents “ownership of the unique code linked to or associated with the asset’s metadata-information about the asset, such as the creation date, size, or where it is stored on the Internet.”<sup>156</sup>

NFTs have two important characteristics that make them distinctive. First, an NFT is non-fungible, which means it is unique and not interchangeable with other assets, unlike dollar bills or cryptocurrency.<sup>157</sup> Each NFT has a unique code assigned to it, which then makes it easy to differentiate between NFTs.<sup>158</sup> Scarcity is produced when a work is valued based on its exclusive qualities. Digital files can be copied an infinite number of times without losing any quality.<sup>159</sup> However, because each NFT has its own code

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<sup>149</sup> *Id.*

<sup>150</sup> *Id.*

<sup>151</sup> Shaverdian, *supra* note 53.

<sup>152</sup> *Id.*

<sup>153</sup> *Id.*

<sup>154</sup> U.S. GOV’T ACCOUNTABILITY OFF, *supra* note 6.

<sup>155</sup> *Id.*

<sup>156</sup> *Id.*

<sup>157</sup> *Id.*

<sup>158</sup> Lisa Theng, *Non-fungible tokens and their legal implications*, IR GLOBAL (June 9, 2021), <https://www.irglobal.com/article/non-fungible-tokens-and-their-legal-implications-2/> [<https://perma.cc/A275-RJUS>].

<sup>159</sup> Lim, *supra* note 106, at 751.

and is unique, it is scarce and its value is increased.<sup>160</sup> Second, NFTS are immutable, meaning that “[t]he information stored in an NFT cannot be fundamentally changed or amended in the future.”<sup>161</sup> This makes it so that the unique information attached to the NFT, such as payment terms, transfer uses, or records, remains permanent.<sup>162</sup>

NFTs have a variety of uses. Currently, many NFTs are used to sell artwork and content.<sup>163</sup> Artwork, such as Kevin Abosch’s photograph “Forever Rose” and Beeple’s “Ocean Front,” have sold for millions of dollars.<sup>164</sup> Other, more unique and creative works, such as a Mad Dog Jones’ piece named “Replicator,” which generates new NFTs, have also fetched huge sums.<sup>165</sup> Thus, NFTs may also be used with artists and creators to allow artists to sell their work without relying upon galleries.<sup>166</sup> Moreover, NFTs may also be used in other, more creative ways and many people are experimenting with the use of NFTs to track documents and agreements.<sup>167</sup> Some companies, like StockX, are using NFTs in conjunction with collectibles or luxury goods to track ownership and authenticate items.<sup>168</sup> NFTs can track ownership in other fields, such as real estate, where the deed would be on the blockchain, easily showing an owner the

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<sup>160</sup> Theng, *supra* note 158.

<sup>161</sup> Lim, *supra* note 106, at 727.

<sup>162</sup> *Id.*

<sup>163</sup> See Sarah Cascone, *Here Are the 14 Most Expensive NFTs Sold to Date*, ARTNET NEWS, (June 21, 2021), <https://news.artnet.com/market/updated-most-expensive-nfts-1980942> [<https://perma.cc/CUP6-9SRU>].

<sup>164</sup> *Id.*

<sup>165</sup> *Id.*

<sup>166</sup> U.S. GOV’T ACCOUNTABILITY OFF., *supra* note 6.

<sup>167</sup> *Id.*

<sup>168</sup> *Collect What’s Next: Introducing Vault NFTs on Stockx*, STOCKX, <https://stockx.com/lp/nfts/> [<https://perma.cc/9ZE9-3CA3>] (last visited Nov. 9, 2023) (explaining StockX selling digital tokens tied to a physical sneaker stored in a climate-controlled, high-security vault).

chain of possession.<sup>169</sup> Furthermore, it has been suggested that storing electronic health records as NFTs could help patients have more control over their records and who has access to them.<sup>170</sup>

## V. APPLICATION OF THE DIGITAL FIRST SALE DOCTRINE TO NFTS

In *ReDigi*, the Second Circuit Court of Appeals noted that “[i]f ReDigi and its champions have persuasive arguments in support of the change of law they advocate, it is Congress they should persuade. We reject the invitation to substitute our judgment for that of Congress.”<sup>171</sup> Many scholars have followed this line of thought, advocating for Congress to make statutory amendments that address both the distribution and reproduction rights.<sup>172</sup> Advocates for a digital first sale doctrine include reproduction because under current technology it is inevitable that the law considers the transfer of a digital file to be a reproduction.<sup>173</sup> There have been a few short-lived attempts to create a digital first sale doctrine, such as in 1997, when the Digital Era Copyright Act was proposed.<sup>174</sup> Other attempts include the Benefit Authors Without Limiting Advancement or Net Consumer Expectations Act (the BALANCE Act) and the Digital Media Consumers’ Rights Act of 2003.<sup>175</sup>

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<sup>169</sup> Jordan Parker, *New Kids on the Blockchain: How NFTs Might Bring About a Digital First Sale Doctrine*, 60 HOUS. L. REV. 467, 482 (2022).

<sup>170</sup> U.S. GOV’T ACCOUNTABILITY OFF., *supra* note 6.

<sup>171</sup> Capitol Records, L.L.C. v. ReDigi, Inc., 910 F.3d 649, 664 (2d Cir. 2018).

<sup>172</sup> Lim, *supra* note 106, at 742.

<sup>173</sup> *Id.*

<sup>174</sup> H.R. 3048, 105th Cong. (1997).

<sup>175</sup> H.R. 1066, 108th Cong. (2003); H.R. 107, 108th Cong. (2003).

**A. NFTs and Digital First Sale Doctrine Concerns**

Since NFTs are recorded in the blockchain they create novel legal questions under the first sale doctrine of copyright. NFTs are documented in the blockchain, and they behave more like tangible goods in that they can be tracked and transferred between owners without retaining a copy. Some legal experts have suggested that due to the non-fungible nature of NFTs, they are “conceptually closer” to the transfer of tangible goods.<sup>176</sup> However, the court in *ReDigi* and the Copyright Office have both articulated that a fundamental requirement of the first sale doctrine is that the good is tangible.<sup>177</sup>

Some academics have suggested that NFTs should be viewed, instead, in the light of rivalrousness rather than tangibility.<sup>178</sup> Proponents of this idea contend that the Second Circuit has left some room for arguments that the first sale doctrine applies to more than physical goods.<sup>179</sup> Moreover, it is suggested that the “[c]ourts often conflate the idea of tangibility with rivalrousness” and that *ReDigi*’s opinion rested on the fact that as an intangible good, digital music is not rivalrous.<sup>180</sup> However, *ReDigi* also noted that the first sale doctrine would apply to selling a hard drive with

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<sup>176</sup> Lim, *supra* note 106, at 741 (quoting Lisa M. Tittlemore & Bailey Davall, *NFTs A Novel Challenge for Traders, Investors and Copyright Lawyers*, SUNSTEIN INSIGHTS (May 5, 2021), <https://www.sunsteinlaw.com/publications/nfts-a-novel-challenge-for-traders-investors-and-copyright-lawyers>, [https://perma.cc/HP6E-DNWF]).

<sup>177</sup> DMCA SECTION 104 REPORT, *supra* note 1, at 90 (“[T]he Supreme Court’s decision in *Bobbs-Merrill* and the legislative history of the 1909 Act do refer directly to alienability of tangible property.”).

<sup>178</sup> See Shaverdian, *supra* note 53.

<sup>179</sup> *Id.*

<sup>180</sup> *Id.*

a digital copy on it.<sup>181</sup> Thus, “[t]his distinction implies that tangibility is used as a proxy to describe rivalrousness, since, after all, the digital copies on the hard drive can still be infinitely reproduced.”<sup>182</sup> Consequently, the emphasis should be on rivalrousness rather than tangibility.

Section 109 has very broad language to allow the consideration of new technologies. Thus, the definition of both “fixation” and “device” includes the language of “now known or later developed.”<sup>183</sup> While there is currently a tangibility requirement—which is codified in the 1976 Copyright Act—for a work to fall under the first sale doctrine, if the requirement was instead rivalrousness, blockchain technology would have the possibility of falling under the first sale doctrine due to the very broad language.<sup>184</sup>

Another feature unique to intangible goods is that they do not degrade like tangible goods do.<sup>185</sup> While NFTs do not degrade, it is important to consider that through information the original creator embeds into the smart contract or through the ledger that accompanies an NFT, a person can view the age of an NFT.<sup>186</sup> This, paired with the rivalrous nature of NFTs, promotes scarcity and thus adds value to the NFT, similar to the added value of age and scarcity seen in tangible goods.<sup>187</sup>

Moreover, NFTs do not create a “double spending” issue as many other digital technologies create. This is because NFTs are not duplicable due to the blockchain.<sup>188</sup> The blockchain can transfer a title, “in an immutable

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<sup>181</sup> *Id.*

<sup>182</sup> *Id.*

<sup>183</sup> *Id.* (quoting 17 U.S.C. § 109(a)).

<sup>184</sup> Shaverdian, *supra* note 53.

<sup>185</sup> Lim, *supra* note 106, at 751.

<sup>186</sup> *Id.* at 751–52.

<sup>187</sup> *Id.*

<sup>188</sup> *Id.* at 740.

manner” to a purchaser without making a copy of the file.<sup>189</sup> Thus, the blockchain makes it so that a transferor is prevented from retaining “the original or sending it to more than one transferee.”<sup>190</sup>

However, it is important to recognize that there are some problems with forward-and-delete technology seen in NFTs. NFTs still technically fall within the reproduction trap articulated by the Copyright Office.<sup>191</sup> The Copyright Office has indicated that reproduction is the reason why the first sale doctrine is inapplicable to NFTs.<sup>192</sup> NFTs are still technically a reproduction because minting a new NFT requires that a new copy be made of the digital good.<sup>193</sup> In other words, when an NFT is minted, the user uploads an image they currently have on their computer to the NFT marketplace.<sup>194</sup> Thus, during this time, there is a copy of the file on the creator’s computer and another copy of the file that has been minted into an NFT on the blockchain.<sup>195</sup> Consequently, there is still a copy of the digital file on the original creator’s computer.<sup>196</sup> This creates many questions about how this reproduction issue will be solved:

Would User A immediately delete their copy once they have minted a new copy as an NFT? Would they have to certify that they would no longer use the original copy? Would an NFT marketplace have to implement a system similar to ReDigi’s, which would prompt User A and other minters to delete their local

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<sup>189</sup> *Id.*

<sup>190</sup> Shaverdian, *supra* note 53.

<sup>191</sup> DMCA SECTION 104 REPORT, *supra* note 1, at 109–10.

<sup>192</sup> *See id.*

<sup>193</sup> Lim, *supra* note 106, at 741.

<sup>194</sup> *Id.* at 748.

<sup>195</sup> *Id.*

<sup>196</sup> *Id.*

file so that the only surviving copy is the one that was minted as an NFT?<sup>197</sup>

Some proponents of the applicability of NFTs to the first sale doctrine have suggested that the European Union's landmark case *UsedSoft GmbH v. Oracle International Corp.* and the European Union's Copyright Directive (Directive 2001/29/EC)<sup>198</sup> may be good guides for solving this issue.<sup>199</sup> In *UsedSoft*, Oracle sold its software through download on its website.<sup>200</sup> Oracle argued that UsedSoft committed copyright infringement by selling used Oracle software.<sup>201</sup> The European Court of Justice (ECJ) relied upon the Copyright Directive and ultimately held that the first sale doctrine applied to intangible goods downloaded over the Internet, which has been named the First-Download Doctrine.<sup>202</sup> Moreover, the ECJ articulated a three-prong test in order to apply the First Download Doctrine:

The copyright holder must have (1) authorized the downloading of that copy from the Internet onto a data carrier; (2) conferred a right to use that copy for an unlimited period; and (3) received payment of a fee intended to enable him to obtain a remuneration corresponding to the economic value of the downloaded copy.<sup>203</sup>

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<sup>197</sup> *Id.*

<sup>198</sup> Directive 2001/29 of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, 2001 O.J. (L 167) 10, art. 5(1), (10) (EC).

<sup>199</sup> Lim, *supra* note 106, at 748.

<sup>200</sup> Lukas Feiler, *Birth of the First-Download Doctrine- The Application of the First-Sale Doctrine to Internet Downloads under EU and US Copyright Law*, 16 J. OF INTERNET L. 1, 16 (Oct. 2012).

<sup>201</sup> *Id.*

<sup>202</sup> *Id.* at 17.

<sup>203</sup> *Id.*

Proponents of applying the First-Download Doctrine to American law argue that “it can be inferred that the directive embraces the digital copy’s reproduction, as long as it is an essential part of the technological process and instills some responsibility to the sender to ensure that the reproduction is temporary.”<sup>204</sup> Thus, when applying the First-Download Doctrine to NFTs, the original digital file used to mint the NFT on the blockchain becomes a “mere result of a temporary act.”<sup>205</sup>

It is also interesting to recognize that an NFT may be associated with not just digital goods, but physical goods as well. For these physical goods, the first sale doctrine would be applicable, but the NFT acting as a receipt of the physical good would fall under the digital goods exception.

## **B. NFTs and the Six Interests Promoted by the First Sale Doctrine**

As described above, six policies have been identified as promoted by the first sale doctrine, which are: (1) access; (2) preservation; (3) privacy; (4) transactional clarity; (5) innovation; and (6) platform competition.<sup>206</sup> The application of the first sale doctrine to NFTs would help to promote these six interests. First, the first sale doctrine applied to NFTs would improve access to work by allowing consumers to sell NFTs that they have purchased to others. Currently, many consumers are unable to resell an NFT unless specified within the smart contract.<sup>207</sup> Second, by allowing NFTs to be sold, preservation of the work is promoted because NFTs

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<sup>204</sup> Lim, *supra* note 106, at 749.

<sup>205</sup> *Id.*

<sup>206</sup> Hess, *supra* note 31, at 1971.

<sup>207</sup> See David Hoppe, *The Royalty Treatment: Does the Resale Right Apply to NFTs?*, GAMMA LAW (Mar. 17, 2022), <https://gammalaw.com/the-royalty-treatment-does-the-resale-right-apply-to-nfts/> [<https://perma.cc/T75E-MR5K>].



continue to stay in circulation in the market and cannot be suppressed by the original copyright owner. Third, by allowing NFTs to be sold by a consumer, privacy is promoted because they can then be transferred without the permission of the copyright holder and privately. Fourth, there is transactional clarity to selling NFTs if the first sale doctrine is applied. NFTs would be able to be sold in an easily understandable way, just as physical goods currently are, while still maintaining the ledger to store and verify ownership. Fifth, the ability to resell NFTs creates new resale markets and promotes innovation by copyright holders to keep their work creative and innovative in the market. Lastly, currently, NFTs may only be sold on the platform they are purchased on due to the royalties built within smart contracts. By allowing for the first sale doctrine to apply to NFTs sold without the aid of a smart contract, they can be sold on any platform. This would prevent the lock-in that currently occurs.

## VI. SMART CONTRACTS AS IMPERFECT SOLUTIONS

Every NFT is associated with a smart contract, which sets the terms of the user agreement in code.<sup>208</sup> Smart contracts were first introduced by Nick Szabo, who described them as:

New institutions, and new ways to formalize the relationships that make up these institutions, are now made possible by the digital revolution. I call these new contracts “smart”, because they are far more functional than their inanimate paper-based ancestors. No use of artificial intelligence is implied. A smart contract is a set of promises, specified in digital form,

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<sup>208</sup> See Shaan Ray, *NFTs and Smart Contracts*, MEDIUM (May 18, 2021), <https://medium.com/lansaar/nfts-and-smart-contracts-6c4c5516d5a0> [<https://perma.cc/V6JG-WP9R>].

including protocols within which the parties perform on these promises.<sup>209</sup>

Smart contracts are computer algorithms that transform commercial contracts into code and execute the terms of the contract.<sup>210</sup> Moreover, smart contracts can be programmed to perform the terms of the contract when a set of pre-defined conditions are fulfilled.<sup>211</sup> Smart contracts, like NFTs, are on the blockchain.<sup>212</sup> There are two primary ways that NFTs interact with smart contracts.<sup>213</sup> First, NFTs can be embedded within smart contracts. Thus, “[a] smart contract can own an NFT within it which is then transferred to a user or another contract based on the rules and events defined in the smart contract.”<sup>214</sup> Second, a smart contract can be embedded within the NFT.<sup>215</sup> Within the NFT, a smart contract acts to call and access assets.<sup>216</sup> Smart contracts are currently used for two primary functions: (1) ensuring payment when a triggering event occurs, and (2) imposing financial penalties when conditions are not satisfied.<sup>217</sup>

Smart contracts have several advantages. First, smart contracts are useful because they can “(a) enable direct transfers of rights between right holders and users, (b) allow right holders to control pricing and other conditions, (c)

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<sup>209</sup> Nick Szabo, *Smart Contracts: Building Blocks for Digital Market*, 16 EXTROPY J. OF TRANSHUMAN THOUGHT 50, 50 (1996).

<sup>210</sup> Ray, *supra* note 208.

<sup>211</sup> *Id.*

<sup>212</sup> *Id.*

<sup>213</sup> *Id.*

<sup>214</sup> *Id.*

<sup>215</sup> *Id.*

<sup>216</sup> Ray, *supra* note 208.

<sup>217</sup> Stuart D. Levi & Alex B. Lipton, *An Introduction to Smart Contracts and Their Potential and Inherent Limitations*, HARV. L. SCH. F. ON CORP. GOVERNANCE (May 26, 2018), <https://corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations/> [https://perma.cc/RAY8-K2VP].

make tracking of content usage and payments possible, (d) improve revenue distribution, and (e) create a secondary market for digital content.”<sup>218</sup> Smart contracts enable the direct transfer of rights between the copyright owner and a buyer by allowing for a direct transaction between the two, where the copyright owner can determine the price and conditions in advance.<sup>219</sup> This cuts out a need for middlemen, such as content distribution platforms.<sup>220</sup> Second, smart contracts allow copyright holders to set their own prices and conditions for their work.<sup>221</sup> Prices can be set for each individual work, rather than accessing works through a flat fee on a streaming platform.<sup>222</sup> Third, smart contracts help to track the usage of content and payments.<sup>223</sup> With information from transactions, copyright holders can collect data and learn more about those who purchase their works.<sup>224</sup> Fourth, smart contracts can be programmed to execute specific terms according to the copyright holder’s wants.<sup>225</sup> Thus, “[t]his can solve the imbalance wherein users can access digital content straightaway, but right holders, especially artists, often have to wait for a long time to get paid.”<sup>226</sup> Lastly, a smart contract can be written in a way that allows works that are licensed to be transferred between users, creating a secondary market for digital goods.<sup>227</sup>

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<sup>218</sup> Sebastian Pech, *Copyright Unchained: How Blockchain Technology Can Change the Administration and Distribution of Copyright Protected Works*, 18 NW. J. TECH. & INTELL. PROP. 1, 36 (2020).

<sup>219</sup> *Id.* at 37.

<sup>220</sup> *Id.*

<sup>221</sup> *Id.* at 38.

<sup>222</sup> *Id.* at 39.

<sup>223</sup> *Id.*

<sup>224</sup> Pech, *supra* note 218, at 39–40.

<sup>225</sup> *Id.* at 40.

<sup>226</sup> *Id.*

<sup>227</sup> *Id.* at 41–42.

While smart contracts have several useful qualities, there are some restrictions as well. These restrictions include an inability to move between platforms, technical restrictions, inflexibility, risk of abuse, ambiguity, conflict with existing licenses, and other legal barriers. As seen in *ReDigi*, the first sale doctrine does not apply to digital goods. Thus, the ability to sell a digital good belongs only to the copyright owner. However, the ability of the buyer to resell the NFT is typically in the best interest of the copyright holder.<sup>228</sup> Thus, copyright owners have begun to put provisions in smart contracts that allow for the resale of an NFT in exchange for royalties.<sup>229</sup> However, there are some limitations to smart contracts and royalties. One such limitation currently is that the royalty is only recognized if the resale occurs on the same platform that the NFT was first sold on.<sup>230</sup> To fix this problem of royalties being limited to one platform, some programmers have suggested EIP-2981, which would allow for royalties to be paid across multiple platforms.<sup>231</sup>

Moreover, smart contracts have some technical issues as well. Smart contracts require trusted, technical experts to form the parties' agreement in code and confirm that the code written is what both parties desire.<sup>232</sup> While non-lawyers can typically understand short, uncomplex

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<sup>228</sup> Hoppe, *supra* note 207.

<sup>229</sup> O. Joseph Balthazor, *Does the first-sale doctrine apply to NFTs?* WORLD TRADEMARK REVIEW (Sep. 1, 2022), <https://www.worldtrademarkreview.com/article/does-the-first-sale-doctrine-apply-nfts> [<https://perma.cc/LJ6N-FQTD>].

<sup>230</sup> *Buying & Selling NFTs: Navigating the Legal Landscape*, JD SUPRA (Nov. 30, 2021), <https://www.jdsupra.com/legalnews/buying-selling-nfts-navigating-the-2284166/#:~:text=Under%20the%20traditional%20framework%2C%20the,sale%20of%20that%20physical%20work> [<https://perma.cc/BW8X-RCRN>].

<sup>231</sup> *Id.*

<sup>232</sup> Levi & Lipton, *supra* note 217.

agreements, a smart contract requires an expert.<sup>233</sup> As a result, smart contracts are harder to adopt on a widespread scale. However, some proponents suggest that for basic functions of smart contracts, text templates can be created where non-code savvy users can enter information such as the specified date a payment should be received.<sup>234</sup> Nonetheless, for more complex agreements a programmer would likely be required.<sup>235</sup>

Another technical issue that smart contracts present is that they rely upon “off-chain” resources, meaning information resources that must be pulled from other places to fill the parameters of the smart contract.<sup>236</sup> Smart contracts are unable to pull “off-chain” resources and thus require the information to be “pushed” into the smart contract.<sup>237</sup> Moreover, information that is in flux makes it difficult for smart contract parameters to be met.<sup>238</sup> However, there is a proposed solution in using third parties, known as oracles, who “push” the information into the smart contract.<sup>239</sup> Nevertheless, oracles may be corrupted.<sup>240</sup> Thus, some situations may call for a consensus oracle, where a group of people acts as oracles and “the software extracts whatever value they have agreed on.”<sup>241</sup> These oracle solutions, yet again, require hiring a third party to help facilitate the smart contract.

Smart contracts are also inflexible and immutable. They are created so that when certain data sources fill the parameters, the contract will execute. Since smart contracts

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<sup>233</sup> *Id.*

<sup>234</sup> *Id.*

<sup>235</sup> *Id.*

<sup>236</sup> *Id.*

<sup>237</sup> *Id.*

<sup>238</sup> Levi & Lipton, *supra* note 217.

<sup>239</sup> *Id.*

<sup>240</sup> James Grimmelmann, *All Smart Contracts Are Ambiguous*, 2 J. OF L. & INNOVATION 1, 15 (2019).

<sup>241</sup> *Id.*

are designed to be irreversible, this means that “they cannot be altered, and transactions cannot be undone once executed.”<sup>242</sup> This can lead to problems if the terms of the agreement need to be changed.<sup>243</sup> This requires that an extensive review be done of the smart contract by experts before its deployment in the blockchain.<sup>244</sup>

The inflexibility of smart contracts also increases their ability to be abused. The irreversibility of contracts can allow people to manipulate smart contracts or take advantage of errors in the program code.<sup>245</sup> This is illustrated through The Distributed Autonomous Organization (DAO), which “flamed out spectacularly.”<sup>246</sup> The DAO was a decentralized venture fund created in 2016, which administered itself through a set of smart contracts on the Ethereum blockchain and “managed to raise approximately 12 million Ether (worth around \$150 million at the time).”<sup>247</sup> The DAO was exploited when “[a]n unknown attacker used a bug in the underlying smart contract to remove approximately 3.6 million Ether.”<sup>248</sup>

Moreover, smart contracts are susceptible to issues brought on by ambiguity, including over-licensing and over-enforcement.<sup>249</sup> As seen in contract law, “the legal effect of a contract is determined by the interpretation of its terms, the meaning of a contract is irreducibly social.”<sup>250</sup> Smart contracts may run into issues where the computer program

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<sup>242</sup> Pech, *supra* note 218, at 43.

<sup>243</sup> *Id.*

<sup>244</sup> Shafaq Naheed Khan, et al., *Blockchain smart contracts: Applications, challenges, and future trends*, 14 PEER-TO-PEER NETWORKING & APPLICATIONS 2901, 2919 (2021).

<sup>245</sup> Pech, *supra* note 218, at 43.

<sup>246</sup> Grimmelmann, *supra* note 240, at 18.

<sup>247</sup> Pech, *supra* note 218, at 43.

<sup>248</sup> *Id.*

<sup>249</sup> *Id.* at 44.

<sup>250</sup> Grimmelmann, *supra* note 240, at 10.

is unable to determine the semantics of language.<sup>251</sup> Computer programs rest on prior agreements by humans as to how to interpret terms.<sup>252</sup> Thus, a smart contract's language may be ambiguous due to the different ways people may use and understand the same words.<sup>253</sup> The meaning of words in contracts are changed through the legal system.<sup>254</sup> However, for smart contracts, "the way to change the consequences of contracts is to *change the semantics*. The programming-language terms in smart contracts mean something different than they used to, and they have different technical effects, and these two differences are the same thing. Interpretation and construction collapse."<sup>255</sup> Moreover, because smart contracts "operate on 'if-then' rules, they will encounter issues with vague legal terms."<sup>256</sup> Due to this quality of smart contracts, there may be times when they are unable to assess whether a use is covered by legal exceptions or limitations.<sup>257</sup> This in turn leads to over-licensing.<sup>258</sup>

Furthermore, smart contracts may also conflict with existing licenses. This can occur when "a right holder has already granted a 'traditional' exclusive license, and the same use is licensed again by a smart contract."<sup>259</sup> This situation can be problematic for rights holders, such as musical artists who have their own contractual obligations with record companies.<sup>260</sup> This may create issues where their contract prevents them from distributing their work.<sup>261</sup>

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<sup>251</sup> *Id.* at 11.

<sup>252</sup> *Id.* at 12.

<sup>253</sup> *Id.* at 19–20.

<sup>254</sup> *Id.* at 20.

<sup>255</sup> *Id.*

<sup>256</sup> Pech, *supra* note 218, at 44.

<sup>257</sup> *Id.*

<sup>258</sup> *Id.*

<sup>259</sup> *Id.* at 46.

<sup>260</sup> *Id.*

<sup>261</sup> *Id.*

There are other legal issues that smart contracts create as well. One such issue is that each country has its own laws, making it difficult for a smart contract to comply with all regulations.<sup>262</sup> However, Pech suggests that the “characteristics of specific jurisdictions can be programmed into smart contracts.”<sup>263</sup> Nevertheless, this solution requires programming by experts, which again requires a third party’s help to facilitate the smart contract.<sup>264</sup> Moreover, typically legal clauses or conditions are not quantifiable, which makes it difficult for a smart contract to use these conditions to execute the terms of the contract.<sup>265</sup>

## VII. COPYRIGHT HOLDER’S INTERESTS

This paper presents reasons as to why a digital first sale doctrine could apply to NFTs while advancing copyright and first sale doctrine interests. However, it is important to consider copyright holder’s objections to a digital first sale doctrine applied to NFTs. Copyright holders seek to prevent both “user substitution” and “user proliferation.”<sup>266</sup> “User substitution” happens when a “user who has acquired the right to enjoy a copy of a copyrighted work transfers those usage rights to someone else while simultaneously *forfeiting* his own ability to use the work.”<sup>267</sup> In contrast, “user proliferation” occurs when a user who has acquired the rights to use a copy “transfers those rights to someone else while simultaneously *retaining* his own ability to enjoy the work.”<sup>268</sup>

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<sup>262</sup> Khan et al., *supra* note 244, at 2918.

<sup>263</sup> Pech, *supra* note 218, at 48.

<sup>264</sup> Khan et al., *supra* note 244, at 2919.

<sup>265</sup> *Id.* at 2918.

<sup>266</sup> Vivian F. Wang, *Sale or License? UMG v. Augusto, Vernor v. Autodesk, and the First Sale Doctrine*, 19 TEXAS INTELL. PROP. L.J. 1, 8 (2010).

<sup>267</sup> *Id.* (emphasis added).

<sup>268</sup> *Id.* at 8–9 (emphasis added).



By preventing “user substitution,” a copyright holder can engage in price discrimination, where the holder can charge different consumers different prices for the same goods or services or for a variant of the same goods or services.<sup>269</sup> As stated by Reese, the first sale doctrine acts to:

[C]omplicate[] price discrimination by allowing buyers to resell, rent, or loan the copies they buy. . . . If a copyright owner tried to price discriminate in the sale of her works, the buyer of a copy could resell access to the work to a second customer at a price lower than the price the copyright owner would charge the second consumer directly.<sup>270</sup>

Thus, while it is in the interest of a copyright owner to prevent “user substitution” to maximize profits, the concept is in direct opposition to the goals of the first sale doctrine, which aims to promote competition.<sup>271</sup>

While the application of the digital first sale doctrine to NFTs would encourage “user substitution” and thus the goals of copyright law, there must be an incentive for copyright holders to engage in a system that would lessen their control over a work. There are three reasons why copyright holders may be incentivized to do so: a digital first sale doctrine may (1) discourage piracy; (2) encourage purchases; and (3) open new markets.<sup>272</sup>

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<sup>269</sup> *Id.*

<sup>270</sup> R. Anthony Reese, *The First Sale Doctrine in the Era of Digital Networks*, 44 B.C. L. REV. 577, 625–26 (2003).

<sup>271</sup> Wang, *supra* note 266, at 10 (quoting DMCA SECTION 104 REPORT, *supra* note 1, at 21).

<sup>272</sup> Sarah Abelson, *An Emerging Secondary Market for Digital Music: The Legality of ReDigi and the Extent of the First Sale Doctrine*, 29 ENT. & SPORTS LAW. 8, 10 (2012).

It has been estimated that there was a 29.3% increase in visits to piracy websites between 2021 and 2022.<sup>273</sup> Moreover, it is estimated that digital video piracy costs the U.S. economy between \$29.2 and \$71 billion each year and music piracy costs the U.S. 70,000 jobs a year.<sup>274</sup> High rates of digital piracy have been attributed to an array of reasons, including that digital files are perceived as different by consumers than physical goods.<sup>275</sup> Abelson writes that “[d]ownloading files illegally over the Internet did not carry the ethical weight of ‘stealing’ because of a perception that intangible assets such as MP3s were somehow less valuable in the market than hard copies.”<sup>276</sup> Moreover, some scholars suggest that digital piracy is so rampant today because “[p]resently, customers who purchase digital content from retailers such as Amazon or Apple only have illegal options available to them if they wish to permanently transfer their

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<sup>273</sup> *MUSO Discover Q1 2022 Digital Piracy Data Insights*, MUSO (2022), <https://www.muso.com/magazine/muso-discover-q1-2022-digital-piracy-data-insights#:~:text=MUSO%20measured%2052.5%20billion%20visits,Publishing%20%2D%2058.5%25%20increase> [https://perma.cc/TNC4-RTWC].

<sup>274</sup> Damjan Jugovic Spajic, *Piracy Is Back: Piracy Statistics for 2023*, DATAPROT (updated July 14, 2023), <https://dataprot.net/statistics/piracy-statistics/> [https://perma.cc/UC3B-YPFC].

<sup>275</sup> Abelson, *supra* note 272 at 10; *see also* Matthew Gault, *Internet Piracy Is Surging, Researchers Say*, VICE (Jan. 28, 2022, 11:29 AM), <https://www.vice.com/en/article/93bd8v/internet-piracy-is-surging-researchers-say> [https://perma.cc/8QKL-37TX] (“Piracy is complicated. It flourishes and declines for many reasons. The COVID-19 pandemic kept people home and out of theaters, but many of the most pirated films were available to watch at home the same day they hit the cinema. There’s so many different streaming services now that it can be hard to keep track and watching a specific film or TV show can entail signing up for a specific service to watch one show. Faced with the prospect of paying *another* \$10 a month to catch up on a TV show or watch the latest Marvel movie, many people chose piracy and decided to watch for free instead.”).

<sup>276</sup> Abelson, *supra* note 272, at 10.

content to others.”<sup>277</sup> A secondary market where users can sell digital goods may serve to decrease piracy by giving people a way to legally transfer copyrighted works and by allowing digital goods to be bought at cheaper prices.<sup>278</sup>

Additionally, a digital first sale doctrine would likely encourage purchasing. Currently, many people use services such as Spotify, Netflix, and Hulu rather than committing to the purchase of a song or movie. The ability to resell a digital good if a consumer no longer uses the good or does not like the good would make consumers more likely to purchase a digital good at full price.<sup>279</sup>

Lastly, the ability to resell a digital good would serve to open new markets for copyright holders. It has been estimated that \$54 billion is spent on digital goods annually, and this market is expected to grow to \$74 billion by 2025.<sup>280</sup> The ability to resell digital goods creates new opportunities for copyright owners, which would result in “more innovation, leading to greater consumer excitement about the conduit and content.”<sup>281</sup> As Abelson explains, “[t]he industry must embrace innovation in content delivery, because new technology and markets may prove even more successful in the future.”<sup>282</sup>

Furthermore, while a digital first sale doctrine applied to NFTs may encourage “user substitution,” the inherent nature of NFTs actually serves to discourage “user proliferation.” In contrast to “user substitution,” “user proliferation” “is countenanced by--indeed fundamental to--

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<sup>277</sup> Reis, *supra* note 21, at 189.

<sup>278</sup> *Id.* at 193; Abelson, *supra* note 272, at 10.

<sup>279</sup> Reis, *supra* note 21, at 193; Abelson, *supra* note 272, at 10.

<sup>280</sup> James Ross, *Why Digital Goods Will Bring Brands Closer To Consumers*, FORBES (Sep. 16, 2022, 7:30 AM), <https://www.forbes.com/sites/forbesagencycouncil/2022/09/16/why-digital-goods-will-bring-brands-closer-to-consumers/?sh=74c61f3242a1> [<https://perma.cc/JT2Z-UA4Y>].

<sup>281</sup> Abelson, *supra* note 272, at 10.

<sup>282</sup> *Id.*

copyright law.”<sup>283</sup> As discussed earlier, NFTs are recorded and tracked in the blockchain. Due to the blockchain’s ability to document ownership, they cannot be copied like other digital goods. Moreover, blockchain technology ensures that the digital asset is transferred in its entirety. For these reasons, “user proliferation” may be discouraged by NFTs.

### VIII. CONCLUSION

There is one large underlying theme of copyright and the first sale doctrine: the desire to promote the advancement of arts and sciences. Thus, the first sale doctrine acts as a scale to balance a copyright owner’s interest in retaining control over their copyright and the public’s interest in accessing the arts and sciences. Currently, the inapplicability of the first sale doctrine to digital goods tips the scale in favor of copyright owners by limiting access, hindering preservation, discouraging privacy, stopping transactional clarity, constraining innovation, and restricting platform competition. As technology has developed, it has become clear that with the aid of statutory change, digital goods such as NFTs may be able to settle the balance between copyright owners and the public. NFTs may be able to do this by solving concerns, such as the forward-and-delete problem, which have hounded digital goods since the passage of the DMCA.

In response to the digital goods exception to the first sale doctrine, many academics have proposed solutions that would solve many of the concerns regarding digital goods. While tangibility has been codified as a requirement of the first sale doctrine in § 109(a), scholars suggest that instead, a rivalrousness requirement would meet the goals of the first sale doctrine. This accounts for the fact that NFTs are stored

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<sup>283</sup> Wang, *supra* note 266, at 12.

in a ledger where they are tracked and verified. Moreover, NFTs do not have the same forward-and-delete issues seen in many technologies that can be copied an infinite number of times. However, NFTs do have shortcomings in that a copy is made when the NFT is first minted, thus constituting a reproduction. Consequently, scholars recommend adopting the First-Download Doctrine, as seen in Europe.

However, all these recommended changes to the first sale doctrine require congressional amendment. Currently, smart contracts are NFT's solution to the inapplicability of the first sale doctrine. Nevertheless, while smart contracts have many useful aspects, they also have several limitations. These restrictions include an inability to move between platforms, technical restrictions, inflexibility, risk of abuse, ambiguity, conflict with existing licenses, and other legal barriers. Thus, smart contracts are an imperfect solution to the digital goods exception to the first sale doctrine. While copyright holders may want to retain their grasp on their work through only licensing through smart contracts, the risks associated with these licensing agreements in smart contracts may make copyright holders more receptive to the sale, rather than licensing, of NFTs. Moreover, copyright holders may be more convinced of the application of the first sale doctrine to NFTs due to NFTs' discouragement of piracy and "user proliferation," encouragement of purchases, and ability to open new markets.