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# INTERNET SAFE HARBORS AND THE TRANSFORMATION OF COPYRIGHT LAW

Matthew Sag\*

*This Article explores the potential displacement of substantive copyright law in the increasingly important online environment. In 1998, Congress enacted a system of intermediary safe harbors as part of the Digital Millennium Copyright Act (DMCA). The internet safe harbors and the associated system of notice-and-takedown fundamentally changed the incentives of platforms, users, and rightsholders in relation to claims of copyright infringement. These different incentives interact to yield a functional balance of copyright online that diverges markedly from the experience of copyright law in traditional media environments. More recently, private agreements between rightsholders and large commercial internet platforms have been made in the shadow of those safe harbors. These “DMCA-plus” agreements relate to automatic copyright filtering systems, such as YouTube’s Content ID, that not only return platforms to their gatekeeping role, but encode that role in algorithms and software.*

*The normative implications of these developments are contestable. Fair use and other axioms of copyright law still nominally apply online, but in practice, the safe harbors and private agreements made in the shadow of those safe harbors are now far more important determinants of online behavior than whether that conduct is, or is not, substantively in compliance with copyright law. Substantive copyright law is not necessarily irrelevant online, but its relevance is indirect and contingent. The attenuated relevance of substantive copyright law to online expression has benefits and costs that appear fundamentally incommensurable. Compared to the offline world, online platforms are typically more permissive of infringement, and more open to new and unexpected speech and new forms of cultural participation. However, speech on these platforms is also more vulnerable to overreaching claims by rightsholders. There is no easy metric for comparing the value of noninfringing expression enabled by the safe harbors to that which has been unjustifiably suppressed by misuse of the notice-and-takedown system. Likewise, the harm that copyright infringement does to rightsholders is not easy to calculate, nor is it easy to weigh against the many benefits of the safe harbors.*

*DMCA-plus agreements raise additional incommensurable potential costs and benefits. Automatic copyright enforcement systems have obvious advantages for both platforms and right-*

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*sholders: they may reduce the harm of copyright infringement; they may also allow platforms to be more hospitable to certain types of user content. However, automated enforcement systems may also place an undue burden on fair use and other forms of noninfringing speech. The design of copyright enforcement robots encodes a series of policy choices made by platforms and rightsholders and, as a result, subjects online speech and cultural participation to a new layer of private ordering and control. In the future, private interests, not public policy, will determine the conditions under which users get to participate in online platforms that adopt these systems. In a world where communication and expression is policed by copyright robots, the substantive content of copyright law matters only to the extent that those with power decide that it should matter.*

## INTRODUCTION

The internet is deeply integrated into most of our lives: we connect with other people online, we build communities online, we are entertained and informed online, and, increasingly, we buy, sell, and work online. Yet vital aspects of the regulation of online expression owe far more to the policies and unilateral actions of private companies than to public policy.

For over 300 years, the law of copyright has struck a careful balance between rights and freedoms. Copyright law recognizes the need to incentivize authors by granting them a significant degree of control over the use of their works, but this control is far from absolute. Copyright law also recognizes that the public must retain some freedom to use existing works and to build upon them as the next generation of authors.<sup>1</sup> This balance is achieved by doctrines, such as the idea-expression distinction, the requirement of substantial similarity in copying, the fair use doctrine, and a host of other statutory and nonstatutory limitations and exceptions to the scope of copyright.<sup>2</sup> These doctrines help ensure that copyright law enables, rather than chills, creativity and freedom of expression.<sup>3</sup> However, in the online world, the balance struck by the traditional levers of copyright policy increasingly risks irrelevance. To a significant degree, the balance of copyright law has been overshadowed online by the system of intermediary safe harbors enacted as part of a general modernization of copyright under the Digital Millennium Copyright Act (DMCA) in 1998. Fair use and other axioms of copyright law still nominally apply online; but in practice, the safe harbors and private agreements made in the shadow of those safe harbors (“DMCA-plus” agreements) are now far more important determinants of online behavior than whether that conduct is, or is not, substantively in compliance with

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1 See, e.g., *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 429 (1984) (noting that copyright requires “a difficult balance between the interests of authors and inventors in the control and exploitation of their writings and discoveries on the one hand, and society’s competing interest in the free flow of ideas, information, and commerce on the other hand”).

2 See Matthew J. Sag, *Beyond Abstraction: The Law and Economics of Copyright Scope and Doctrinal Efficiency*, 81 *TUL. L. REV.* 187, 198–99 (2006).

3 *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 558 (1985) (“[T]he Framers intended copyright itself to be the engine of free expression.”); see also *Eldred v. Ashcroft*, 537 U.S. 186, 219 (2003).

copyright law. To the extent that substantive copyright law remains relevant, that relevance is indirect and contingent.

Copyright law contains several balancing mechanisms. Copyright's idea-expression distinction gives authors exclusive rights in their expression, but it allows for facts, ideas, systems, and processes embedded within such expression to be freely copied.<sup>4</sup> Copyright law protects rightsholders from copying that is quantitatively and qualitatively significant, but trivial amounts of copying or any reproduction that lacks substantial similarity is noninfringing.<sup>5</sup> The fair use doctrine permits copying without permission in certain circumstances depending on the purpose, proportionality, and effect of that copying.<sup>6</sup> Fair use, in particular, plays a vital role in enabling creativity and freedom of expression because it "permits [and requires] courts to avoid rigid application of the copyright statute when, on occasion, it would stifle the very creativity which that law is designed to foster."<sup>7</sup> In theory, through the application of these doctrines (and others), copyright law maintains a balance between rights and freedom. But as every lawyer knows, theory and practice often diverge: the mere fact that an action does or does not amount to copyright infringement is no guarantee that individuals and organizations in the chain of distribution will act accordingly. As such, it is important to consider what copyright law allows and restrains in practice; in other words, we must know the functional balance of copyright law.

The functional balance of copyright law is the difference between the stories people want to tell and those that copyright law in practice allows them to tell. Documentary filmmakers, for example, have a legal right to make fair use of existing works, but the threat of copyright infringement litigation may still have a chilling effect on their ability to exercise that right.<sup>8</sup> In the analog world (i.e., the offline world), decisions about who gets to speak in a particular medium and what they get to say are typically made not by authors, artists, or filmmakers, but by various gatekeepers, such as publish-

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4 The idea-expression distinction is reflected in the § 102(b) exclusion of (among other things) ideas, processes, systems, and discoveries from copyright protection. 17 U.S.C. § 102(b) (2012).

5 See, e.g., *Newton v. Diamond*, 388 F.3d 1189, 1193 (9th Cir. 2004) ("[E]ven where the fact of copying is conceded, no legal consequences will follow from that fact unless the copying is substantial.").

6 See § 107 ("[T]he fair use of a copyrighted work . . . is not an infringement of copyright."). Technically, there are four fair use factors, but for present purposes it is sufficient to focus on the purpose, proportionality, and effect of the defendant's copying as the central questions in any fair use investigation.

7 *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 577 (1994) (alteration in original) (quoting *Stewart v. Abend*, 495 U.S. 207, 236 (1990)) (internal quotation marks omitted).

8 This problem has been significantly ameliorated by the Documentary Filmmakers' Statement of Best Practices in 2005. See ASS'N OF INDEP. VIDEO & FILMMAKERS ET AL., DOCUMENTARY FILMMAKERS' STATEMENT OF BEST PRACTICES IN FAIR USE 2-3 (2005), [http://archive.cmsimpact.org/sites/default/files/fair\\_use\\_final.pdf](http://archive.cmsimpact.org/sites/default/files/fair_use_final.pdf); see also Michael C. Donaldson, *Fair Use: What a Difference a Decade Makes*, 57 J. COPYRIGHT SOC'Y U.S.A. 331, 332 (2010) (explaining how the Best Practices reduced uncertainty and came to be relied upon by errors and omission ("E&O") insurers, thus enabling documentarians to rely on fair use).

ers, distributors, broadcasters, and insurance companies. These gatekeepers consult their own self-interest, including potential legal liability, and thus respond to their understanding of what copyright law allows and prohibits. In this world, boundary issues in copyright law tend to be settled by gladiatorial contests between representative interests. These contests are watched with interest and their results are amplified as they become part of the knowledge base of various gatekeepers and their legal advisors.

For example, the Supreme Court's ruling in *Campbell v. Acuff-Rose* that commercial parody can qualify as fair use<sup>9</sup> emboldened television networks to rely on fair use in comedy programs that lampoon current events, such as *The Daily Show*, *Last Week Tonight*, and *@Midnight*.<sup>10</sup> This is hardly a perfect system, but the salient feature to note is that it is a system in which decisions about which works are and are not made available through various distribution channels are linked to the substantive content of copyright law. Gatekeepers in the analog distribution chain may have an imperfect understanding of copyright law—they may be affected by risk aversion or other cognitive biases—but their understanding of the substantive law remains central to their decision-making process.<sup>11</sup> In short, although the true balance of copyright law and the functional balance of copyright law in traditional media environments are obviously not exactly aligned, they are intrinsically connected such that where the former moves, the latter follows.<sup>12</sup>

The relationship between substantive copyright law and the functional balance of copyright law is far more tenuous in the digital world of online communication. In the relatively early days of the commercial internet, Congress established a system of copyright infringement safe harbors with the aim of providing legal certainty for internet service providers (ISPs) and other online intermediaries; these safe harbors were also designed to give

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9 *Campbell*, 510 U.S. at 572.

10 Each of these shows routinely selects and comments on audio-visual material from broadcast news and internet sources without obtaining a license from the relevant copyright owners. *The Daily Show* has successfully defended its reliance on fair use in at least one court case. See *Kane v. Comedy Partners*, No. 00 Civ. 158, 2003 WL 22383387, at \*4 (S.D.N.Y. Oct. 16, 2003) (holding that a presentation of plaintiff's original work in a mocking context is fair use), *aff'd*, 98 F. App'x 73 (2d Cir. 2004).

11 See James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 *YALE L.J.* 882, 884–85 (2007).

12 There are, of course, other stories about how the balance of copyright has changed that have nothing to do with the DMCA safe harbors. For example, the Copyright Act of 1909 expanded the rights of copyright owners with a broader concept of reproduction; however, that new right was partially offset by a compulsory license. See Peter DiCola & Matthew Sag, *An Information-Gathering Approach to Copyright Policy*, 34 *CARDOZO L. REV.* 173, 200–03 (2012). Likewise, a new equilibrium in relation to consumer copying for personal use arose out of *Sony Corp. of America v. Universal City Studios, Inc.*, a case that held that the Copyright Act applied to consumer copying for personal use, but that time shifting broadcast television for later viewing was fair use. 464 U.S. 417, 421 (1984). See generally Jessica Litman, *Campbell at 21/Sony at 31*, 90 *WASH. L. REV.* 651 (2015).

rightsholders an expeditious mechanism to address online infringement.<sup>13</sup> Under the DMCA safe harbors, companies that provide internet access and those that host and transmit content selected by their users are not liable when their users violate copyright law.<sup>14</sup> There are many technical requirements for safe harbor eligibility, but the basic quid pro quo is that in exchange for immunity, online platforms must remove or block access to infringing material once they receive a specific notice from the copyright owner—this system is referred to generally as notice-and-takedown.<sup>15</sup>

The DMCA safe harbors have had a profound effect on the behavior of traditional content producers, online platforms, and users. In the online world—or at least those large sections of that world governed by the safe harbors and notice-and-takedown—publication is the default, and the substantive content of copyright is often disregarded. Thus when YouTube user Miss Zizie posted “Taylor Swift Blank Space (karaoke version)?” in 2014,<sup>16</sup> no one at the video-sharing website, nor Miss Zizie herself, in all likelihood, gave any thought as to whether a karaoke video with background music and lyrics infringed on the rights of the copyright owner. It does.<sup>17</sup> As this Article shows, whereas a traditional offline gatekeeper would very likely have red-flagged any apparently unlicensed use of the works of one of the world’s best-selling recording artists, the DMCA safe harbors take away any incentive for platforms to even consider whether material posted by their users was licensed, fair use, or otherwise permissible. In a notice-and-takedown regime, Miss Zizie has very little reason to worry about whether her karaoke video is legal or not, although millions of online videos are targeted for removal under notice-and-takedown; individual YouTubers have rarely been subject to follow-up litigation.<sup>18</sup>

The DMCA’s notice-and-takedown regime is not entirely permissive, however. Internet service providers and intermediaries are just as unreflective when they receive infringement notices from copyright owners. Thus, in 2008, presidential candidate John McCain had several commercials taken down from YouTube on the basis of dubious copyright claims. By the time the material was reinstated in accordance with the DMCA’s counternotification procedure, ten days had elapsed, and as Trevor Potter, General Counsel of the McCain campaign, noted in a letter pleading with YouTube to restore

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13 See *infra* Section I.A.

14 See *infra* Section I.B.

15 See *infra* subsection I.B.2.

16 Miss Zizie, *Taylor Swift Blank Space (karaoke version)*, YOUTUBE (Dec. 24, 2014), [https://www.youtube.com/watch?v=KH3MYRx0ILs&ab\\_channel=MissZizie](https://www.youtube.com/watch?v=KH3MYRx0ILs&ab_channel=MissZizie).

17 See *Leadsinger, Inc. v. BMG Music Publ’g*, 429 F. Supp. 2d 1190, 1197 (C.D. Cal. 2005), *aff’d*, 512 F.3d 522 (9th Cir. 2008).

18 For a rare example, see *Hosseinzadeh v. Klein*, 16-cv-3081, 2017 WL 3668846 (S.D.N.Y. Aug. 23, 2017). Note that the defendants in this case prevailed on summary judgment after the court found that their use of the video clips in question constituted fair use as a matter of law. See *id.* at \*6–8.

the videos, “10 days can be a lifetime in a political campaign.”<sup>19</sup> The McCain campaign had a compelling fair use argument for its use of brief snippets of debate footage featuring their candidate, but it had no forum in which to make that argument. The Senator simply had to wait for the machinery of notice-and-takedown and counternotification-and-restore to run its course. It is shocking that a presidential candidate could be effectively censored on a flimsy copyright pretext, but it is not surprising.<sup>20</sup> Overreaching, unwarranted, and erroneous takedown notices are a fact of online existence—the ill-informed, pranksters, eccentrics, television networks, movie studios, music publishers, record labels, industry associations, political campaigns, hate groups, oppressive governments, and terrorists have all used the DMCA to accomplish ends ranging from misguided to nefarious.<sup>21</sup> The McCain campaign’s experience is only unusual in one respect: very few internet users take advantage of the DMCA counternotification procedure. In most cases, content that is taken down after a copyright notice stays down.<sup>22</sup>

The DMCA safe harbors have been a tremendous benefit to the U.S. copyright system and to the U.S. economy. Together with the protection that Section 230 of the Communications Decency Act (CDA) provides against state law claims such as defamation,<sup>23</sup> the internet safe harbors have pro-

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19 Letter from Trevor Potter, Gen. Counsel, McCain Campaign, to Chad Hurley, CEO, YouTube, LLC (Oct. 13, 2008), <https://www.eff.org/files/McCain%20YouTube%20copyright%20letter%2010.13.08.pdf>.

20 See generally CTR. FOR DEMOCRACY & TECH., CAMPAIGN TAKEDOWN TROUBLES: HOW MERITLESS COPYRIGHT CLAIMS THREATEN ONLINE POLITICAL SPEECH (2010), [https://www.cdt.org/files/pdfs/copyright\\_takedowns.pdf](https://www.cdt.org/files/pdfs/copyright_takedowns.pdf). For a more recent example, see Ethan Chiel, *The Trump Kids Video Has Been Removed from YouTube Due to a Mysterious Copyright Claim*, SPLINTER (Jan. 26, 2016), <http://splinternews.com/the-trump-kids-video-has-been-removed-from-youtube-due-1793854296>.

21 See, e.g., James Ball & Paul Hamilos, *Ecuador’s President Used Millions of Dollars of Public Funds to Censor Critical Online Videos*, BUZZFEED (Sept. 24, 2015), [https://www.buzzfeed.com/jamesball/ecuadors-president-used-millions-of-dollars-of-public-funds?utm\\_term=.wo4ba34Q1](https://www.buzzfeed.com/jamesball/ecuadors-president-used-millions-of-dollars-of-public-funds?utm_term=.wo4ba34Q1); Alex Hern, *WordPress Pulls Interview with Anti-Gay Group Straight Pride UK*, GUARDIAN (Aug. 13, 2013), <http://www.theguardian.com/technology/2013/aug/13/wordpress-straight-pride-uk>; Georgi Kantchev, *Twitter Deletes Oil-Data Tweets Following Industry Complaints*, WALL ST. J. (Mar. 9, 2016), <http://www.wsj.com/articles/twitter-deletes-oil-data-tweets-following-industry-complaints-1457566322>; Timothy B. Lee, *Music Publisher Uses DMCA to Take Down Romney Ad of Obama Crooning*, ARS TECHNICA (July 16, 2012), <http://arstechnica.com/tech-%20policy/2012/07/major-label-uses-dmca-to-take-down-romney-ad-of-obama-crooning/>; Rob Price, *Terrorists Are Using DMCA Notices to Hunt Down Their YouTube Critics*, DAILY DOT (Nov. 6, 2014), <http://www.dailydot.com/politics/dmca-youtube-terrorism-dox-al-hayat/>.

22 See generally Jennifer M. Urban et al., *Notice and Takedown in Everyday Practice* (Univ. of Cal. Berkeley, Public Law Research Paper No. 2755628, 2017), <http://ssrn.com/abstract=2755628>. See *infra* subsection I.D.4 (expanding on this point).

23 47 U.S.C. § 230(e)(3) (2012). Section 230 of the CDA has been interpreted as giving interactive computer service providers a broad immunity from liability for content provided by third parties. See *id.* § 230(c)(1). See generally Brief of Amici Curiae Internet Law Professors in Support of Appellees Google, Inc. and YouTube, LLC at 4, *Garcia v. Google Inc.*, 786 F.3d 733 (9th Cir. 2015) (en banc) (No. 12-57302), <http://ssrn.com/>

pelled the growth of social networking and other “Web 2.0” businesses.<sup>24</sup> Some argue that the safe harbors give too much cover to online intermediaries and diminish their incentives to address online infringement and that the safe harbors should be abolished or made more demanding.<sup>25</sup> For example, Lital Helman and Gideon Parchomovsky argue that safe harbor protection should be limited to those platforms that can show that they employed the best filtering technology available (as determined by the Copyright Office).<sup>26</sup> However, before we can remake the safe harbors, we need to understand them more completely. This Article concentrates on the intrinsic effects of the internet safe harbors; in particular, on how the DMCA notice-and-takedown regime and DMCA-plus agreements negotiated in the shadow of that regime have shifted the locus of power with respect to copyright. It is too simplistic to say that the internet safe harbors have made the substantive content of copyright irrelevant to online behavior, but as this Article shows, the DMCA has fundamentally altered the relationship between copyright law on the books and the law in action.<sup>27</sup> By changing the incentives of the intermediaries through which content passes, the DMCA has in many cases decoupled decisions about what gets published and whether it remains published from the actual content of copyright law.

The normative implications of this transformation are difficult to assess. In much of the online world, platforms are absentee gatekeepers, and the balance of publication is determined by the interaction between whatever users decide to post and whatever copyright owners decide to take down. Neither decision is typically tied that closely to the substantive content of copyright law, either in terms of what the law allows or disallows. As Part I explores, this new balance of publication appears to be more permissive of infringement and more open to new and unexpected speech and new forms of cultural participation, but it is also more vulnerable than traditional offline distribution channels to overreaching claims by rightsholders. Moreover, the rules of notice-and-takedown do not represent a stable equilibrium.

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abstract=2539165 (“Due to the robust nature of the immunity, Section 230 provides the legal foundation for many of the most popular websites that enable users to communicate with each other or the world at large.”).

<sup>24</sup> See Edward Lee, *Decoding the DMCA Safe Harbors*, 32 COLUM. J.L. & ARTS 233, 269 (2009) (“[T]he DMCA safe harbors have helped to foster tremendous growth in web applications.”).

<sup>25</sup> For a representative sample of criticisms of the safe harbors, see Jeffrey Harleston et al., Universal Music Grp., *Reply Comments Submitted in Response to Section 512 Study: Notice and Request for Public Comment* at 3–9 (Apr. 1, 2016), <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-90321&attachmentNumber=1&disposition=attachment&contentType=pdf>; Jennifer L. Pariser, Motion Picture Ass’n of Am., *Reply Comments Submitted in Response to Request for Comments on U.S. Copyright Office Section 512 Study* at 3–5 (Apr. 1, 2016), <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-90285&attachmentNumber=1&disposition=attachment&contentType=pdf>.

<sup>26</sup> See generally Lital Helman & Gideon Parchomovsky, *The Best Available Technology Standard*, 111 COLUM. L. REV. 1194 (2011).

<sup>27</sup> See Roscoe Pound, *Law in Books and Law in Action*, 44 AM. L. REV. 12, 36 (1910).



For reasons addressed in Part II, rightsholders and platforms with substantial resources are leaving the DMCA behind and negotiating DMCA-plus arrangements that revolve around automated copyright enforcement systems. These systems are a pragmatic response to the incredible scale of online infringement, but they also have the potential to fundamentally rewrite the balance of copyright law. The automation of copyright enforcement at the platform level reinstates gatekeeping, but in a way that is likely to result in a new digital/analog divide. The defining feature of copyright regulation in DMCA-plus environments is that any connection it has to the substantive content of copyright law will be purely a function of private negotiations between copyright owners and internet platforms.

## I. NOTICE-AND-TAKEDOWN

### A. *The DMCA's Origin Story*

The DMCA was intended to shepherd copyright into the digital age, but it was drafted at a time when the full implications of digitization and the global interconnectedness of the internet could not have been fully anticipated. In 1998, only forty-one percent of American households were connected to the internet, and an hour of television would take more than twenty-four hours to download, assuming you had the latest 56k modem.<sup>28</sup> Google was founded on September 4, 1998, less than two months before the DMCA was signed into law.<sup>29</sup>

The DMCA's origin story begins in 1993 when President Clinton formed the Information Infrastructure Task Force to articulate and implement the Administration's vision for the National Information Infrastructure (i.e., the internet). The resulting White Paper was released in 1995 and eventually—after much lobbying, negotiation,<sup>30</sup> forum shopping, and horse trading—morphed into the DMCA that we have today.<sup>31</sup> The final text adopted in 1998 reflects a compromise between competing interests: Congress wanted to protect copyright owners from the prospect of massive digital piracy, but at

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28 See Susannah Fox, *The Internet Circa 1998*, PEW RES. CTR. (June 21, 2007), <http://www.pewInternet.org/2007/06/21/the-Internet-circa-1998/>. A file of 577 MB would take twenty-four hours to download on a 56k modem with dialup access. See *Download Speed Calculator—How Long Will a Download Take?*, CALCULATORCAT, [http://www.calculatorcat.com/free\\_calculators/download\\_speed\\_calculator.phtml](http://www.calculatorcat.com/free_calculators/download_speed_calculator.phtml) (last visited Sept. 20, 2017).

29 See Alex Fitzpatrick, *Google Used to Be the Company that Did 'Nothing but Search,'* TIME (Sept. 4, 2014), <http://time.com/3250807/google-anniversary/>.

30 Pamela Samuelson, *The U.S. Digital Agenda at WIPO*, 37 VA. J. INT'L L. 369, 379–81 (1997) (explaining the influence of the U.S. digital copyright agenda on the negotiation of the World Intellectual Property Organization (WIPO) internet treaties in the mid-1990s).

31 JESSICA LITMAN, DIGITAL COPYRIGHT 89–150 (2001) (reviewing the legislative history of DMCA). Note that the White Paper's legislative proposal contained no relief whatsoever for online intermediaries with respect to infringing user conduct. See Annemarie Bridy, *Graduated Response and the Turn to Private Ordering in Online Copyright Enforcement*, 89 OR. L. REV. 81, 87–89 (2010) (summarizing the White Paper discussion concerning the scope of online service provider liability for copyright infringement).

the same time it sought to ensure quick access to movies, music, software, and literary works via the internet.<sup>32</sup> Congress did not foresee user-generated content, Facebook posts, tweets, Vines, Snapchat videos, and the like; what it had in mind was a kind of “Celestial Jukebox,” which would broadcast traditional content, made by traditional producers, on demand and via subscription.<sup>33</sup>

In the 1990s, traditional commercial copyright producers, such as movie studios, record labels, songwriters, publishing houses, and software companies, were understandably concerned that rapidly spreading digital networks would facilitate the unauthorized copying of perfect digital reproductions of their works on a scale never before seen. Because the internet promised the dissemination of copyrighted works almost instantaneously, copyright owners were reluctant to make their works available in digital form or online without enhanced legal protection.<sup>34</sup>

On the flip side, the telecommunications providers that connected users to the internet were concerned that they would be made liable for the infringing conduct of their users—conduct over which they had no real control.<sup>35</sup> This liability could be direct or indirect. Cases in the 1990s, such as *Playboy Enterprises, Inc. v. Frena*<sup>36</sup> and *Playboy Enterprises, Inc. v. Russ Hardenburgh, Inc.*<sup>37</sup> suggested that online service providers, such as internet bulletin boards, would be held directly liable for unlawful material posted by their users.<sup>38</sup> However, other cases, such as *Religious Technology Center v. Netcom On-Line Communication Services, Inc. (Netcom)*<sup>39</sup> and *CoStar Group, Inc. v. LoopNet, Inc. (CoStar)*,<sup>40</sup> persuasively reached the opposite conclusion. In *Netcom*, the district court held that the defendant internet service provider was not liable for the automatic reproduction of a copyrighted work by its computer system.<sup>41</sup> The court refused to impose direct liability on the service provider, reasoning that “[a]lthough copyright is a strict liability statute, there should still be some element of volition or causation which is lacking where a defendant’s system is merely used to create a copy by a third party.”<sup>42</sup> In *CoStar*,

32 S. REP. NO. 105-190, at 8 (1998). This account risks crossing the line from simplification into fable, but it is sufficient for present purposes.

33 See *Bonneville Int’l Corp. v. Peters*, 153 F. Supp. 2d 763, 767 (E.D. Pa. 2001), *aff’d*, 347 F.3d 485 (3d Cir. 2003). See generally PAUL GOLDSTEIN, *COPYRIGHT’S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX* 187–88 (rev. ed. 2003).

34 S. REP. NO. 105-190, at 8; see also GOLDSTEIN, *supra* note 32, at 164–65.

35 See GOLDSTEIN, *supra* note 32, at 105–90.

36 839 F. Supp. 1552 (M.D. Fla. 1993) (holding a bulletin board service operator liable for copyright infringement because the bulletin board displayed and allowed downloads of pictures copyrighted by Playboy).

37 982 F. Supp. 503 (N.D. Ohio 1997).

38 See Eric Goldman, *How the DMCA’s Online Copyright Safe Harbor Failed*, 3 NTUT J. INTELL. PROP. L. & MGMT. 195, 195 (2014).

39 907 F. Supp. 1361 (N.D. Cal. 1995).

40 373 F.3d 544, 550 (4th Cir. 2004).

41 *Netcom*, 907 F. Supp. at 1370.

42 *Id.*

the Fourth Circuit likewise explained that direct copyright infringement required more than “mere ownership of a machine used by others to make illegal copies.”<sup>43</sup>

Even if it had been clear that courts would adopt the “volitional copy” doctrine from *Netcom*—as many subsequently have<sup>44</sup>—service providers would still have faced the possibility of indirect liability under copyright law principles of contributory and vicarious liability.<sup>45</sup> Under the principle of contributory copyright infringement, a service provider could be held responsible for user infringement if it had knowledge of, and made a material contribution to, a user’s infringement.<sup>46</sup> Under the principle of vicarious liability, a service provider that had the right and ability to supervise infringing conduct and a direct financial interest in the infringing activity would also be liable.<sup>47</sup> In 1984, the Supreme Court held that the knowledge required for contributory copyright liability could be established by the sale of an item whose only practical use was to infringe copyright.<sup>48</sup> The corollary of this position was that a manufacturer would not be liable for the infringing acts of end users if the technology in question was a product “widely used for legitimate, unobjectionable purposes. Indeed, it need *merely be capable of substantial noninfringing uses*.”<sup>49</sup> Nonetheless, subsequent cases have clarified that the fact that a service has a substantial noninfringing use will not shield the service provider if it has actual knowledge of infringement,<sup>50</sup> nor if it makes the service available “with the object of promoting its use to infringe

43 *CoStar*, 373 F.3d at 550; *see also* *Fox Broad. Co. v. Dish Network L.L.C.*, 747 F.3d 1060, 1066–68 (9th Cir. 2014); *Cartoon Network LP v. CSC Holdings, Inc.*, 536 F.3d 121, 130–31 (2d Cir. 2008); *Parker v. Google, Inc.*, 242 F. App’x 833, 835–37 (3d Cir. 2007) (per curiam).

44 *ABC, Inc. v. Aereo, Inc.*, 134 S. Ct. 2498, 2512–13 (2014) (Scalia, J., dissenting) (“A defendant may be held directly liable only if it has engaged in volitional conduct that violates the Act. . . . Although we have not opined on the issue, our cases are fully consistent with a volitional-conduct requirement.” (footnote omitted) (citations omitted)); *see also* *Fox Broad. Co.*, 747 F.3d at 1066–68; *Cartoon Network*, 536 F.3d at 130–31; *CoStar*, 373 F.3d at 549–50.

45 *MGM Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 930 (2005) (“One infringes contributorily by intentionally inducing or encouraging direct infringement, and infringes vicariously by profiting from direct infringement while declining to exercise a right to stop or limit it. Although ‘[t]he Copyright Act does not expressly render anyone liable for infringement committed by another,’ these doctrines of secondary liability emerged from common law principles and are well established in the law.” (alteration in original) (footnote omitted) (citations omitted) (quoting *Sony Corp. of Am. v. University City Studios, Inc.*, 464 U.S. 417, 434 (1984))).

46 *Gershwin Publ’g Corp. v. Columbia Artists Mgmt., Inc.*, 443 F.2d 1159, 1162 (2d Cir. 1971); *see also* *MGM*, 545 U.S. at 915.

47 *Gershwin*, 443 F.2d at 1162.

48 *Sony Corp. of Am.*, 464 U.S. at 491 (Blackmun, J., dissenting).

49 *Id.* at 442 (majority opinion) (emphasis added).

50 *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1020 (9th Cir. 2001).

copyright, as shown by clear expression or other affirmative steps taken to foster infringement.”<sup>51</sup>

In the 1990s, copyright’s doctrines of secondary liability were seen as theoretically muddled and somewhat arbitrary in application. Accordingly, service providers had no way of predicting whether courts would apply key concepts, such as “knowledge,” “material contribution,” “the right and ability to supervise,” “financial interest in the infringing activity,” and “substantial noninfringing use” in a way that made them liable.<sup>52</sup> Indeed, whether an internet service provider that connects households to the internet, such as Comcast or AT&T, could ever be held liable for the unauthorized transmission and/or storage of copyrighted material without their knowledge remains an open question even today. Likewise, the circumstances under which an online service provider, such as YouTube (a popular video-sharing website) or Flickr (a popular photo-sharing website), could actually be held liable for any infringing uploads by their users is unclear.<sup>53</sup> In the mid-1990s, the issues were sufficiently in doubt that telecommunications providers and would-be providers of other online services convinced Congress that they were reluctant to “make the necessary investment in the expansion of the speed and capacity of the Internet” without reasonable assurances of limited liability for copyright infringement.<sup>54</sup>

Although the Clinton administration initially focused on the reforms that Hollywood was demanding, principally anticircumvention rules now found in section 1201 of the Copyright Act,<sup>55</sup> telecom companies and fledgling ISPs demanded and eventually received safe harbor protection as a

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51 *MGM*, 545 U.S. at 936–37.

52 Congress could have done more to relieve platforms of uncertainty if it had not included so many of these terms in the weeds of the safe harbor rules. *See, e.g.*, 17 U.S.C. § 512(c)(1)(B) (2012) (explaining that safe harbor eligibility is contingent on not receiving “a financial benefit directly attributable to the infringing activity, in a case in which the service provider has the right and ability to control such activity”). Note also that the doctrine of inducement was not on anyone’s radar in the late-1990s. But in hindsight, there is substantial room for discretion in applying the Supreme Court’s inducement formula, especially in the notion of “clear expression or other affirmative steps taken to foster infringement.” *MGM*, 545 U.S. at 937.

53 *See* *Viacom Int’l Inc. v. YouTube, Inc. (Viacom I)*, 718 F. Supp. 2d 514 (S.D.N.Y. 2010) (granting defendant’s motion for summary judgment on the application of the DMCA safe harbors), *aff’d in part, vacated in part, remanded*, *Viacom Int’l, Inc. v. YouTube, Inc. (Viacom II)*, 676 F.3d 19 (2d Cir. 2012), *summary judgment restored by* *Viacom Int’l Inc. v. YouTube, Inc. (Viacom III)*, 940 F. Supp. 2d 110 (S.D.N.Y. 2013) (granting defendant’s motion for summary judgment on the application of the DMCA safe harbors on remand). Note that in *Perfect 10, Inc. v. Amazon.com, Inc.*, the Ninth Circuit held that an internet search engine could satisfy the material contribution element of contributory liability, but remanded the case for further consideration. 508 F.3d 1146, 1172–73 (9th Cir. 2007).

54 S. REP. NO. 105-190, at 8 (1998).

55 To put it simply, the anticircumvention rules make it illegal to break digital locks (i.e., encryption or digital rights management) or to traffic in digital lock-breaking tools. 17 U.S.C. § 1201.

quid pro quo.<sup>56</sup> Eventually, Congress enacted a patchwork of reforms, concessions, and incentives tailored to the interests of the major participants.<sup>57</sup> Congress sought to preserve “strong incentives for service providers and copyright owners to cooperate” in dealing with online infringement.<sup>58</sup> It also sought to provide “greater certainty to service providers concerning their legal exposure for infringements that may occur in the course of their activities.”<sup>59</sup> To achieve this balance, internet and online service providers were given significant relief from prospective copyright liability under a set of provisions that are conventionally known as the DMCA safe harbors. Title II of the DMCA, also known as the Online Copyright Infringement Liability Limitation Act, now forms section 512 of the Copyright Act.<sup>60</sup> As the term “safe harbor” suggests, Title II of the DMCA was intended to offer legal certainty to internet service providers and online platforms if their conduct stayed within certain parameters. Title II was modeled, in part, on the district court decision in *Netcom*, which held that a service operating automatically at the direction of a user lacks the volitional element required for copyright infringement.<sup>61</sup> But rather than confirming this view of the law, Congress left this and related questions open. That the direct and indirect liability of internet and online service providers remains open to debate some twenty years later is a testament to the success to the safe harbor regime.<sup>62</sup>

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56 See Timothy Wu, *Copyright's Communications Policy*, 103 MICH. L. REV. 278, 350–56 (2004) (discussing the tradeoff between Section 512 and Section 1201); see also Samuelson, *supra* note 30 (explaining the influence of the U.S. digital copyright agenda on the negotiation of the WIPO internet treaties in the mid-1990s).

57 LITMAN, *supra* note 31 (reviewing the legislative history of the DMCA); see also Pamela Samuelson, *The Copyright Grab*, WIRED (Jan. 1, 1996), <http://www.wired.com/1996/01/white-paper/> (same). Traditional commercial copyright producers obtained a number of important concessions under the DMCA that are not directly relevant to this Article, most notably anticircumvention rules.

58 S. REP. NO. 105-190, at 20.

59 *Id.*

60 See generally Copyright Act of 1976, Pub. L. 94-553, 90 Stat. 2541 (codified as amended in scattered sections of 17 U.S.C.).

61 See *Religious Tech. Ctr. v. Netcom On-Line Commc'n Servs., Inc. (Netcom)*, 907 F. Supp. 1361, 1370 (N.D. Cal. 1995); see also Jerome H. Reichman et al., *A Reverse Notice and Takedown Regime to Enable Public Interest Uses of Technically Protected Copyrighted Works*, 22 BERKELEY TECH. L.J. 981, 990 (2007) (explaining how the *Netcom* decision became “a pivotal development in the legislative drama that spawned the DMCA safe harbors”).

62 One could argue that rather than reducing uncertainty, the DMCA has simply shifted the locus of uncertainty from the common law to the statute. However, I would argue that notwithstanding protracted disputes over the conditions and scope of the safe harbors, for most platforms, the DMCA has provided a clearer framework for action and risk management than the common law standards it displaced. On the lack of clarity in the DMCA, see generally Annemarie Bridy, *Three Notice Failures in Copyright Law*, 96 B.U. L. REV. 777 (2016).

## B. *How the Safe Harbors Change the Behavior of Internet Platforms*

### 1. The Safe Harbors

The DMCA safe harbors protect small blogs and large commercial enterprises alike. Amazon (crowd-sourced reviews), AT&T (internet access), Bing (search), Comcast (internet access), Facebook (social networking), Flickr (photo sharing), Foursquare (social networking), Google (search), Instagram (photography-centered social networking), LinkedIn (social networking), Reddit (social news and commentary), Twitter (social networking), Wikipedia (crowd-sourced encyclopedia), YouTube (video sharing), and Yelp (crowd-sourced reviews) all rely on the DMCA safe harbors to avoid liability for acts of copyright infringement committed by their users. The incentives established by the DMCA safe harbors lead these entities to respond to claims of online copyright infringement in a way that is fundamentally different from their offline counterparts.

Of the four distinct DMCA safe harbors that prevent user-induced copyright liability, the most significant and controversial is the section 512(c) safe harbor for infringement claims that arise “by reason of the storage at the direction of a user of material that resides on a system or network controlled or operated by or for the service provider.”<sup>63</sup> In effect, and as long as platforms play by the rules set forth in section 512(c), the safe harbor makes it impossible for a copyright owner to obtain any relief against the platform for copyright infringement that takes place “by reason of the storage at the direction of a user of material” on the service provider’s system or network.<sup>64</sup> As discussed in more detail below, there are some hurdles to staying within the boundaries of the safe harbor protection, but on the whole, safe harbor protection is broadly available for most Web 2.0 businesses and countless other internet users.<sup>65</sup> The section 512(c) safe harbor is the enabler of almost everything that makes the internet distinct from other means of communication: section 512(c) applies to blogs, wikis, discussion forums, product reviews, tweets, podcasts, anything posted on a video-sharing, photo-sharing, or recipe-sharing website, and much more. Social networking websites, such as Facebook, Twitter, and Instagram, and information platforms, such as Reddit, are comprised almost entirely of user-generated content.

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63 17 U.S.C. § 512(c)(1) (2012).

64 *Id.* Under the safe harbors, service providers are not liable for monetary relief. *See id.* Limited injunctive and other equitable relief is limited under § 512(j).

65 The § 512 safe harbors apply to a broad range of “service providers” defined in relevant part as: “an entity offering the transmission, routing, or providing of connections for digital online communications, between or among points specified by a user, of material of the user’s choosing, without modification to the content of the material as sent or received” and/or “a provider of online services or network access, or the operator of facilities therefor.” § 512(k)(1)(A), (B). In other words, any entity that facilitates the creation or distribution of user-generated content will qualify as an online service provider in relation to that user-generated content.

The section 512(d) safe harbor relates to information location tools, including directories and hypertext links that point users toward infringing material online. This safe harbor protects qualifying service providers from liability for copyright infringement that occurs on the other end of a hypertext link.<sup>66</sup> This safe harbor provides vital reassurance for internet search engines that automatically respond to search requests and is thus one of the key building blocks of the modern internet.<sup>67</sup>

There are two additional safe harbors in section 512, both of which are vital to companies that provide internet access to businesses and households, such as Comcast and AT&T. Under the “Transitory Communications” safe harbor in section 512(a), service providers are not liable for copyright infringement merely because they transmit infringing material through their networks.<sup>68</sup> Finally, the “System Caching” safe harbor in section 512(b) provides similar protection for the routine intermediate and temporary storage data on the network<sup>69</sup>—a practice generally referred to as caching. The Transitory Communications and System Caching safe harbors are not controversial: just as FedEx is not liable for delivering a defamatory letter, the ISPs are not liable for delivering or storing material that infringes copyright.

Beyond their technical details, the most important thing to understand about the safe harbors is that they do not compel platforms to act or refrain from acting in particular ways. The safe harbors create strong incentives, but they are not commands. This distinction is critical because it takes the DMCA outside of the spotlight of First Amendment scrutiny. In *New York Times Co. v. Sullivan*<sup>70</sup> in 1964 and again in *New York Times Co. v. United States*<sup>71</sup> in 1971, the Supreme Court acknowledged that freedom of the press from prior restraint was critical to democratic legitimacy and the principle of freedom of expression encoded in the First Amendment. However, the First Amendment only expressly prohibits governmental action that would “abridg[e] the freedom of speech.”<sup>72</sup> The DMCA has profound effects on the infrastructure that enables free expression, but those effects are manifest through the actions of nonstate actors responding to the incentives of the DMCA; the law itself does not restrain speech any more than copyright, in general, does.<sup>73</sup> The DMCA safe harbors do not implicate the First Amend-

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66 § 512(d).

67 There is some authority to suggest that a search engine operator could be liable for contributory infringement simply by directing search engine users to websites that distribute infringing copies of copyrighted works. See *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1172 (9th Cir. 2007).

68 § 512(a).

69 § 512(b).

70 376 U.S. 254 (1964).

71 403 U.S. 713 (1971) (per curiam).

72 U.S. CONST. amend. I. The First Amendment applies expressly to the federal government and is applicable to the states through the Fourteenth Amendment. See *Reed v. Town of Gilbert*, 135 S. Ct. 2218, 2226 (2015).

73 See generally Jack M. Balkin, *Old-School/New-School Speech Regulation*, 127 HARV. L. REV. 2296, 2297 (2014) (“[T]he infrastructure of free expression increasingly is merging with

ment because section 512 of the Copyright Act does not, in a technical sense, mandate or compel internet platforms to act or refrain from acting in any particular way. However, the prospect of falling outside of safe harbor protection is sufficiently unpalatable that the conditions for obtaining that protection profoundly shape the way most internet platforms operate. Facebook's billions of users copy and paste photographs and text countless times a day with no thought to the copyright consequences.<sup>74</sup> In 2016, YouTube users were uploading 400 hours of video content every minute, again, mostly with no thought to the copyright status of those videos.<sup>75</sup> Without the DMCA, whether Facebook, YouTube, or other online service providers could be held liable for the millions of possibly infringing actions taken by their users would depend on copyright law's rather murky doctrines of secondary liability, summarized earlier.<sup>76</sup>

Practically speaking, to avoid secondary liability without availing themselves of the DMCA safe harbors, platforms must, at a minimum: (i) avoid actual knowledge of specific instances of infringement; (ii) avoid being seen to have a direct financial interest in infringing activity—a standard that has been interpreted both broadly and narrowly; (iii) be confident that they have a clearly established substantial noninfringing use for their service; and (iv) refrain from any action that could be regarded as encouraging or inducing infringement.<sup>77</sup> The caselaw expanding on the elements of contributory and vicarious liability in copyright law is so muddled, arbitrary, and contradictory that it is very difficult to predict when a court will find that a platform is or is not responsible for user infringement. The DMCA was meant to provide a much surer route for platforms to avoid copyright liability.

## 2. Safe Harbor Eligibility

Understanding the DMCA's impact on the incentives of online platforms necessitates a brief tour of the requirements for maintaining safe harbor eligibility. These requirements are optional, in the sense that platforms could ignore the safe harbors and simply accept the risk of copyright infringement claims in relation to user content, but almost none elect to do so. Practically speaking, the safe harbor conditions have become the *de facto* standard for

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the infrastructure of speech regulation and the infrastructure of public and private surveillance.”).

74 Facebook reports that it had an average of 1.37 billion daily active users in June 2017. *Stats*, FACEBOOK NEWSROOM, <http://newsroom.fb.com/company-info/> (last visited Nov. 21, 2017).

75 GOOGLE, HOW GOOGLE FIGHTS PIRACY 21 (2016) (“Today, more than 400 hours of video are uploaded to YouTube every minute . . . .”), <https://drive.google.com/file/d/0BwxyRPFduTN2TmpGajj6TnRLaDA/view>.

76 See *supra* Section I.A.

77 Platforms may also argue that they lack the “right and ability to supervise” infringing conduct required for vicarious liability and that they do not make the “material contribution” to infringement required for contributory liability. See, e.g., *Gershwin Publ’g Corp. v. Columbia Artists Mgmt., Inc.*, 443 F.2d 1159, 1162 (2d Cir. 1971).



how platforms deal with user content and rightsholder claims of copyright infringement. As discussed in more detail below, platforms have many responsibilities under the DMCA, but they are not required to take any active steps to detect or discourage user copyright infringement unless and until they are given specific notice of that infringement.

The DMCA safe harbor eligibility rules can be divided into technical and substantive requirements. The technical requirements for safe harbor eligibility are important for platforms to understand, but they do not significantly impact their day-to-day operations. To satisfy safe harbor “[c]onditions for eligibility” under the DMCA, an internet platform must accommodate “‘standard technical measures’ . . . that are used by copyright owners to identify or protect copyrighted works.”<sup>78</sup> Safe harbor protection is also contingent upon appointing a designated agent to receive takedown notices from copyright owners.<sup>79</sup> These technical conditions can pose some traps for the unwary, but they do not generally present a significant obstacle to qualifying for safe harbor protection. The safe harbor conditions of eligibility also require that service providers adopt and reasonably implement a policy for terminating the accounts of repeat infringers.<sup>80</sup> This requirement to reasonably implement a repeat-infringer policy is a substantive condition on safe harbor eligibility, but has not been interpreted to be a particularly onerous one.<sup>81</sup> Courts have not, for example, equated a repeat-infringer policy with a three-strikes policy of graduated response.<sup>82</sup>

The most significant safe harbor requirement in the DMCA is that platforms must avoid knowledge of *specific and identifiable* instances of copyright infringement by their users—i.e., they must maintain plausible deniability.

78 17 U.S.C. § 512(i) (2012). Under section 512(i) of the DMCA, qualifying service providers must implement “standard technical measures.” *Id.* § 512(i)(1)(B). This term only applies to measures that “have been developed pursuant to a broad consensus of copyright owners and service providers in an open, fair, voluntary, multi-industry standards process”; they must be “available to any person on reasonable and nondiscriminatory terms”; and they must “not impose substantial costs on service providers or substantial burdens on their systems or networks.” *Id.* § 512(i)(2)(A)–(C). Not surprisingly, the required consensus on these standard technical measures has not materialized, and § 512(i) has not yet resulted in any concrete obligations for providers. *See* Bridy, *supra* note 31, at 92.

79 § 512(c)(1)(C), (d)(3).

80 A service provider must demonstrate that it has “adopted and reasonably implemented, and informs subscribers and account holders of the service provider’s system or network of, a policy that provides for the termination in appropriate circumstances of subscribers and account holders of the service provider’s system or network who are repeat infringers.” § 512(i)(1)(A).

81 *Capitol Records, LLC v. Vimeo, LLC*, 972 F. Supp. 2d 500, 513 (S.D.N.Y. 2013) (stating that a threshold obligation to adopt a repeat infringer policy “should not be an overly burdensome one to meet”), *aff’d in part, vacated in part, remanded*, 826 F.3d 78 (2d Cir. 2016). However, the requirement is far from de minimis. *See, e.g., Ellison v. Robertson*, 357 F.3d 1072, 1080 (9th Cir. 2004) (“[A] reasonable jury [could] conclude that AOL had not reasonably implemented its policy against repeat infringers.”).

82 Bridy, *supra* note 31, at 100–03.

For a platform to remain eligible for the User Directed Content or Information Location Tools safe harbors it must avoid both actual knowledge and red flag knowledge of specific acts of infringement.<sup>83</sup> The relevant provisions for both safe harbors provide that the service provider must “not have actual knowledge that the material or an activity using the material on the system or network is infringing”;<sup>84</sup> or “in the absence of such actual knowledge,” it must not be “aware of facts or circumstances from which infringing activity is apparent.”<sup>85</sup> If either of these knowledge thresholds are triggered, the platform must “upon obtaining such knowledge or awareness, act [ ] expeditiously to remove, or disable access to, the material.”<sup>86</sup>

A case filed in 2007 involving the entertainment conglomerate Viacom and the video-sharing website YouTube illustrates the important difference between knowledge of specific acts of infringement and a general awareness of infringement.<sup>87</sup> YouTube permits users to upload videos free of charge, subject to a user agreement. When the video is uploaded, the website makes an exact copy in the file’s original format, and it “transcodes” the video into a format better suited for transmission. Once a video is transcoded, it is available to the general public to view as a streaming video upon request. The YouTube system copies and makes public performances of massive quantities of copyrighted material—hundreds of millions of hours’ worth every day.<sup>88</sup> A great deal of this material is copied and performed without prior permission from the copyright owner.

The district court in *Viacom v. YouTube* noted that based on the plaintiffs’ summary judgment submissions, “a jury could find that the defendants not only were generally aware of, but welcomed, copyright-infringing material being placed on their website.”<sup>89</sup> At the relevant time, various surveys suggested that between half and three-quarters of the content streamed on YouTube was infringing.<sup>90</sup> Moreover, email correspondence between YouTube’s founders showed a cavalier attitude toward copyright, to say the least. For example, responding to a suggestion that they remove a CNN clip of the Space Shuttle in 2005, YouTube cofounder Steve Chen responded:

but we should just keep that stuff on the site. i really don’t see what will happen. what? someone from cnn sees it? he happens to be someone with power? he happens to want to take it down right away. he gets in touch with

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83 § 512(c)(1)(A)(i)–(ii), (d)(1)(A)–(B).

84 § 512(c)(1)(A)(i); *see also* § 512(d)(1)(A).

85 § 512(c)(1)(A)(ii); *see also* § 512(d)(1)(B).

86 § 512(c)(1)(A)(iii).

87 *Viacom Int’l, Inc. v. YouTube, Inc.* (*Viacom II*), 676 F.3d 19 (2d Cir. 2012).

88 GOOGLE, *supra* note 75, at 21 (“Every day, people watch hundreds of millions of hours of video on YouTube, generating billions of views for videos that are created by a global creative community.”).

89 *Viacom Int’l, Inc. v. YouTube, Inc.* (*Viacom I*), 718 F. Supp. 2d 514, 518 (S.D.N.Y. 2010), *aff’d in part, vacated in part, remanded*, 676 F.3d 19 (2d Cir. 2012).

90 Note that because YouTube ultimately prevailed on summary judgment, none of these accusations were ever put to the test of a fully litigated trial. *Viacom II*, 676 F.3d at 32–33 (discussing various estimates).

cnn legal. 2 weeks later, we get a cease & desist letter. we take the video down.<sup>91</sup>

Viacom asked for a billion dollars in damages and claimed that 63,497 video clips on the site infringed its rights.<sup>92</sup> Essentially, Viacom argued that widespread patterns of infringement themselves constituted “facts or circumstances from which specific infringing activity was apparent” and should have disqualified YouTube from safe harbor eligibility.<sup>93</sup> Both the district court and the court of appeals rejected this attack on the safe harbor and held that only “knowledge of specific and identifiable infringements” would take the defendant outside the protection of the safe harbors.<sup>94</sup>

The Second Circuit’s decision in *Viacom v. YouTube* was entirely consistent with the statute. Although this narrow view of the knowledge requirements under section 512(c) places a significant burden on rightsholders to continually monitor for infringement and send takedown notifications, the alternatives must have struck the court as just as unpalatable. Even if video-sharing platforms are aware that particular properties belong to certain rightsholders, they have no way of knowing whether such material is authorized or not. Content owners like Viacom frequently engage in stealth marketing campaigns using agents, proxies, and fake accounts to seed their own content on social media to create the appearance of authenticity and the prospect of generating “buzz” or going “viral.”<sup>95</sup> This strategy was particularly important to two programs central to Viacom’s suit against YouTube: *The Daily Show* and *The Colbert Report*. The principals of those programs, “Jon Stewart and Stephen Colbert[,] believed that their presence on YouTube was important for their ratings as well as for their relationship with their audience.”<sup>96</sup> Stealth marketing on internet platforms remains common practice today.<sup>97</sup>

The cumulative effect of the 2012 *Viacom v. YouTube* decision, and other similar cases,<sup>98</sup> is that, even in the face of a general awareness of widespread infringement, platforms are not required to take any active steps to detect or discourage infringement unless and until they acquire knowledge of specific

91 *Id.* at 34.

92 *Viacom II*, 676 F.3d at 29.

93 *Id.* at 34.

94 *Id.* at 30 (quoting *Viacom I*, 718 F. Supp. 2d at 523) (internal quotation marks omitted).

95 Memorandum of Law in Support of Defendants’ Motion for Summary Judgment at 40, 51, *Viacom I*, 718 F. Supp. 2d 514 (S.D.N.Y. 2010) (No. 07-CV-2103, No. 07-CV-3582).

96 *Id.* at 46 (internal quotation marks omitted); see also Amir Hassanabadi, Note, *Viacom v. YouTube—All Eyes Blind: The Limits of the DMCA in a Web 2.0 World*, 26 BERKELEY TECH. L.J. 405, 430 (2011).

97 Urban et al., *supra* note 22, at 57.

98 Many cases indicate that infringement notices must identify the allegedly infringing content or information with specificity to trigger the knowledge threshold under § 512(c). See, e.g., *Perfect 10, Inc. v. CCBill LLC*, 488 F.3d 1102, 1114 (9th Cir. 2007); *UMG Recordings, Inc. v. Veoh Networks Inc.*, 665 F. Supp. 2d 1099, 1108–09 (C.D. Cal. 2009), *aff’d sub nom.* *UMG Recordings, Inc. v. Shelter Capital Partners LLC*, 667 F.3d 1022 (9th Cir. 2011); *Hendrickson v. eBay Inc.*, 165 F. Supp. 2d 1082, 1093 (C.D. Cal. 2001).

and identifiable infringements. From YouTube's perspective, this means that even though it is aware that, for example, Fox objects to users sharing episodes of *The Simpsons*, the service does not need to take action with respect to any individual post until it receives a takedown request directed to that particular post or otherwise becomes aware that the post is unauthorized. As a result, video-sharing websites and search engines are strongly motivated to act once burdened with knowledge of specific infringing posts, but they are also strongly motivated to avoid such knowledge.<sup>99</sup> This creates a stark divide between the functional balance of copyright law online compared to traditional media environments.

On one end of the spectrum, in the world of traditional media, creativity and communication are channeled through intermediaries that take copyright seriously. Even if individual creators are unfamiliar with or indifferent to copyright, the production companies, distributors, and insurers who underwrite their creations are not.<sup>100</sup> These companies are well aware that claims of copyright infringement can easily range from disruptive to ruinous. This sensitivity to copyright issues becomes part of the creative ecosystem: creators usually take the need to obtain copyright clearances or their ability to rely on fair use into account because they know that somewhere along the chain of distribution copyright issues will have to be addressed.<sup>101</sup>

On the other extreme, in the world of notice-and-takedown, internet platforms are usually immune to claims of copyright infringement and so might seem to have little incentive to play the role of gatekeeper and preemptive copyright enforcer. The qualifying words "might seem to" in the previous sentence are important; as explained in detail in Part II, certain types of platforms are under pressure to adopt DMCA-plus automatic copyright enforcement systems that reinstate their gatekeeping role. But before launching into a discussion of DMCA-plus, it is worth fully explaining the incentives of platforms, rightsholders, and users under the DMCA.<sup>102</sup>

### C. *How Users Respond to Open Platforms*

The ease of digital creation and the open and unfiltered design of internet platforms have combined to transform our modern cultural landscape. Internet platforms operating within the boundaries of the notice-and-takedown regime have no need to take on the role of preemptive copyright

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99 Willful blindness is sufficient to disqualify a platform from the protection of the safe harbors; however, willful blindness means more than simply failing to make inquiries in the face of a general awareness that some activity is infringing. To be willfully blind to infringement, one must turn a blind eye to "specific and identifiable instances of infringement." *Viacom II*, 676 F.3d at 32 (2d Cir. 2012); *Viacom Int'l Inc. v. YouTube, Inc.* (*Viacom III*), 940 F. Supp. 2d 110, 117 (S.D.N.Y. 2013) (finding no showing of willful blindness to specific infringements of clips-in-suit).

100 Gibson, *supra* note 11, at 884–85.

101 *Id.* at 893.

102 *See infra* Part II.

enforcer and seemingly<sup>103</sup> few incentives to do so. This lack of prior restraint is democratizing. Internet users have treated the absence of effective gatekeepers as an invitation to engage with copyrighted materials on whatever terms correspond to their own sense of fairness. This new ecosystem has brought user-generated content and participatory culture to the forefront and given rise to a great deal of spontaneity, creativity, and diversity in cultural production<sup>104</sup>—also, many cat videos.

The openness of internet platforms has normalized the noncommercial appropriation of other peoples' content as an act of communication and expression. On YouTube, Facebook, Reddit, SoundCloud, and countless other social media sites, mass media is routinely appropriated, quoted, and repurposed. Many of these acts of appropriation would easily qualify as fair use, many are arguable but not clear cut, and many are obviously not fair use. The ambiguity of fair use has been frequently overstated,<sup>105</sup> but even though the relevant principles are fairly clear, applying those principles to the facts leaves some gray areas. The key questions in addressing the fair use of online video are essentially: whether the use transformed the copyrighted work by using it for a fundamentally different purpose; and whether the nature and amount of the work borrowed was reasonable in light of that purpose.<sup>106</sup> Accordingly, users have a certain freedom to quote from works in popular culture in a way that comments on or critiques those works or what they represent. Likewise, users have a right to repurpose selections of copyrighted material for their illustrative value. For example, a succession of video clips across time showing pundits proclaiming statements like "this election is the most important election in a generation" could be characterized as a commentary on those individual works, but its real significance is to illustrate the relationship between those works and the triteness of that observation.<sup>107</sup> The practices of collage and pastiche have a long artistic pedigree. In the digital age, mashups and remixes that generate new meaning through juxtaposition can also be strong candidates for fair use. An unlikely combination of prior works for humorous effect or social commentary will qualify as fair use provided that its transformative purpose is reasonably apparent and the risk of substituting for the original work is low.

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103 See *infra* Part II.

104 See Edward Lee, *Warming up to User-Generated Content*, 2008 U. ILL. L. REV. 1459.

105 See Matthew Sag, *Predicting Fair Use*, 73 OHIO ST. L.J. 47, 86 (2012) (conducting an empirical study of factors relevant to the outcomes of fair use cases and concluding that "fair use is not nearly so incoherent or unpredictable as is conventionally assumed"); Pamela Samuelson, *Unbundling Fair Uses*, 77 FORDHAM L. REV. 2537, 2537 (2009) (conducting a doctrinal review of fair use cases and concluding that the "fair use caselaw is more coherent and more predictable than many commentators seem to believe").

106 See AM. UNIV. SCH. OF COMM'C'N CTR. FOR SOCIAL MEDIA, CODE OF BEST PRACTICES IN FAIR USE FOR ONLINE VIDEO 2–3 (2008), [http://cmsimpact.org/wp-content/uploads/2016/01/online\\_best\\_practices\\_in\\_fair\\_use.pdf](http://cmsimpact.org/wp-content/uploads/2016/01/online_best_practices_in_fair_use.pdf).

107 *Full Frontal with Samantha Bee. 2010 Elections* (TBS television broadcast Feb. 29, 2016).

By way of illustration, the user video, *ENDLESS LOVE Lionel Ritchie duet w Diana Ross w Lyrics*, posted to YouTube in 2011<sup>108</sup> is not fair use. The video simply synchronizes the entire romantic ballad, *Endless Love*, with appropriate and harmonious photos of peaceful scenery.<sup>109</sup> The combination may be pleasing, but it lacks transformative purpose and has the obvious potential to substitute for authorized versions of the song on YouTube or through other methods of distribution. In contrast, the *Bush Blair Endless Love* video posted to YouTube in 2005<sup>110</sup> is clearly fair use. The video combines just over a minute of the music of *Endless Love* with video footage of then-British Prime Minister, Tony Blair, and then-American President, George W. Bush. The juxtaposition is itself a transformative commentary on the unlikely alliance between these world leaders and the uncritical way in which Prime Minister Blair committed to following the United States into war. The 2011 *Endless Love* video is a complete, untransformative copy of the original. The conclusion that the 2005 video is transformative does not depend on the observation that it contains about a quarter of the original recording, but this fact helps underscore what should already be obvious. At the time of writing, both videos were still available on YouTube.

The openness of internet platforms has been a powerful democratizing force in cultural production. The lack of central planning and prior restraint leaves karaoke singers, videogamers, skateboarders, teachers, poets, activists, and noodle eaters<sup>111</sup> (yes, that is a thing) to compete for attention on equal terms with more traditional entertainment industry offerings. Social media platforms have their own economy of attention, and so, just as on Speakers Corner in Hyde Park, the right to speak does not equate to a right to be heard. It would be naïve to assume that raw talent combined with digital distribution is all that it takes to become a star on social media. Social media is not democracy, but its openness is democratic.

Moreover, social media is not just for amateurs; it has become an important platform for professional media distribution and consumption. Today, the idea of active users who engage with popular culture is so taken for granted that it is embedded within the media strategies of big media companies.<sup>112</sup> News networks now encourage their audiences to submit photo and video content and entire mainstream television shows are devoted to reviewing and discussing material trending online.<sup>113</sup> Traditional media companies have resisted loss of control and loss of revenue online, but they have

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108 Tintin Emilou, *ENDLESS LOVE Lionel Ritchie duet w Diana Ross w Lyrics*, YouTube (Jan. 23, 2011), [https://www.youtube.com/watch?v=jM\\_R1R28kLM](https://www.youtube.com/watch?v=jM_R1R28kLM).

109 *Id.*

110 siegharuto, *bush blair endless love*, YouTube (Nov. 10, 2005), <https://www.youtube.com/watch?v=UTEH6wZXP44>.

111 See, e.g., Paulino Centurion, *ASMR EATING DINNER- forever eating ;(*, YouTube (Apr. 24, 2017), <https://www.youtube.com/watch?v=xrbkGwer8hY>

112 JEAN BURGESS & JOSHUA GREEN, YouTube: ONLINE VIDEO AND PARTICIPATORY CULTURE 13 (1st ed. 2009).

113 See, for example, *@midnight with Chris Hardwick*, a popular program on Viacom's subsidiary cable channel, Comedy Central, from 2013 to 2017.

also embraced social media as a platform for engaging with their audiences and building their brands.

Internet users have responded to open platforms with an outpouring of creative engagement. Just as the DMCA safe harbors give platforms very little incentive to worry about user-generated copyright infringement, the openness of platforms to any and all content gives users very little reason to think about copyright either. This is especially true for noncommercial users who may labor under the misconception that copyright law does not apply to them.<sup>114</sup> A great deal of what users do with this newfound freedom is arguably fair use or otherwise inconsequential. However, it is also quite clear that a great deal of user-generated content is infringing. In the world of notice-and-takedown, it seems that neither platforms nor users are strongly motivated to consider what copyright law actually allows and what it forbids.

#### D. Rightsholder Incentives Under Notice-and-Takedown

##### 1. The Importance of Takedown

Traditional commercial copyright producers, such as the music, film, television, and publishing industries, as well as less concentrated interests, such as commercial photographers, are still adapting to the immense challenges posed by digitization and the internet. The generally unfiltered nature of platforms operating within the DMCA safe harbors have sparked tremendous creativity and innovation. It has made the internet a vehicle for free expression with no historical precedent, and yet, these gains are not without cost. The costs of this system are largely carried by rightsholders who rely on models of commercial distribution. In general, producers have benefited greatly from advances in technology over the years as the cost of production has fallen and new markets have opened up.<sup>115</sup> However, producer business models have also been disrupted: digitization and global communication networks have introduced new forms of competition and have made piracy more threatening and more difficult to combat.

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114 Of course, noncommercial users exhibit a range of attitudes to and awareness of copyright law. See, e.g., Casey Fiesler et al., *Understanding Copyright Law in Online Creative Communities*, in PROCEEDINGS OF THE 18TH ACM CONFERENCE ON COMPUTER SUPPORTED COOPERATIVE WORK & SOCIAL COMPUTING 116 (2015), [http://delivery.acm.org/10.1145/2680000/2675234/p116-fiesler.pdf?ip=66.254.229.141&id=2675234&acc=ACTIVE%20SERVICE&key=EA62C54EFA59E1BA%2E367AD4ADD93F5D2F%2E4D4702B0C3E38B35%2E4D4702B0C3E38B35&CFID=819159151&CFTOKEN=11255343&\\_acm\\_=1508176462\\_e0ff5371beef95456bb8d2e5e76c900e](http://delivery.acm.org/10.1145/2680000/2675234/p116-fiesler.pdf?ip=66.254.229.141&id=2675234&acc=ACTIVE%20SERVICE&key=EA62C54EFA59E1BA%2E367AD4ADD93F5D2F%2E4D4702B0C3E38B35%2E4D4702B0C3E38B35&CFID=819159151&CFTOKEN=11255343&_acm_=1508176462_e0ff5371beef95456bb8d2e5e76c900e); Katharina Freund, *"Fair Use is Legal Use": Copyright Negotiations and Strategies in the Fan-Vidding Community*, 18 NEW MEDIA & SOC'Y 1347 (2014); Aram Sinnreich & Mark Latonero, *Tracking Configurable Culture from the Margins to the Mainstream*, 19 J. COMPUTER-MEDIATED COMM. 798 (2014).

115 See Luis Aguiar & Joel Waldfogel, *Even the Losers Get Lucky Sometimes: New Products and the Evolution of Music Quality Since Napster*, 34 INFO. ECON. & POL'Y 1, 3 (2016) (demonstrating that the cost-reducing effects of digitization have increased the number of new recorded music products and their apparent quality more than piracy has diminished them).

In the analog era of printing presses, photocopiers, and videotape, copyright enforcement was mostly a matter of identifying and locating large-scale commercial pirates and/or contesting specific legal boundary questions with commercial rivals. Analog copies could be problematic, but copies of copies of copies of analog works were noticeably inferior. In contrast, digital copies reproduce with perfect fidelity, so a fourteenth generation mp3 of a Katy Perry song is just as good as the original. By placing powerful copying equipment at the fingertips of almost every household in the developed world, digital technology has also made enforcing copyright much harder.<sup>116</sup>

To make matters worse from a rightsholder's point of view, the increasing connectedness of digital networks means that every potential consumer with an internet connection has easy access to copies made by anyone with access to the original work.<sup>117</sup> In the late-1990s, record companies used to sell compact discs by the millions; some fear that in the future they will sell each album only once.<sup>118</sup> However, like much discussion of the internet, the distributed nature of online infringement can easily be overstated. The internet makes file exchange between any two users easy; so easy in fact, that for many, it is virtually simultaneous and essentially free.<sup>119</sup> However, for two users—let's call them Alice and Bob—to contribute to the piracy problem, Alice needs to know that Bob wants a copy of a particular digital object, and Bob needs to know that Alice can send him that copy. This is where various platforms and intermediaries come in. Peer-to-peer file-sharing services, BitTorrent tracking sites, and online storage lockers do not just facilitate the transfer of digital objects, but also act as information hubs. Websites that transmit performances of copyrighted works also have a similar centralizing information function. Accordingly, the content producer's best strategy for attacking online infringement is to target these platforms and intermediaries.

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116 In 2015, eighty-four percent of American adults used the internet. Andrew Perrin & Maeve Duggan, *Americans' Internet Access: 2000–2015*, PEW RES. CTR. (June 26, 2015), <http://www.pewInternet.org/2015/06/26/americans-Internet-access-2000-2015/>.

117 As of 2016, there were over one billion websites online; as of 2015, there were more than three billion people using the internet. *Total Number of Websites*, INTERNET LIVE STATS, <http://www.internetlivestats.com/total-number-of-websites/> (last visited Sept. 19, 2017).

118 Obviously, this is an exaggeration for rhetorical effect. Comparing music distribution across time as formats change is problematic. Just as there is no natural ratio of emails to faxes, there is no natural ratio of streams to mp3 downloads, or of singles to albums. But there is little doubt that the music industry went through hard times in the post-Napster era. For example, in 1999 and 2000, the highest selling albums of the year (by the Backstreet Boys and 'NSYNC) sold more than nine million copies each. In 2009 and 2010, the highest sellers (Taylor Swift and Eminem) were in the low three millions. See David Basham, *Got Charts? Linkin Park, Shaggy, 'NSYNC Are 2001's Top-Sellers*, MTV (Jan. 4, 2002), <http://www.mtv.com/news/1451664/got-charts-linkin-park-shaggy-nsync-are-2001s-top-sellers>; Keith Caulfield, *Taylor Swift Edges Susan Boyle for 2009's Top-Selling Album*, BILLBOARD (Jan. 6, 2010), <http://www.billboard.com/articles/news/960801/taylor-swift-edges-susan-boyle-for-2009s-top-selling-album>; *The Nielsen Company & Billboard's 2010 Music Industry Report*, BUSINESS WIRE (Jan. 7, 2011), <http://www.businesswire.com/news/home/20110106006565/en/Nielsen-Company-Billboard's-2010-Music-Industry-Report>.

119 Free in the sense of no marginal cost on a standard data plan.



As noted above, there is enough ambiguity in the principles of contributory and vicarious liability that rightsholders whose works have been infringed by the users of a platform could hope to hold the platform itself accountable.<sup>120</sup> However, the safe harbors effectively absolve internet platforms from any responsibility for user infringement. That absolution, however, is contingent on responding to rightsholder notifications and generally complying with the detailed notice-and-takedown rules set forth in section 512. Thus issuing takedown notices on a large scale gives rightsholders the opportunity to purge infringing content from platforms, and also has the potential to expose platforms to liability if they fail to respond to DMCA notifications.

The rightsholders with the most to gain from issuing takedown notices are commercial entities threatened by piracy and unauthorized use of their works. Rightsholders and their delegated enforcers are naturally more worried about purging the internet of copyright infringement than ensuring that fair uses and other noninfringing uses are protected. As discussed below,<sup>121</sup> the limited empirical evidence on the use of takedown notices suggests that the error rate is quite high, and an analysis of the repercussions for issuing an overreaching takedown notice illustrates why this is to be expected.<sup>122</sup>

## 2. Erroneous Takedowns

Three separate empirical studies have attempted to assess the accuracy of DMCA notices. In 2006, Jennifer Urban and Laura Quilter conducted an in-depth review of takedown notices and concluded that at least a third of notices were flawed and that in 31% of notices reviewed, these flaws related to the validity of the underlying copyright claim in some way.<sup>123</sup> Urban and Quilter also found that well over half of section 512(d) notices relating to search engine links sent to Google were sent by businesses targeting apparent competitors.<sup>124</sup> The Urban 2006 study made an excellent contribution to the field at the time, but so much has changed in the intervening decade that it is mostly of historical interest. Daniel Seng's 2015 study of errors in DMCA takedown notices found that 8.3% of takedown demands in the study period failed to comply with the statutory requirements of section 512(c)(3), and that a further 1.3% were substantively improper.<sup>125</sup> Seng used automated techniques to identify defective notice, and then confirmed this initial judg-

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120 See *supra* subsection I.B.1.

121 See *infra* subsection I.D.2.

122 See *infra* subsection I.D.3.

123 Jennifer M. Urban & Laura Quilter, *Efficient Process or Chilling Effects—Takedown Notices Under Section 512 of the Digital Millennium Copyright Act*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 621 (2006).

124 *Id.* at 655.

125 Daniel Seng, "Who Watches the Watchmen?" An Empirical Analysis of Errors in DMCA Takedown Notices 1 (Jan. 23, 2015) (unpublished manuscript), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2563202](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2563202).

ment with manual review.<sup>126</sup> As a result, these numbers are a good starting point, but they are likely underinclusive.<sup>127</sup>

In 2016, Urban and two new coauthors published a much more ambitious report, *Notice and Takedown in Everyday Practice* (NTEP), which includes a new empirical study of the quality of takedown notices.<sup>128</sup> The NTEP study is based on a representative sample of takedown requests sent to Lumen (formerly the Chilling Effects Clearinghouse) over a six-month period from May to October in 2013.<sup>129</sup> The authors of the study sampled over 1800 notices of the more than 108 million requests archived by Lumen in that period.<sup>130</sup>

The NTEP study concluded that 4.2% of notices in the sample were “fundamentally flawed because they targeted content that clearly did not match the identified infringed work,” and that a further 28.4%—that is roughly two out every seven—were of questionable validity.<sup>131</sup> Within this broad category of suspect notices, the study found that: more than 15% of takedown requests appeared to fail to meet statutory requirements, such as sufficiently identifying the allegedly infringed work or the material alleged to infringe;<sup>132</sup> 6.6% of takedown requests raised questions of potential fair use defenses;<sup>133</sup> and 2.3% of takedown requests involved non-copyright issues, such as allegations of trademark infringement or defamation.<sup>134</sup>

These are extraordinary findings; they suggest that rightsholders are sending takedown notices without due diligence and presumably without regard to the costs of suppressing noninfringing expression. The methodology used in the NTEP study is sound, but there is some danger that the results could be misunderstood for two reasons. First, the 4.2% of notices that were “fundamentally flawed” are still quite likely to have been directed towards infringing content. The fact that a copyright agent mistook *X* movie on an illegal BitTorrent site for *Y* movie on an illegal BitTorrent site<sup>135</sup> bespeaks a troubling lack of care, but it would be wrong to treat the mistaken suppression of blatant copyright infringement as a problem of the same magnitude as the suppression of noninfringing content or content with a colorable claim to fair use.

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126 See *id.* at 17–19.

127 See *id.* at 19 n.82.

128 See Urban et al., *supra* note 22. Assuming a normal distribution and a 95% confidence interval, the margin of error for the results in this section of the NTEP study would be +/- 2.29%. *Id.* at 11 n.16.

129 *Id.* at 78.

130 *Id.* at 77.

131 *Id.* at 11–12.

132 *Id.* at 12.

133 *Id.*

134 *Id.*

135 Urban et al. give the example of a request sent on behalf of Paramount where the allegedly infringed work was the Paramount movie “An Officer and a Gentleman,” and the allegedly infringing material was the Paramount movie “Anchorman: The Legend of Ron Burgundy.” *Id.* at 91.

Second, takedown requests addressed to Google Web Search comprised 99.8% of the Lumen archive in the six-month period of the NTEP study.<sup>136</sup> Thus, although the study is highly informative in the context of Google Search,<sup>137</sup> the Lumen archive from which it is derived is so dominated by Google Search that it is quite uncertain how these results should be extrapolated to the hosts of user-generated content, such as music- and video-sharing platforms.<sup>138</sup> The absence of data from internet access providers and the exclusion of notices relating to YouTube (owned by Google's parent company) is especially important because the issues raised by search engines and the Information Location Tools safe harbor are quite different from those relating to internet access providers, and these are different again from the highly contentious issues relating to online music and video social networks. Platforms that host user-generated content are likely reluctant to routinely disclose takedown requests because they have a direct customer relationship with the targets of these notices. Search engines receive different kinds of notices and are less constrained by user privacy and customer relations.<sup>139</sup>

This is not to imply that the NTEP report overstates the problem of erroneous takedowns; it might actually understate it. The NTEP report also contains a separate study of notices in relation to Google Image Search over the same time period using the same methodology.<sup>140</sup> The Image Search study figures are inflated by thousands of demands sent from one single person attempting to suppress content that was allegedly defamatory but clearly not

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136 *Id.* at 82.

137 Urban et al. also report on a separate study of notices in relation to Google Image Search over the same time period using the same methodology. *See supra* text accompanying notes 140–43.

138 It is important to understand why the data in Lumen is so skewed towards Google Web Search. First and foremost, although anyone can submit a takedown notice to Lumen, only those who believe the takedown is in some way objectionable are likely to do so. Second, there are two exceptions to this selection effect, Google and more recently Twitter. These companies submit all of the takedown requests they receive within certain categories to Lumen as a matter of course. Google began this practice in 2002, with Twitter following in 2012. *See* AHolland, *Twitter Releases Newest Transparency Report*, LUMEN (July 31, 2014), [https://lumendatabase.org/blog\\_entries/720](https://lumendatabase.org/blog_entries/720); Greg Sterling, *DMCA Takedown Database ChillingEffects.org Takes Itself out of Search Results*, SEARCH ENGINE LAND (Jan. 12, 2015), <https://searchengineland.com/anti-censorship-database-chilling-effects-censors-removing-domain-search-212567>; *Copyright Policy*, TWITTER, <https://support.twitter.com/articles/15795> (last visited Oct. 15, 2017). These submissions provide a wealth of information, but Google and Twitter are not representative of the whole internet, and, perhaps most significantly, the Google data excludes YouTube. Google and Twitter, and some other platforms, also make data about takedown notices available through Transparency Reports. Again, these data are useful but incomplete. Recognizing this problem, the NTEP study has a separate section on Google Image Search takedowns as discussed in note 140, *infra*.

139 Urban et al., *supra* note 22, at 50.

140 Urban and her coauthors reviewed and coded a randomized sample of 1732 of the 33,409 Google Image Search takedown requests in the Lumen dataset from May to October 2013. Again, this yields a margin of error of +/- 2.29%. *Id.* at 98.

infringing.<sup>141</sup> However, even after excluding this tenacious individual, over a third (36.3%) of demands relating to Google Image Search were found to be potentially problematic.<sup>142</sup> Specifically, 11.5% of image takedown requests raised possible fair use defenses, 15.1% seemed to be attempts to use the DMCA to address privacy or defamation issues, 6.1% appeared to raise ownership issues, 2.9% failed to appropriately identify material, and 0.9% related to material in the public domain.<sup>143</sup>

Evidence directly from internet companies in the context of the Copyright Office's recent Section 512 Study supports the conclusion that substantively flawed takedown requests are common.<sup>144</sup> The Internet Archive noted that it "routinely" receives notices from third-party enforcers (i.e., companies hired by content owners) that mistakenly target works that are in the public domain based on "loose keyword matching."<sup>145</sup> For example, the Internet Archive received a takedown notice regarding an Old Salem cigarette commercial based on the term "Salem" which also happened to be the title of a major television series.<sup>146</sup> In a similar vein, Automattic Inc., the web development company behind WordPress.com and other blogging-related sites and tools, commented to the Copyright Office:

[O]ur statistics show that more than 25% of notices fail to meet [the] requirements [of section 512(c)(3)], and it is our belief that the failure comes not from overly burdensome requirements, but because in many cases people simply don't have a colorable claim that infringement is taking place. . . . However, even many notices that comply with the statute's requirements are fraudulent, abusive, or otherwise unfounded.<sup>147</sup>

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141 *Id.* at 106.

142 *Id.*

143 *Id.*

144 In addition to the comments cited below, see Evan Engstrom, Exec. Dir., Engine, *Reply Comments of Engine, GitHub, Kickstarter, Medium, and Redbubble Submitted in Response to Section 512 Study: Notice and Request for Public Comment* at 9 (Apr. 1, 2016), <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-90694&attachmentNumber=1&disposition=attachment&contentType=pdf> (noting that "Kickstarter rejected approximately 39 percent of the DMCA notices it received"); ORG. FOR TRANSFORMATIVE WORKS, *Reply Comments Submitted in Response to Section 512 Study: Notice and Request for Public Comment* at 4, <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-86027&attachmentNumber=1&disposition=attachment&contentType=pdf> (reporting that it is "more common than not" that takedown notices received by the Organization for Transformative Works either fail to comply with the DMCA or "raise obvious fair use issues or assert non-copyright claims").

145 See INTERNET ARCHIVE, *Reply Comments Submitted in Response to Section 512 Study: Notice and Request for Public Comment* at 4 (Mar. 22, 2016), <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-85991&attachmentNumber=1&disposition=attachment&contentType=pdf>.

146 *Id.*

147 Paul Sieminski, Gen. Counsel, Automattic Inc., *Reply Comments Submitted in Response to Section 512 Study: Notice and Request for Public Comment* at 2 (last visited Oct. 15, 2017), <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-87349&attachmentNumber=1&disposition=attachment&contentType=pdf>.

The Association of American Universities and the Association of Public and Land-grant Universities informed the Copyright Office that their members increasingly find that copyright holders and their rights enforcement agents do not take seriously their responsibility to use the DMCA's notice-and-takedown system fairly and effectively.<sup>148</sup> The universities noted that they "regularly see a high degree of notices requesting takedown of content that any good-faith determination would identify as fair use."<sup>149</sup> Most troubling of all, "the sporadic timing and widespread nature of spikes in notice volume over this period give the appearance of organized efforts to overwhelm institutional capacity to respond."<sup>150</sup> This seems to suggest that rightsholders or their agents are abusing the DMCA to target universities in bad faith.

### 3. Limited Repercussions for Overreaching Takedown Notices

The empirical evidence discussed above and substantial anecdotal accounts suggest that rightsholders (and their agents) can be less than careful in issuing takedown notices. Part of the reason this might be so is that although the DMCA provides a cause of action for knowing misrepresentations in takedown notices, rightsholders face no repercussions for merely being mistaken or unreasonable in their views as to what is and is not infringing.

For a rightsholder notification to be effective under the DMCA, it must identify the infringed work and provide enough information for the service provider to locate the material that should be blocked or removed.<sup>151</sup> This need for specificity leaves rightsholders playing a rather unedifying game of Whac-A-Mole, in which they must constantly scour the various search engines, social media, and content-sharing websites to identify particular instances of infringement.<sup>152</sup> Usually, infringing material reappears in a new post just as quickly as the old post is taken down.<sup>153</sup> A notification must also attest to the complaining party's "good faith belief that use of the material in

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148 Jarret S. Cummings et al., *Reply Comments of EDUCAUSE, the Association of American Universities, and the Association of Public and Land-grant Universities Submitted in Response to Section 512 Study: Notice and Request for Public Comment* at 2 (Mar.29, 2016), <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-85999&attachmentNumber=1&disposition=attachment&contentType=pdf>.

149 *Id.* at 2–3.

150 *Id.* at 2.

151 17 U.S.C. § 512(c)(3)(A)(ii)–(iii) (2012). As noted above, the statute further provides that notifications falling "substantially" short of these standards do not give an internet platform the kind of actual or red flag knowledge that would take them out of the safe harbor. § 512(c)(3)(B)(i)–(ii).

152 *See, e.g.*, Harleston et al., *supra* note 25, at 14.

153 *See id.* (arguing that the section 512 notice-and-takedown process is "extraordinarily ineffective" in part because it "cannot handle, and was not designed to handle, the sheer volume of online activity and infringement that occurs in today's digital environment" and "does nothing to address the so-called 'whack-a-mole' problem, in which content that is taken down in response to [a] Section 512 takedown notice is almost immediately reposted on the same site").

the manner complained of is not authorized by the copyright owner, its agent, or the law,”<sup>154</sup> and it must further promise that “the information in the notification is accurate, and under penalty of perjury, that the complaining party is authorized to act on behalf of the owner of an exclusive right that is allegedly infringed.”<sup>155</sup>

The DMCA establishes a remedy for any user who is injured by a knowingly false representation in a takedown notice; however, because this is based on a subjective standard, a takedown can be erroneous (and even unreasonable) and still fail to trigger liability under the DMCA.<sup>156</sup> Early caselaw suggested that although rightsholders have strong incentives to invest in monitoring and issuing takedown notices, the DMCA provided very little incentive for copyright owners to avoid overclaiming. In *Online Policy Group v. Diebold, Inc.*,<sup>157</sup> the district court applied an objective standard to section 512(f) and held that the term “knowingly” encompassed actual knowledge of falsity and also instances where a party “should have known if it acted with reasonable care or diligence, or would have had no substantial doubt had it been acting in good faith.”<sup>158</sup> However, very shortly thereafter, the Ninth Circuit in *Rossi v. Motion Picture Ass’n of America*<sup>159</sup> held that the good faith belief requirement “encompasses a subjective, rather than objective, standard.”<sup>160</sup> Under a subjective standard, negligent, unreasonable, or overzealous assertions of infringement do not violate the good-faith requirement and do not constitute an actionable misrepresentation under section 512(f). This narrow reading of the DMCA’s statutory misrepresentation remedy is doubly significant because the courts have also held that the DMCA remedy preempts state law causes of action, such as tortious interference with contract, which might have otherwise provided a remedy.<sup>161</sup>

Recent developments suggest that the subjective standard for actionable misrepresentation under section 512(f) is less forgiving to sophisticated copyright owners than it may have first appeared. On February 7, 2007, Stephanie Lenz uploaded a twenty-nine second home video capturing her children dancing in the family’s kitchen to the song *Let’s Go Crazy* by Prince. The “dancing baby video” is utterly unremarkable except for the eight years (and counting) of litigation that it provoked.<sup>162</sup> At the time, Universal Music Corporation administered the relevant copyrights on behalf of Prince. Universal issued a DMCA takedown notice to YouTube on June 4, 2007.<sup>163</sup> YouTube

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154 § 512(c)(3)(A)(v).

155 § 512(c)(3)(A)(vi).

156 § 512(f).

157 337 F. Supp. 2d 1195 (N.D. Cal. 2004).

158 *Id.* at 1204.

159 391 F.3d 1000 (9th Cir. 2004).

160 *Id.* at 1004.

161 *See Diebold*, 337 F. Supp. 2d at 1205.

162 Stephanie Lenz, “*Let’s Go Crazy*” #1, YouTube (Feb. 7, 2007), <https://www.youtube.com/watch?v=N1KfJHFWlhQ>.

163 *Lenz v. Universal Music Corp.*, 572 F. Supp. 2d 1150, 1152 (N.D. Cal. 2008).

removed the video the following day. Lenz issued a counternotification, and her video was eventually restored some six weeks later.<sup>164</sup>

The dancing baby video was targeted for removal by Universal as part of a broader effort to purge unauthorized Prince titles from YouTube—Prince apparently had strong feelings on the subject, and Universal was keen to make him happy.<sup>165</sup> This is how the legal assistant at Universal who reviewed the video described his process: “I put a video on the list that embodied a Prince composition in some way if the—there was a significant use of it, of the composition, specifically if the song was recognizable, was in a significant portion of the video or was the focus of the video.”<sup>166</sup> The assistant determined that the dancing baby video violated Prince’s copyright because of its title, *Let’s Go Crazy # 1*; because he recognized the song in the background “right off the bat,” and because “the song was loud and played through the entire video.”<sup>167</sup> The assistant also based his decision on the fact that the audio track “included a voice asking the children whether they liked the music.”<sup>168</sup> When Universal issued its takedown notice, it attested that it had “a good faith belief that the above-described activity is not authorized by the copyright owner, its agent, or the law.”<sup>169</sup> However, at no stage did the legal assistant, nor anyone else in Universal’s legal department, consider whether the dancing baby video qualified as fair use.<sup>170</sup>

Universal’s omission was unfortunate because it is beyond serious question that the dancing baby video qualifies as fair use. The video opens with the camera focused on a baby in a red jumper pushing a red cart along a kitchen floor in a cacophony of noise.<sup>171</sup> The baby turns to the camera and, off screen, a woman asks “what do you think of the music?”<sup>172</sup> Another child briefly enters the frame and the sounds of Prince singing “c’mon baby let’s get nuts” become audible and recognizable, at least to the average Prince fan.<sup>173</sup> For the remaining seventeen seconds of the video, the baby stays in the center of the frame, not exactly dancing but apparently enjoying the music.<sup>174</sup> In the background, there is adult laughter as another child does laps of the kitchen. Apart from the music, the general domestic background noise is loud throughout the video.<sup>175</sup> The dancing baby video captures a child’s reaction to a well-known pop song in an ordinary family setting.<sup>176</sup>

164 *Id.*

165 *Id.* at 1156 (discussing the “Prince Policy”).

166 *Lenz v. Universal Music Corp.*, No. 5:07-CV-03783, 2013 WL 271673, at \*5 (N.D. Cal. Jan. 24, 2013) (quoting deposition) (some internal quotation marks omitted).

167 *Id.* (quoting deposition) (internal quotation marks omitted).

168 *Id.*

169 *Id.* at \*4.

170 *Id.* at \*5.

171 See “*Let’s Go Crazy*” #1, *supra* note 162.

172 *Id.*

173 *Id.*

174 *Id.*

175 *Id.*

176 *Id.*

The child and its reaction, not the music, are the focus of the video. Any objective observer could see this. Rightsholders place great value on so-called synchronization rights: the right to synchronize music with otherwise unrelated visual media. However, the dancing baby video could not be mistaken for an ordinary synchronization. Although the music is identifiable, only a relatively brief part of the song is featured, and the audio quality is poor. No one would watch or listen to this video in order to appreciate the Prince classic. Any objective observer familiar with the fair use doctrine should have recognized that the dancing baby video was fair use.

FIGURE 1: DANCING BABY VIDEO



As a result, the dancing baby video set the stage for an important test case on the relationship between the DMCA notice-and-takedown procedures and fair use. The district court in *Lenz v. Universal Music Corp.*<sup>177</sup> held, in denying a motion to dismiss, that an allegation that a copyright owner acted in bad faith by issuing a takedown notice without proper consideration of the fair use doctrine was sufficient to state a misrepresentation claim pursuant to section 512(f) of the DMCA.<sup>178</sup> On appeal to the Ninth Circuit, Universal argued that it was under no obligation to consider fair use before issuing a takedown notice.<sup>179</sup> Universal asserted that fair use is an affirmative defense to infringement and not a legal authorization.<sup>180</sup> Thus, in Universal's view, its assertion that "[the] use of the material in the manner complained of is not authorized by the copyright owner, its agent, or the law,"<sup>181</sup> was correct,

177 572 F. Supp. 2d 1150 (N.D. Cal. 2008).

178 *Id.* at 1154–55.

179 *See Lenz v. Universal Music Corp.*, 815 F.3d 1145, 1151 (9th Cir. 2015).

180 *See id.* at 1152.

181 17 U.S.C. § 512(c)(3)(A)(v) (2012).



regardless of the application of fair use. Moreover, Universal relied on the subjective standard in *Rossi*<sup>182</sup> to argue that as long as it did not actually know that the video was fair use, it had a good faith belief that the video was not authorized by law.<sup>183</sup> The imposition of any more robust duty to contemplate possible fair use defenses would, Universal argued, make the notice-and-takedown process unworkable.

The Ninth Circuit rejected each of these contentions. To begin with, the court agreed with the plaintiff that fair use is no mere defense, such as laches or lack of personal jurisdiction; rather, fair use is a fundamental part of the copyright system that confers rights on the public and defines the outer limits of the copyright owner's enumerated exclusive rights.<sup>184</sup> This is correct, and the text of section 107 could not be any clearer: "Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work . . . is not an infringement of copyright."<sup>185</sup> The fact that, procedurally, fair use must usually be pleaded as a defense does not alter its substance.<sup>186</sup> As the court stated, "Fair use is not just excused by the law, it is wholly authorized by the law."<sup>187</sup>

Having confirmed that the fair use of a copyrighted work is indeed authorized by the law, the court turned to the relevant state of mind. Section 512(f) refers to a person "who *knowingly* materially misrepresents . . . that material or activity is infringing,"<sup>188</sup> whereas a section 512(c) notification of claimed infringement must include a "statement that the complaining party has a *good faith* belief that use of the material in the manner complained of is not authorized by the copyright owner, its agent, or the law."<sup>189</sup> Since the fair use of a copyrighted work is authorized by law, the court concluded that "Universal faces liability if it knowingly misrepresented in the takedown notification that it had formed a good faith belief the video was not authorized by

182 See *Rossi v. Motion Picture Ass'n of Am.*, 391 F.3d 1000, 1004 (9th Cir. 2004).

183 See *Lenz*, 815 F.3d at 1159.

184 The court agreed with Judge Birch in *Bateman v. Mnemonics, Inc.* that "[a]lthough the traditional approach is to view 'fair use' as an affirmative defense . . . it is better viewed as a right granted by the Copyright Act of 1976. . . . As a statutory doctrine, however, fair use is not an infringement. Thus, since the passage of the 1976 Act, fair use should no longer be considered an infringement to be excused; instead, it is logical to view fair use as a right."

*Id.* at 1152 (quoting *Bateman v. Mnemonics, Inc.*, 79 F.3d 1532, 1542 n.22 (11th Cir. 1996)); see also Lydia Pallas Loren, *Fair Use: An Affirmative Defense?*, 90 WASH. L. REV. 685, 688 (2015).

185 § 107.

186 Loren, *supra* note 184, at 688 ("Congress did not intend fair use to be an affirmative defense—a defense, yes, but not an affirmative defense."); Sag, *supra* note 2, at 236 ("[T]he fact that, procedurally, fair use must be asserted as an affirmative defense does not mean that it is always the defendant who carries the burden of proof once the defense has been properly raised." (footnote omitted)).

187 *Lenz v. Universal Music Corp.*, 801 F.3d 1126, 1132 (9th Cir. 2015), *amended and superseded on denial of reh'g*, 815 F.3d 1145 (9th Cir. 2016).

188 § 512(f)(1) (emphasis added).

189 § 512(c)(3)(A)(v) (emphasis added).

the law, i.e., did not constitute fair use.”<sup>190</sup> In other words, before issuing a takedown notice, a rightsholder must at least form a view about whether the accused work is infringing, and that process includes forming a view as to whether the accused work is fair use.<sup>191</sup>

The critical question in the wake of *Lenz* is whether rightsholders can rely on the same algorithms they use to identify potential infringement to make a judgment about fair use. Identifying fair use is a hard problem for any automated system.<sup>192</sup> Audio and video remixes and the use of samples or brief illustrative excerpts have become staple features of user-generated content. Distinguishing critical reviews, parodies, and transformative remixes from infringing reuses of copyrighted material often involves the kind of contextual decisionmaking that is easy for humans but difficult for algorithms. Humans can usually tell if a work is a parody or a critique; they can usually tell if an excerpt is being used by way of illustration or reference. If they stop and think about it, they can usually identify other situations where an original work has been transformed with a new meaning or message in a way that is unlikely to harm the market for the original work. These determinations are at the core of the fair use status of user-generated content, but some of these subtleties will remain beyond the grasp of robotic filters for the foreseeable future.

The difficulty of completely automating fair use analysis does not suggest, however, that algorithms have no role to play. Experience, common sense, and recent empirical research suggest that there are some objective characteristics that make a finding of fair use more likely, and there is no reason in principle why matching algorithms could not be fine-tuned to iden-

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190 *Lenz*, 801 F.3d at 1134. The court also said that “because 17 U.S.C. § 107 created a type of non-infringing use, fair use is ‘authorized by the law’ and a copyright holder must consider the existence of fair use before sending a takedown notification under § 512(c).” *Id.* at 1133.

191 The rule in *Lenz* might apply differently to sophisticated versus unsophisticated copyright owners. When an actor familiar with the basics of copyright law, such as Universal, asserts its belief that a video is not authorized by law, even though it has failed to consider whether the fair use doctrine (or other lawful justification) might apply, it makes a knowing misrepresentation as to its belief. After all, you cannot say that you believe that something is not authorized by law if you know that you have not considered whether it might be. But what about the unsophisticated copyright owner? It seems unlikely that a copyright owner who was actually unaware of the fair use doctrine could be said to be knowingly misrepresenting his belief that the video was not authorized by law in these circumstances. Of course, most copyright owners sufficiently well informed to activate the notice-and-takedown process would also be aware of fair use. But what of those who are not?

192 See Dan L. Burk & Julie E. Cohen, *Fair Use Infrastructure for Rights Management Systems*, 15 HARV. J.L. & TECH. 41, 56 (2001) (noting that “[b]uilding the range of possible uses and outcomes into computer code would require both a bewildering degree of complexity and an impossible level of prescience”).

tify common situations associated with a higher probability of fair use.<sup>193</sup> In certain well-defined contexts, computers could be trained to make an initial assessment of the likelihood of fair use issues requiring further investigation.<sup>194</sup> To give a concrete example, a user video with fifteen minutes of footage from a single film is unlikely to be fair use if that footage is merely an abridged version of the film. However, if the footage is arranged in a different sequence to the original and interspersed with other content, it is more likely to be a film review and a strong candidate for fair use. Advances in machine learning suggest that a system like Content ID could improve its ability to automatically identify potential fair uses by analyzing data from disputes within the system.<sup>195</sup>

Maayan Perel and Niva Elkin-Koren warn that translating qualitative doctrines such as fair use into “codish” thresholds or proxy measures is a “process that in itself may result in unintentional alterations of settled doctrines.”<sup>196</sup> Without downplaying these concerns, it must be remembered that the alternative, in all likelihood, is a bored and overworked paralegal following a checklist. Whether relying on algorithms to screen for potential fair uses allows a rightsholder to form a *good faith* belief that the use complained of was not authorized by the fair use doctrine depends upon what level of inquiry vis-à-vis fair use *Lenz* requires.

The Ninth Circuit’s original opinion in *Lenz* emphasized that a consideration of the application of fair use did not require a full investigation into the merits of a defendant’s potential fair use claim; however, the court amended its opinion in early 2016 and deleted the relevant language.<sup>197</sup> The amended opinion retains the text noting that the court will not second-guess a copyright holder’s subjective good faith belief in the absence of fair use, but the court also warned that “[a] copyright holder who pays lip service to the consideration of fair use by claiming it formed a good faith belief when there is evidence to the contrary is still subject to § 512(f) liability.”<sup>198</sup> The obvious implication of omitting the court’s initial suggestion that right-

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193 See Sag, *supra* note 105 (undertaking a comprehensive empirical study of the fair use doctrine in copyright law and identifying testable hypotheses relating to various fair use factors).

194 Helman & Parchomovsky, *supra* note 26, at 1231 (proposing that quantitative benchmarks could effectively substitute for qualitative criteria to some degree); see also Gideon Parchomovsky & Kevin A. Goldman, Essay, *Fair Use Harbors*, 93 VA. L. REV. 1483, 1511–17 (2007) (proposing specific ceilings for uses of copyright content without liability).

195 See Zoubin Ghahramani, *Probabilistic Machine Learning and Artificial Intelligence*, 521 NATURE 452 (2015).

196 Maayan Perel & Niva Elkin-Koren, *Black Box Tinkering: Beyond Disclosure in Algorithmic Enforcement*, 69 FLA. L. REV. 181, 197 (2017) (internal quotation marks omitted).

197 See *Lenz v. Universal Music Corp.*, 801 F.3d 1126, 1135 (9th Cir. 2015), *amended and superseded on denial of reh’g*, 815 F.3d 1145 (9th Cir. 2016) (“In order to comply with the strictures of § 512(c)(3)(A)(v), a copyright holder’s consideration of fair use need not be searching or intensive. We follow *Rossi*’s guidance that formation of a subjective good faith belief does not require investigation of the allegedly infringing content.”).

198 *Lenz v. Universal Music Corp.*, 815 F.3d 1145, 1154 (9th Cir. 2016).

sholders might be able to satisfy their obligations under section 512(c) with some kind of algorithm-enabled assessment of the possibility of fair use is that consideration of fair use requires human review. Yet the court did not definitively say so.

Post-*Lenz*, it seems clear that *some* consideration of fair use is required before a takedown notice can be issued, but that such consideration does not need to be objectively reasonable. Consideration of fair use must extend beyond mere lip service, but it is unclear how well considered a rightsholder's view on the absence of fair use must be. Under the subjective standard, mistakes—even unreasonable mistakes—do not trigger liability for misrepresentation under the DMCA.<sup>199</sup> Professor James Grimmelmann suggests that, even after *Lenz*, copyright owners have little to fear from sending erroneous takedown notices because the subjective standard means that, with respect to fair use, “any review process at all will suffice.”<sup>200</sup> The standard might not be quite this empty. After all, the person issuing the takedown notice would have to believe that her fair use review process was adequate to the task. If a rightsholder, such as Universal, adopted a fair use checklist or an algorithm that it believed to be inadequate or misleading, it would know that the checklist/algorithm did not provide a good faith basis to believe that the accused work was not “authorized by law.” But if a rightsholder had developed a checklist or an algorithm that reliably identified potential fair uses when tested, I see no reason why that could not form the basis of a good faith belief in lack of authorization by law as the statute requires.

The Ninth Circuit's decision in *Lenz* injects some life into the misrepresentation remedy in section 512(f) of the DMCA; however, the provision is still quite limited.<sup>201</sup> *Lenz* requires copyright owners to take slightly more care when issuing DMCA takedown notices,<sup>202</sup> but the incentives against overreaching claims still appear to be fairly weak. The subjective standard in *Lenz* leaves plenty of room for record labels and motion picture studios to continue to believe that fair use has only the narrowest application, even if that view is objectively unreasonable or based on erroneous understandings of the law or the facts. In the immortal words of George Costanza, “it's not a lie if you believe it.”<sup>203</sup> This tolerance for error means that although copyright owners are obliged to consider the possibility of fair use, they are free to fail to recognize the merits of an objectively compelling fair use defense, so long as they do so in good faith.<sup>204</sup> This is important because we should not

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199 See *id.*

200 James Grimmelmann, *Copyright for Literate Robots*, 101 IOWA L. REV. 657, 672 (2016).

201 See *Lenz*, 815 F.3d at 1154.

202 See *id.*

203 *Seinfeld: The Beard* (NBC television broadcast Feb. 9, 1995).

204 *Lenz v. Universal Music Corp.*, 801 F.3d 1126, 1134–35 (9th Cir. 2015) (“If, however, a copyright holder forms a subjective *good faith* belief the allegedly infringing material does not constitute fair use, we are in no position to dispute the copyright holder's belief even if we would have reached the opposite conclusion.”), *amended and superseded on denial of reh'g*, 815 F.3d 1145 (9th Cir. 2016).

be too quick to assume that objectively unreasonable views are not held in good faith. Lawyers who work for the music industry tend to be so committed to their clients' copyright-maximalist/fair-use-skeptical worldview that they may be unable to recognize a strong case for fair use. Rightsholders may react to *Lenz* by investing more resources into ensuring notice quality, they may attempt to automate some aspects of fair use consideration, they may feel compelled to issue few automated notices, or they may simply accept the increased risk of liability and continue with their current practices.

Taking a broader view, the Ninth Circuit's decision in *Lenz* may have ramifications for the broader public debate on the future of fair use in the United States and overseas. Interest groups advocating for the abolition of fair use, or for a scaling back of the doctrine, frequently buttress their opposition with the argument that fair use is fundamentally uncertain and unpredictable.<sup>205</sup> If fair use doctrine were genuinely as volatile as many insist, then it seems unlikely that a rightsholder could rely on an algorithm to identify potential fair uses without risking section 512(f) liability. Consequently, it is very hard to see how rightsholders' notice-and-takedown operations could ever scale up to deal with the massive volume of online infringement. But then again, if a rightsholder truly believes that fair use is fundamentally uncertain, could it even attest to its good faith belief that an accused work is not "authorized by . . . law"<sup>206</sup> in an individual case, as the statute requires? If I assume that a coin is equally weighted between heads and tails, I cannot in good faith express the belief that it will land on heads. Following *Lenz*, the radical uncertainty critique of fair use seems to pose a problem for rightsholders. The easiest way for copyright owner representatives such as the Recording Industry Association of America (RIAA) and the Motion Picture Association of America (MPAA) to get out of this conundrum would be to articulate and defend their views on the scope of fair use, rather than simply throwing their hands in the air and pronouncing the whole question an unknowable mystery. Indeed, there are some early signs this may be occurring.<sup>207</sup>

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205 See, e.g., William Henslee, *You Can't Always Get What You Want, but if You Try Sometimes You Can Steal It and Call It Fair Use: A Proposal to Abolish the Fair Use Defense for Music*, 58 CATH. U. L. REV. 663 (2009).

206 17 U.S.C. § 512(c)(3)(A)(v) (2012).

207 For example, in recent comments in response to the Copyright Office's Section 512 Study, the Columbia Law School's Kernochan Center for Law, Media, and the Arts stated that "[t]he prospect of automated fair use might after all not prove as preposterous as first impression suggests" and may be the first sign of a shift in this direction. See Kernochan Ctr. for Law, Media and the Arts, Columbia Art Sch., *Reply Comments in Response to Section 512 Study: Notice and Request for Public Comment* at 9 (Apr. 1, 2016), <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-90892&attachmentNumber=1&disposition=attachment&contentType=msw12>.

#### 4. Legal Action in Response to Bad Takedowns Is Uncommon

Users who have been subjected to a takedown request have the option under the DMCA to issue a counternotification.<sup>208</sup> However, most users find that there is little incentive to take this step. To begin with, the counternotification procedure has a built-in ten-day delay period that severely limits its utility for users wishing to restore access to time-sensitive content.<sup>209</sup> Moreover, nothing in the DMCA guarantees that a platform will comply with a counternotification. The service provider's safe harbor eligibility does not depend on complying with the restoration request in a counternotification. All that is at stake from the service provider's point of view is its immunity from legal action by a user who is injured by an erroneous takedown notification.<sup>210</sup> This is virtually meaningless in practice because service providers are usually well insulated against such claims by virtue of their terms of service.<sup>211</sup>

Lawrence Lessig is the author of several influential books about copyright and internet law; he is a professor of law at Harvard University and a member of the American Academy of Arts and Sciences. On June 8, 2010, Lessig posted a video entitled *Open* on YouTube.<sup>212</sup> *Open* is a video of a forty-nine-minute lecture Lessig delivered as the keynote address to a Creative Commons conference in Seoul, South Korea.<sup>213</sup> The lecture was primarily a discussion of cultural and technological innovation on the internet. To illustrate his thesis, Lessig included in his lecture five extracts from user-generated videos depicting groups of people from around the world dancing to the same song, *Lisztomania*, by the band Phoenix.<sup>214</sup> The *Lisztomania* copycat videos powerfully illustrate the use of remix tools and video-sharing platforms to generate new expression and communication via the internet. The five clips featuring *Lisztomania* in the *Open* lecture ranged in length from ten to forty-seven seconds—clearly no more than was reasonable to illustrate and comment on the phenomenon.<sup>215</sup> It should have been more than apparent

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208 § 512(g)(3).

209 § 512(g)(2)(C).

210 § 512(g)(1) (“[A] service provider shall not be liable to any person for any claim based on the service provider’s good faith disabling of access to, or removal of, material or activity claimed to be infringing or based on facts or circumstances from which infringing activity is apparent, regardless of whether the material or activity is ultimately determined to be infringing.”).

211 See, e.g., *Terms of Service*, YOUTUBE (June 9, 2010), <https://www.youtube.com/static?template=terms>.

212 lessig, *Open*, YOUTUBE (June 8, 2010), <https://www.youtube.com/watch?v=KBTWoCaNKn4>.

213 *Id.*

214 *Id.* (using PHOENIX, *Lisztomania*, on WOLFGANG AMADEUS PHOENIX (V2 Records 2009)).

215 *Id.*

that Lessig's use of the *Lisztomania* song in that context was fair use under U.S. copyright law.<sup>216</sup>

At the end of June 2013, Liberation Music submitted a DMCA takedown notice to YouTube demanding the removal of Lessig's video, *Open*.<sup>217</sup> YouTube promptly complied, and *Open* was taken down. Lessig responded with a counternotice under section 512(g) of the DMCA, which, in the ordinary course of events, should have led YouTube to restore the video ten days after the initial notification.<sup>218</sup> However, Liberation Music responded by threatening Lessig with legal proceedings if he did not retract his counternotice, and two days later, Lessig did so.<sup>219</sup> But Lessig was not quite finished: in August 2013, with the assistance of the Electronic Frontier Foundation and one of the nation's top law firms (working pro bono), Lessig filed his own copyright complaint seeking declaratory judgment of fair use and damages for misrepresentation under section 512(f) of the DMCA.<sup>220</sup> The lawsuit was eventually settled in February 2014 with Liberation agreeing to pay damages and issuing the following statement:

Liberation Music is pleased to amicably resolve its dispute with Professor Lessig. Liberation Music agrees that Professor Lessig's use of the Phoenix song "Lisztomania" was both fair use under US law and fair dealing under Australian law. Liberation Music will amend its copyright and YouTube policy to ensure that mistakes like this will not happen again. Liberation Music is committed to a new copyright policy that protects its valid copyright interests and respects fair use and dealing.<sup>221</sup>

Possibly the most important lesson to take away from *Lessig v. Liberation Music* is how unusual the case is. In the final analysis, our understanding of any incentives that the DMCA safe harbors create for users must also account for the reality that many individual users are not legally sophisticated enough to effectively wield the limited rights the law bestows upon them.<sup>222</sup> The NTEP study's survey of internet platforms reports that they mostly consider counternotification "a dead letter—impractical and rarely used."<sup>223</sup> Asserting one's legal rights requires knowledge of those rights and a sense of empowerment, and so the counternotification process is unlikely to be of much use to voices at the margins of society, even if those voices are the ones who need it most. The fact that filing a counternotice means submitting to

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216 As Liberation Music was eventually forced to concede. See *Lawrence Lessig Settles Fair Use Lawsuit over Phoenix Music Snippets*, ELECTRONIC FRONTIER FOUND. (Feb. 27, 2014), <https://www.eff.org/press/releases/lawrence-lessig-settles-fair-use-lawsuit-over-phoenix-music-snippets>.

217 *Id.*

218 17 U.S.C. § 512 (g)(2)(C) (2012).

219 See Complaint at ¶¶ 58–61, *Lessig v. Liberation Music Pty Ltd.*, 1:13-cv-12028 (D. Mass. filed Aug. 22, 2013); ELECTRONIC FRONTIER FOUND., *supra* note 216.

220 ELECTRONIC FRONTIER FOUND., *supra* note 216.

221 *Id.*

222 Mark A. Lemley, *Rationalizing Internet Safe Harbors*, 6 J. TELECOMM. & HIGH TECH. L. 101, 114–15 (2007).

223 Urban et al., *supra* note 22, at 44.

the jurisdiction of U.S. courts and abandoning anonymity makes the process worse than useless for political dissidents.<sup>224</sup> The First Amendment commitment to freedom of speech includes a right to anonymous speech,<sup>225</sup> but the substance of that right is undermined by the DMCA because speech can be suppressed without due process, and it cannot be restored without abandoning anonymity.

Unlike Professor Lessig, most users lack familiarity with copyright law and access to affordable legal representation. But even speakers who know their rights, understand and have access to the legal system, and are not afraid to speak publicly, still forgo counternotification in substantial numbers. For example, a study of almost 500 documentary filmmakers found that almost a quarter (23%) had seen their own videos taken down by DMCA notices, that 60% of these respondents were confident that their work fell within the parameters of fair use, and yet many of those still failed to contest the takedown.<sup>226</sup> Even a user who strongly objects to a takedown is just as likely to repost the material on an alternative platform as she is to challenge the takedown notice. Indeed, it seems that the most common users of the DMCA's counternotification provisions, at least in the context of search related takedowns, are pirates in overseas jurisdictions acting in transparent bad faith.<sup>227</sup>

To summarize the foregoing: the DMCA enables online platforms to decline to filter user content at the point of publication, but it also motivates them to respond to rightsholder takedown requests with very little regard for the underlying merits of infringement claims. New tools of digital creation and the openness of internet platforms have enabled and emboldened users to cut, paste, and remix. Users' interactions with copyrighted content is constrained, initially, only by their own sense of what is appropriate—a sense that is often out of alignment with what copyright law actually allows. Rightsholders in turn are strongly motivated to issue takedown notices, but only weakly motivated to keep their assertions of infringement in line with copyright law principles.

This Part has explored the ways the DMCA notice-and-takedown system has fundamentally changed the incentives and structures through which platforms, rightsholders, and users interact with copyrighted works and with each other. These changes have made the substantive doctrines of copyright law much less directly relevant to the online experience of copyright law. They have created a new, more volatile balance of publication that is both more

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224 17 U.S.C. § 512(g)(3)(D) (2012).

225 See *McIntyre v. Ohio Elections Comm'n*, 514 U.S. 334, 357 (1995).

226 Patricia Aufderheide & Aram Sinnreich, *Documentarians, Fair Use, and Free Expression: Changes in Copyright Attitudes and Actions with Access to Best Practices*, 19 INFO. COMM. & SOC'Y 178, 183 (2016).

227 Urban et al., *supra* note 22, at 46 ("More than one respondent described bogus counter notices from obvious foreign copyright pirates claiming the right to post infringing material.").



permissive of potential infringement *ex ante*, but also more vulnerable to overreaching claims by rightsholders *ex post*.

## II. ROBOT GATEKEEPERS AND THE RETURN OF FILTERING

Whether fair use continues to balance the interests of copyright owners and subsequent creators in the online environment depends on both the actual content of copyright law and how that content translates to real-world experience. Part I of this article explored how the functional balance of copyright law in traditional media environments diverges from the online experience under a regime of notice-and-takedown. This Part examines how the functional balance of copyright is being remade yet again as the DMCA's system of notice-and-takedown established by Congress in the late-1990s is gradually being superseded by DMCA-plus initiatives that install automatic copyright filters at the platform level.

This Part explores the implications of agreements between rightsholders and platforms to bypass the DMCA and reinstate platform level filtering. Copyright filtering systems, such as YouTube's Content ID, not only return platforms to their gatekeeping role, but encode that role in algorithms and software. Copyright filtering systems are a new layer of private ordering that will change the functional balance of copyright law and create a new digital/analog divide. Exactly how this algorithm-driven private ordering will compare to filtering offline or to the unfiltered version of the internet made possible by the DMCA safe harbors is yet to be seen. As this Part shows, this uncertainty is not simply because algorithmic copyright filtering is a new and evolving phenomenon; it is because its effects are contingent upon the design choices inherent in such systems.

### A. *The Spread of Matching and Filtering Technology—From DMCA to DMCA-Plus*

As discussed in Part I, platforms sheltering under the DMCA safe harbors do not need to take proactive steps to detect and/or prevent copyright infringement by their users. However, this state of affairs may not last much longer. Under substantial pressure from rightsholders, some platforms have adopted DMCA-plus automatic copyright filtering systems to cope with the ever-increasing scale of takedown notices. One of the most contested issues with respect to the DMCA safe harbors is whether and to what extent platforms should be required to take active steps to reduce copyright infringement by their users.<sup>228</sup> To date, platforms have successfully fought off attempts to revise or reinterpret the safe harbors to impose such a requirement.<sup>229</sup> But despite the lack of a *de jure* obligation to filter under the

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<sup>228</sup> See *supra* notes 25–26 and accompanying text.

<sup>229</sup> There are many significant cases in this regard. See, e.g., *Perfect 10, Inc. v. CCBill LLC*, 488 F.3d 1102, 1109, 1114 (9th Cir. 2007); *Viacom Int'l Inc. v. YouTube, Inc. (Viacom I)*, 718 F. Supp. 2d 514 (S.D.N.Y. 2010), *aff'd in part, vacated in part, remanded*, 676 F.3d 19 (2d Cir. 2012); *UMG Recordings, Inc. v. Veoh Networks Inc.*, 665 F. Supp. 2d 1099 (C.D.

DMCA,<sup>230</sup> many platforms—typically large-scale commercial enterprises—are nonetheless implementing automated copyright enforcement systems. At the present time, platforms using automated copyright enforcement include Scribid, 4shared, Dropbox, YouTube, Facebook, SoundCloud, Twitch, TuneCore, Tumblr, Veoh, and Vimeo.<sup>231</sup> The pressure to adopt automated filtering comes primarily from rightsholders, but these systems also meet some of the business objectives of platforms.

Rightsholders have argued strongly that platforms have a legal and ethical obligation to deploy filtering because there is simply no way to respond to the massive scale of online copyright infringement on the modern internet without automated systems.<sup>232</sup> The DMCA safe harbors are legal architecture as fundamental to the modern internet as HTTP, but both are creations of the mid-1990s. The notice-and-takedown regime was established in 1998, the year Google was founded, when there were only 2.4 million websites worldwide;<sup>233</sup> that number reached nearly 1 billion in 2014.<sup>234</sup> Collectively, YouTube users now upload more than half a million hours of video and watch hundreds of millions of hours of video every day.<sup>235</sup> A nontrivial fraction of these uploads and views infringe one or more copyrights. From the

Cal. 2009), *aff'd sub nom.* UMG Recordings, Inc. v. Shelter Capital Partners LLC, 667 F.3d 1022 (9th Cir. 2011), *withdrawn and superseded on reh'g*, 718 F.3d 1006 (9th Cir. 2013).

230 In fact, quite the opposite. Section 512(m)(1) expressly provides that “[n]othing in this section shall be construed to condition the applicability of [the safe harbors] on—(1) a service provider monitoring its service or affirmatively seeking facts indicating infringing activity, except to the extent consistent with a standard technical measure complying with the provisions of subsection (i).” 17 U.S.C. § 512(m)(1) (2012).

231 See Jay Rosenthal & Steven Metalitz, Mitchell Silberberg & Knupp LLP, *Reply Comments of American Association of Independent Music et al. in Response to Section 512 Study: Notice and Request for Public Comment* at 29 (Apr. 1, 2016), <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-89806&attachmentNumber=1&disposition=attachment&contentType=pdf> (“While there is no multi-industry initiative on the use of content matching technologies, several digital services, including YouTube, Tumblr, SoundCloud, 4shared, and others, have unilaterally implemented some form of content matching and have taken action based on that matching to deter further infringement.”); *An Update on Video Management on Facebook*, FACEBOOK MEDIA (Aug. 27, 2015), <http://media.fb.com/2015/08/27/an-update-on-video-management-on-facebook/>; *Customers & Partners*, AUDIBLE MAGIC, <https://www.audiblemagic.com/customers/> (last visited Aug. 16, 2016) (listing various customers, including Facebook, SoundCloud, Twitch, TuneCore, Veoh, and Vimeo, among others); *How Content ID Works*, YOUTUBE HELP, <https://support.google.com/youtube/answer/2797370?hl=EN> (last visited Aug. 16, 2016); *What Happens When You Share Copyrighted Stuff on DropBox*, MEDIUM (Nov. 19, 2014), <https://medium.com/productivity-in-the-cloud/what-happens-when-you-share-copyrighted-stuff-on-dropbox-5e7e0f44b3df#w6f4fuhik>.

232 Niva Elkin-Koren, *After Twenty Years: Revisiting Copyright Liability of Online Intermediaries*, in *THE EVOLUTION AND EQUILIBRIUM OF COPYRIGHT IN THE DIGITAL AGE* 29, 45 (Susy Frankel & Daniel Gervais eds., 2014).

233 *Total Number of Websites*, *supra* note 117.

234 *Id.*

235 See GOOGLE, *supra* note 75, at 21 (“Today, more than 400 hours of video are uploaded to YouTube every minute . . .”).

perspective of rightsholders, notice-and-takedown as conceived in the mid-1990s simply does not scale to the realities of the mid-2010s. In an effort to persuade both courts and legislators, major rightsholder groups argue that platforms must implement filtering and other DMCA-plus measures, and that those that fail to do so are deliberately benefiting from and enabling widespread copyright infringement.<sup>236</sup>

Filtering systems have intrinsic benefits for platforms—at least those that can afford them. These systems can be a way of “re-asserting some control over copyright disputes on their services, which the blanket takedown response to automated sending did not afford.”<sup>237</sup> But more importantly for platforms hosting user-generated content, video, and music, DMCA-plus measures mitigate the perceived risks of falling outside the DMCA safe harbors. A recent study of “Notice and Takedown in Everyday Practice” by Professor Jennifer Urban and her coauthors quotes one unnamed internet platform as follows:

If you are hosting [music or video] content, I don’t see how you can deal with that risk without having some sort of content filtering long term. It is not a requirement under the DMCA, but there is too much uncertainty in the DMCA and there is too much risk; it is potentially catastrophic. [Adopting filtering technology] is a reflection of the fact that we don’t think that how the DMCA as written and interpreted [offers enough protection from liability].<sup>238</sup>

As discussed above, the DMCA provides significant protection for platforms that comply with the rules of notice-and-takedown and maintain some kind of “repeat infringer” policy.<sup>239</sup> However, rightsholder advocates and a succession of plaintiffs have mounted a sustained attack on the safe harbors, attempting to narrow their scope through either judicial or congressional revision.<sup>240</sup> Indeed, although the DMCA was intended to provide a safe harbor from copyright litigation for platforms that play by the rules, rightsholders have generated considerable uncertainty through their “willingness to litigate every word of the DMCA across multiple circuits.”<sup>241</sup> Even companies that believe they are well within the law have a lot to lose from pro-

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236 One commentator’s description of “Google’s open philosophical contempt for most property rights online” is typical. Scott Cleland, *Google’s Piracy Liability*, FORBES (Nov. 9, 2011), <http://www.forbes.com/sites/scottcleland/2011/11/09/googles-piracy-liability/#7f1bad8480a8>. For a more thoughtful anti-Google perspective, see David Newhoff, *Why Does Google Love Piracy?*, ILLUSION OF MORE (Mar. 24, 2016), <http://illusionofmore.com/google-love-piracy/>. See also Gennaro Castaldo, *BPI Response to “How Google Fights Piracy” 2016 Update*, BRITISH PHONOGRAPHIC INDUS. (July 13, 2016), <https://web.archive.org/web/20160822094025/http://www.bpi.co.uk:80/home/bpi-response-to-how-google-fights-piracy-2016-update.aspx> (describing Google as “one of the key enablers of piracy on the planet”).

237 Urban et al., *supra* note 22, at 56.

238 *Id.* at 58 (alterations in original).

239 See *supra* subsection I.B.2.

240 For a representative sample of industry views, see generally Pariser, *supra* note 25.

241 ORG. FOR TRANSFORMATIVE WORKS, *supra* note 144, at 19.

tracted federal court litigation.<sup>242</sup> As a result, although the safe harbors are working well for some platforms, others find that they are not as safe as they had hoped. To mitigate this uncertainty, a number of platforms that host large quantities of music and audio-visual works have agreed to go beyond the requirements of the DMCA and proactively filter user content in an effort to reduce infringement and to appease rightsholders. Most obviously, YouTube's development of Content ID appears to have been spurred by the Viacom litigation that began almost as soon as Google acquired the video-sharing company in 2006.<sup>243</sup> Although Viacom was ultimately unable to persuade the courts to adopt its favored interpretation of the safe harbors, the creation and expansion of Content ID can nevertheless be seen as victory for Viacom.<sup>244</sup> Justin Hughes suggests an alternative interpretation of events; namely, that the genesis of Content ID may have had nothing to do with the Viacom litigation and everything to do with Google's desire to sell targeted advertising on YouTube.<sup>245</sup> Targeted advertising is based on a variety of user characteristics, but to the extent that YouTube based its targeting on who watches what, it would be hard to then disclaim knowledge of the same.

DMCA-plus measures give platforms negotiating leverage to strike broader licensing deals with rightsholders. Such deals may allow for the monetization of infringing material, which in turn gives rightsholders an incentive to allow contested material to remain available on the platform. For example, YouTube's Content ID system identifies potentially infringing user content proactively, but rather than simply blocking that material, YouTube gives the content owner strong incentives to accept compensation in

242 John Blevins, *Uncertainty as Enforcement Mechanism: The New Expansion of Secondary Copyright Liability to Internet Platforms*, 34 CARDOZO L. REV. 1821, 1830 (2013) ("For many Internet companies, the litigation itself can be fatal even if they are complying fully with copyright law. For these reasons, content industries can often 'win' simply by filing litigation so long as the litigation is expensive.").

243 Viacom's \$1 billion lawsuit alleging that YouTube had engaged in "brazen" copyright infringement was filed on March 13, 2007. Complaint at 2, *Viacom Int'l Inc. v. YouTube, Inc.* (*Viacom I*), 718 F. Supp. 2d 514 (S.D.N.Y. 2010) (Nos. 07-CV-2103, 07-CV-3582).

244 Although YouTube's Content ID system is a voluntary private agreement, many have noted that the system was spurred on by the Viacom lawsuit and thus is "arguably not as voluntary as it might appear." Lisa Willmer, Getty Images, *Reply Comments in Response to Section 512 Study: Notice and Request for Public Comment* at 6 (Mar. 31, 2016), <https://www.regulations.gov/document?D=COLC-2015-0013-87425>. More generally, although DMCA-plus arrangements are voluntary, many of these agreements were reached in the shadow of express or implied threats of governmental regulation. See Annemarie Bridy, *Internet Payment Blockades*, 67 FLA. L. REV. 1523, 1543 (2015) (discussing the government's role in procuring voluntary agreements and the "Paradox of Non-Regulatory Regulation" in the antipiracy and anticounterfeiting space); see also DiCola & Sag, *supra* note 12 (examining the role of various government institutions in content-technology disputes in historical and contemporary context).

245 E-mail from Justin Hughes, Professor of Law, Loyola Law Sch., to Matthew Sag, Professor of Law and Assoc. Dir. for Intellectual Prop., Inst. for Consumer Antitrust Studies, Loyola Univ. of Chicago (July 20, 2017, 11:25 AM) (on file with author).

the form of advertising revenue associated with the challenged video.<sup>246</sup> When the user's video is not "monetized" in this fashion, it may be blocked, muted (in the case of musical works and sound recordings), or simply monitored.<sup>247</sup> Rightsholders are apparently free to block all infringing content rather than monetize it, but most implement some kind of mixed strategy. However, that freedom is limited by the fact that, according to some musicians, access to Content ID is linked to participation in YouTube's music streaming services.<sup>248</sup>

Moreover, going beyond the minimum requirements of the safe harbors may be good politics. Most platforms recognize the need to balance the legitimate interests of rightsholders and their users. They also recognize that if they fully exploit formal DMCA immunities in a way that appears opportunistic or unfair, they may invite revision of the safe harbors. Google's voluntary adoption of a number of DMCA-plus measures while resisting equivalent changes in the law is illustrative. In 2011 and 2012, Google helped lead the fight to defeat SOPA and PIPA (the Stop Online Piracy Act and the Protect IP Act), laws that would have imposed new copyright enforcement responsibilities on internet platforms.<sup>249</sup> And yet Google has voluntarily embraced many of these same antipiracy measures, including using takedown notices to demote the search ranking of websites, removing search terms associated with piracy from autocomplete, and providing tools for high-volume takedown submitters.<sup>250</sup> Conceding something to the interests of rightsholders makes sense if it reduces the prospect of a more radical change to the structure of the DMCA safe harbors.<sup>251</sup> Most platforms will be keenly aware that any filtering systems that they adopt on their own initiative are likely to be less problematic than any one-size-fits-all approach imposed by Congress or the Copyright Office.<sup>252</sup>

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246 *How Content ID Works*, *supra* note 231.

247 *Id.*

248 Ben Popper, *YouTube Will Block Videos from Artists Who Don't Sign Up for Its Paid Streaming Service*, VERGE (June 17, 2014), <https://www.theverge.com/2014/6/17/5817408/youtube-reportedly-block-videos-indie-artists/>.

249 See Derek E. Bambauer, *Against Jawboning*, 100 MINN. L. REV. 51, 52–53 (2015).

250 See GOOGLE, *supra* note 75, at 21.

251 Indeed, on December 31, 2015, the U.S. Copyright Office announced that it was "undertaking a public study to evaluate the impact and effectiveness of the DMCA safe harbor provisions." Section 512 Study: Notice and Request for Public Comment, 80 Fed. Reg. 81,862, 81,862 (Dec. 31, 2015).

252 Facebook warns that "a statutory provision designating specific solutions would almost certainly be outdated as soon as it was enacted." Mark Fiore, Facebook, Inc., *Reply Comments in Response to Section 512 Study: Notice and Request for Public Comment* at 7 (Apr. 7, 2016), <https://www.regulations.gov/document?D=COLC-2015-0013-90724>. Facebook also warns the Copyright Office, quite candidly, that if it were required to take certain proactive measures by law, its appetite to experiment with other tools to address copyright infringement would be lessened. Facebook maintains that the "voluntary nature of the current regime allows for, and encourages, experimentation and cooperation with rights owners to continue to explore new solutions." *Id.* at 8.

B. *Copyright Robots—Automated Copyright Enforcement Systems*

The first key to understanding automatic copyright enforcement systems is to distinguish between the use of automatic matching technology within the DMCA notice-and-takedown system and those operating outside the DMCA. The salient difference between DMCA-plus systems—such as YouTube’s Content ID system—and what came before is not the technology employed, but the legal architecture in which that technology is embedded.

The present scale of online infringement is such that copyright owners are virtually compelled to rely on algorithmic matching to identify the targets of takedown notices.<sup>253</sup> There are tens of billions (possibly hundreds of billions) of webpages on the internet; every minute of every day, new videos, new photos, and new sound recordings are uploaded to various social networking platforms by the hundreds (possibly the thousands). The only way for rightsholders to begin to effectively search for infringement in this vast ocean of content is to use software that tries to match online content to the rightsholder’s own catalog of works. However, the increased scale of rightsholder takedown notices attributable to automation has led many platforms to automate their takedown process—the cycle is something like an arms race in which automation begets more automation. Even though both notice senders and recipients presumably incorporate some element of human review as a kind of triage to weed out obvious mistakes and defective notices, for both rightsholders and platforms, these processes can still be fairly described as automatic. The findings of the NTEP study—that 4.2% of DMCA notices sampled were “fundamentally flawed” and a further 28.4% were of questionable validity<sup>254</sup>—strongly suggest that any human review is cursory and incomplete. Thus, in spite of the DMCA’s requirement that takedown notices attest to the complaining party’s “good faith belief” in infringement,<sup>255</sup> massive volumes of such notices are clearly sent, and often acted upon, without meaningful human review.<sup>256</sup> Automation in this context takes place *within* the parameters of the DMCA. The use of automated matching technologies in this context is captured by the term “DMCA-auto.”

In a DMCA-auto world, rightsholders select reference files and unilaterally determine their initial matching parameters, but once a takedown notice has been issued, the consequences of a match are determined by the DMCA. Those consequences include a counternotification procedure and potential liability for misrepresentation. In contrast, in a DMCA-plus world, the design and calibration of matching technology and decisions as to whether the

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253 Google indexed around forty-five billion webpages in March 2016. That same month, more than 6000 individuals or entities used Google’s notice-and-takedown interface to request the removal of more than eighty million webpages from its search index. That is less than 0.2%. These are all large numbers, and perspectives differ as to whether it is the ratio of infringing to noninfringing that matters or simply the absolute number of infringing websites. See ORG. FOR TRANSFORMATIVE WORKS, *supra* note 144, at 3.

254 Urban et al., *supra* note 22, at 11–12.

255 17 U.S.C. § 512(c)(3)(A)(v) (2012).

256 Urban et al., *supra* note 22, at 54.

processes of the DMCA are to be engaged or sidestepped are matters for negotiation between rightsholders and platforms. DMCA-plus arrangements offer more flexibility to rightsholders and platforms than staying within the confines of notice-and-takedown. For example, unlike a DMCA takedown notice, copyright filters can be used by platforms to block potentially infringing content before it is loaded (i.e., ex ante filtering) or to purge such content en masse when it is later identified (i.e., ex post filtering); it can also be used to “monetize” the accused content—i.e., subject it to advertising and channel that advertising to the claimant—or to simply monitor the content and give the claimant the benefit of the associated data.<sup>257</sup>

There are also differences in terms of the consequences of the takedown procedure. In a DMCA-plus framework, automated copyright enforcement can be used to bypass or selectively engage with the DMCA. Content ID, for example, lets rightsholders block or mute a user video without sending a DMCA takedown notice. The monetization and monitoring options in Content ID have no parallel at all in the DMCA. Rightsholders can rely on Content ID to search for potential copyright infringement on their behalf and to preemptively block such infringement without issuing a takedown notice. Furthermore, almost all of this takes place with no human intervention and no direct interaction between rightsholders and users.

DMCA-plus copyright filtering systems offer platforms and rightsholders flexibility, but one of the significant implications of that flexibility is that the mandatory user safeguards built into the DMCA are converted into optional ones.<sup>258</sup> This is the key difference between DMCA-auto and DMCA-plus uses of copyright matching and filtering technology. When algorithmic matching technology is used as the first step in making a DMCA notification, the substantive and procedural rights of users are set out in the DMCA. However, when the same technology is incorporated into a DMCA-plus framework, user rights and the processes under which they are vindicated depend on choices made by rightsholders and platforms. The crucial question then becomes whether or not rightsholders and platforms will choose to maintain open platforms that are tolerant of fair use and a diverse range of expression.

### C. *Will DMCA-Plus Platforms Be Closed or Open?*

#### 1. Copyright-Filtering False Positives

The use of automatic copyright-filtering technology within a DMCA-plus framework carries a real possibility that platforms that were once largely open will become increasingly closed and constrained. To better understand how these constraints might operate, it is useful to consider the different

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<sup>257</sup> Automated matching systems are also key to those DMCA-plus agreements in which platforms agree to give trusted rightsholders “backend” access to their systems so that they can take down infringing content on their own initiative. *See id.* at 55 (reporting that “backdoor access agreements are relatively common among digital music file-hosting services”).

<sup>258</sup> *See supra* Part I (addressing the weakness of these safeguards).

ways in which the copyright-filtering technology in operation today leads to false positives—i.e., claims of infringement directed at noninfringing material. YouTube’s experience with filtering technology over the past few years suggests a taxonomy of false positives as follows: fraudulent claims of ownership, actual false positives, contractual false positives, and legal false positives. The category of legal false positives can be further divided into mistakes about infringement, such as failing to appreciate fair use, and mistakes about ownership, such as not recognizing that ownership of a work does not extend to ownership of public domain materials incorporated into the work. These categories are now addressed in detail.

a. Fraudulent Claims

Content ID begins by taking reference files submitted by a person claiming to represent the copyright owner and converting such files into a hash file or a digital fingerprint.<sup>259</sup> In computer science, a hash function is used to map information of indeterminate size to a long string of letters and digits of fixed size. A “perfect” hash function will generate a unique hash for each unique input. The 128-bit hash for the previous paragraph is *0b11c0463b44082968b1f3eedffb0f80*; the hash for the same text with the word “Banana” substituted for “DMCA” is *2863eb5ee4acdb9d037ea9541ce16b62*. Neither text can be reverse engineered from their hash values, but once the texts are encoded as hash values it is trivial to compare them to see if one is a match for the other. Using hash values to match audio and visual content encoded in differing file formats is no trivial task, but the concepts are similar. Using these hash values, new user content is automatically compared to the reference file as it is uploaded to the site. The system can match audio and/or video; it can detect partial and degraded quality matches as well as perfect high quality copies.

The consequences that follow from any given match depend on a menu of choices given to rightsholders: block, mute, monitor, or monetize.<sup>260</sup> The consequences of a match also depend on YouTube’s complicated and oft-changing policies and procedures, and on the response (or nonresponse) of the user whose content has been flagged. When a rightsholder claims the right to monetize a user’s video and the user takes no action, the rightsholder keeps the associated revenue going forward. If the user disputes the claim, any revenue goes into escrow until<sup>261</sup>: (i) the claim is withdrawn, (ii) the user appeals the rightsholder’s rejection of the dispute and the rightsholder fails to contest that appeal, or (iii) the user appeals the rightsholder’s rejection of the dispute and is subject to a DMCA takedown and then files a

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259 For a description of how hash files work, see Troy Holmes, *What Are Hash Files?*, WISEGEEK, <http://www.wisegeek.com/what-are-hash-files.htm> (last modified Nov. 5, 2017).

260 See *How Content ID Works*, *supra* note 231.

261 *Monetization During Content ID Disputes*, YOUTUBE HELP, <https://support.google.com/youtube/answer/7000961> (last visited Nov. 24, 2017).



DMCA counternotification.<sup>262</sup> If the user does not appeal or does not file a counternotification, the revenue goes to the rightsholder.<sup>263</sup>

In many cases, even users who realize that a monetization claim is spurious may be unable to challenge that claim for some time. To see why, two terms of art need to be explained: *copyright strikes* and *Content ID blocks*. YouTube assigns a user a “copyright strike” if her video has been taken down in response to a “complete and valid legal request” from the rightsholder—i.e., a DMCA takedown notice.<sup>264</sup> After three copyright strikes, the user’s account is terminated.<sup>265</sup> A “Content ID block” occurs when a rightsholder has claimed that a user’s post is infringing and has used Content ID to block that post.<sup>266</sup> When this Article was drafted in 2016, users with a single copyright strike or two Content ID blocks within a thirty-day period were unable to appeal.<sup>267</sup> Furthermore, YouTube then limited the number of claims a user could appeal at any one time.<sup>268</sup> In addition, users who are within their rights may wrongly assume that the rightsholder’s claim is well founded, or at least not worth the risk of challenging. For example, users who rely on their fair use rights may assume that monetization claims from obscure but official sounding entities are being made by designated agents or collecting societies. Thus, user confusion and the design of the Content ID appeals process enables bad actors to make brazenly false claims of copyright ownership in order to siphon off advertising revenue from unsuspecting users.<sup>269</sup> It is not clear how common this form of copyright trolling is, but in 2013, three different copyright trolls—Digital Minds Entertainment, The Music Publishing Rights Collecting Society, and Agora Aggregator—each made baseless claims on the same “let’s play” video.<sup>270</sup> Either the user in question was very unlucky, or this practice is widespread.

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262 See *What Is a Content ID Claim?*, YOUTUBE HELP, <https://support.google.com/youtube/answer/6013276?hl=en> (last visited Nov. 24, 2017).

263 See *Monetization During Content ID Disputes*, *supra* note 261.

264 *Copyright Strike Basics*, YOUTUBE HELP, <https://support.google.com/youtube/answer/2814000?hl=en> (last visited Nov. 24, 2017).

265 *Id.*

266 *What Is a Content ID Claim?*, *supra* note 262.

267 These restrictions have now been modified. See *Changes to Account Standing*, YOUTUBE HELP, <https://support.google.com/youtube/answer/2797387> (last visited Nov. 24, 2017).

268 *Id.*

269 Lauren D. Shinn, Note, *YouTube’s Content ID as a Case Study of Private Copyright Enforcement Systems*, 43 AIPLA Q.J. 359, 373–74 (2015).

270 Tim Cushing, *YouTube’s Content ID Trolls: Claim Copyright on Lots of Gameplay Videos, Hope No One Complains, Collect Free Money [Updated]*, TECHDIRT BLOG (Feb. 28, 2013, 10:56 AM), <https://www.techdirt.com/articles/20130227/20563322144.shtml>. For video, see Sandy4338, *Let’s Play Far Cry3 Part 09*, YOUTUBE (Feb. 18, 2013), <https://www.youtube.com/watch?v=PM74xsQ3hlQ>. For a discussion of copyright trolling in other contexts, see Matthew Sag, *Copyright Trolling, An Empirical Study*, 100 IOWA L. REV. 1105 (2015).

FIGURE 2: COPYRIGHT TROLLING ON YOUTUBE

**Let's Play Far Cry3 Part 09**

Sandy4338 · 344 videos

23 views

Like

About

Share

Add to

Published on 18 Feb 2013

Streifen durch den Dschungel, mit dem ein oder anderen Hindernis.

Für diesen Part Gast-Moderator:  
<http://www.youtube.com/user/ViennaUnd...>

Alle Rechte gehören Ubisoft, Brian Tyler, Agora Aggregator, Digital Minds Entertainment und The Music Publishing Rights Collecting Society !

Category Gaming

Licence Standard YouTube Licence

### b. Actual False Positives

Beyond simple fraud, any copyright filtering system must also deal with *actual* false positives—i.e., those claims made incorrectly but not deliberately falsely. For example, EMI claimed that an hour-long video of a purring cat violated its rights in a song titled *Focus*.<sup>271</sup> Judging from Copyright Office records, *Focus* is either a track from rap group U.S.D.A.'s debut studio album *Cold Summer*,<sup>272</sup> Brandy's album *Afrodisiac*,<sup>273</sup> or Erick Sermon's *Double or Nothing*.<sup>274</sup>

FIGURE 3: OBLIGATORY CAT VIDEO

Copyright Notice

View on watch page

Video Manager

**Cat Purr 1 hour**

Your video may include a song owned by a third party. For example, this might be a song playing in the background or someone performing a song. To hear the matched song please play the video on the right. The video will play from the point where the matched content was identified.

Your video is available and playable. If this video is your cover of a song written by somebody else, you may be eligible to monetize this video.

Copyright details:

"FOCUS", musical composition administered by:	23:06
PRS CS	
EMI Music Publishing	

OK, got it

If you think this is an invalid claim, you can file a dispute.

Learn more about how claims impact your videos.

22:23 / 00:00

271 See Digihaven, *!!Happiest Cat Purring loud 1 hour—Calm, Relax for Study, Sleep, Phantom.*, YOUTUBE (Mar. 29, 2014), <https://www.youtube.com/watch?v=bzadyv2utE>.

272 U.S.D.A., *COLD SUMMER* (Def Jam Recordings 2007).

273 BRANDY, *AFRODISIAC* (Warner Music 2004).

274 ERICK SERMON, *DOUBLE OR NOTHING* (Def Jam Recordings 1995).

If that seems odd, Content ID has also been reported to trigger matches based on music that is inaudible to the human ear.<sup>275</sup> Still more bizarre, film reviewer Brad Jones received a strike on his account for one of his “Midnight Screenings” reviews in which Jones and another person:

sit in a car in a parking lot after going to see a movie in the theatre and we just talk about the movie. There’s no clips, no footage, it is just us sitting in a car talking about a movie. And if you didn’t know that, you could know that by just simply watching the video.<sup>276</sup>

No human could have made these mistakes, but errors of this kind may be an inevitable consequence of matching creative works by reducing them to numerical hash values or even cruder matching techniques.<sup>277</sup>

### c. Contractual False Positives

A more profound problem for Content ID is that the technology is incapable of recognizing *contractual* false positives—i.e., situations where the user’s post matches the reference file but the user is authorized by the content owner, or by the content owner’s own licensor. For example, in 2012, an automated copyright enforcement system interrupted the Hugo Awards webcast because it failed to realize that *Doctor Who* was being honored, not pirated, and that permission to broadcast certain clips from the show had been explicitly granted.<sup>278</sup> Not long afterwards, Michelle Obama’s speech to the Democratic National Convention was also rendered unplayable by Content ID.<sup>279</sup> Users were told that “[t]his video contains content from WMG, SME, Associated Press (AP), UMG, Dow Jones, New York Times Digital, The Harry Fox Agency, Inc. (HFA), Warner Chappell, UMPG Publishing and EMI Music Publishing, one or more of whom have blocked it in your country on copyright grounds.”<sup>280</sup>

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275 Fred von Lohmann, *Testing YouTube’s Audio Content ID System*, ELECTRONIC FRONTIER FOUND. (Apr. 23, 2009), <https://www EFF.org/deeplinks/2009/04/testing-youtubes-aud>.

276 Channel Awesome, *Where’s the Fair Use?—Nostalgia Critic*, YOUTUBE (Feb. 16, 2016), <https://www.youtube.com/watch?v=zvqFAMotwI> (at minute 9:30–9:55).

277 In its comments to the Copyright Office’s recent Section 512 Study, the Internet Archive noted that it “routinely” receives notices from third-party enforcers (i.e., companies hired by content owners) that mistakenly target works that are in the public domain based on “loose keyword matching.” See INTERNET ARCHIVE, *supra* note 145, at 4.

278 See Will Oremus, *Sci-Fi Awards Webcast Shut Down by Rogue Copyright Bots that Refuse to Obey Human Commands*, SLATE (Sept. 4, 2012), [http://www.slate.com/blogs/future\\_tense/2012/09/04/hugo\\_awards\\_ustream\\_science\\_fiction\\_webcast\\_blocked\\_by\\_rogue\\_copyright\\_bots.html](http://www.slate.com/blogs/future_tense/2012/09/04/hugo_awards_ustream_science_fiction_webcast_blocked_by_rogue_copyright_bots.html).

279 Geeta Dayal, *The Algorithmic Copyright Cops: Streaming Video’s Robotic Overlords*, WIRED (Sept. 6, 2012), <https://www.wired.com/2012/09/streaming-videos-robotic-overlords-algorithmic-copyright-cops/>.

280 *Id.*

FIGURE 4: MICHELLE OBAMA BLOCKED BY ROBOTS



#### d. Legal False Positives—Infringement

Content ID and similar systems are particularly likely to fail to recognize that the user's post does not infringe because any similarity to the reference file is de minimis, not substantial, or qualifies as fair use.<sup>281</sup> As YouTube and other online video platforms have grown and matured, the creation of dedicated online content has become more professional and commercial. Online reviews, parodies, satirical works, and educational videos often rely on the fair use doctrine. But that reliance makes them vulnerable to unfounded claims of copyright infringement. Just as Content ID gives rightsholders the option to block, mute, monetize, or monitor, it threatens user videos with often unjustified suppression of their works, unwanted commercialization, deprivation of income, or surveillance.

The saga of *Buffy vs Edward* is just one of a number of recent remixes illustrating the potential conflict between copyright robots and the right to make fair use of copyright materials. *Buffy vs Edward: Twilight Remixed* is an

<sup>281</sup> Cf. Zoe Carpou, Note, *Robots, Pirates, and the Rise of the Automated Takedown Regime: Using the DMCA to Fight Piracy and Protect End-Users*, 39 COLUM. J.L. & ARTS 551, 564–67 (2016).

insightful remix of scenes from *Buffy the Vampire Slayer* and Lionsgate's *Twilight* film series.<sup>282</sup> Jonathan McIntosh, the creator of this remix, envisaged his story "as a pro-feminist visual critique of Edward's character and generally creepy behavior. Seen through Buffy's eyes, some of the more sexist gender roles and patriarchal Hollywood themes embedded in the *Twilight* saga are exposed."<sup>283</sup> Proving the aphorism that sunlight is the best disinfectant, the six-minute-long remix takes fragments from *Buffy* and *Twilight* and reimagines what would have happened if vampire Edward had come to Sunnydale, California, instead of Forks, Washington. Whereas the *Twilight* series glamorizes and romanticizes obsessive and predatory male behavior, in the remix, Buffy cuts Edward down with a flat, "You know, being stalked isn't really a big turn on for girls." Defeated, Edward duly sulks away.<sup>284</sup>

*Buffy vs Edward* is widely used in law schools and media studies courses as an obvious and compelling example of video remix as fair use.<sup>285</sup> The video was even mentioned in the Copyright Office's recommendations on exemptions to the DMCA in 2012 as an example of a transformative noncommercial video.<sup>286</sup> In spite of its evident fair use status, in October 2012, *Buffy vs Edward* was subject to a Content ID claim by the film studio Lionsgate and subjected to monetization. The irony of monetizing a noncommercial gender critique of pop culture vampires with ads for Nordstrom fall fashions was presumably unintended.

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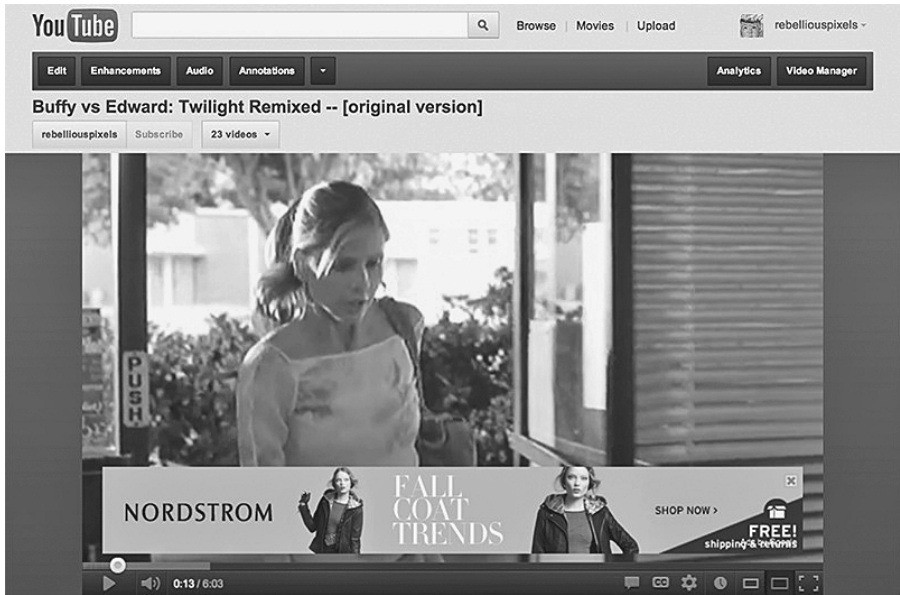
282 Jonathan McIntosh, *Buffy vs Edward: Twilight Remixed—[original version]*, YOUTUBE (June 19, 2009), <https://www.youtube.com/watch?v=rzwM3GvaTRM>; TWILIGHT (Summit Entertainment 2008).

283 McIntosh, *supra* note 282.

284 *Id.* at minute 3:30.

285 This account is based on Jonathan McIntosh's blog post. See Jonathan McIntosh, "Buffy vs Edward" Remix Unfairly Removed by Lionsgate, ARS TECHNICA (Jan. 9, 2013, 10:40 PM), <https://arstechnica.com/tech-policy/2013/01/buffy-vs-edward-remix-unfairly-removed-by-lionsgate/>.

286 U.S. COPYRIGHT OFFICE, LIBRARY OF CONGRESS, SECTION 1201 RULEMAKING: FIFTH TRIENNIAL PROCEEDING TO DETERMINE EXEMPTIONS TO THE PROHIBITION ON CIRCUMVENTION 133 (2012), [http://www.copyright.gov/1201/2012/Section\\_1201\\_Rulemaking\\_2012\\_Recommendation.pdf](http://www.copyright.gov/1201/2012/Section_1201_Rulemaking_2012_Recommendation.pdf).

FIGURE 5: *BUFFY VS EDWARD* WITH NORDSTROM FALL COAT TRENDS

McIntosh disputed the claim, briefly explaining why the remix was fair use, and Lionsgate quickly responded by rejecting the dispute and reinstating its claim. McIntosh retained a lawyer and escalated the dispute through YouTube’s internal appeals process. Almost two months after the initial claim, McIntosh received a response stating that Lionsgate had decided to release its copyright claim. However, it soon became apparent that Lionsgate had also made a separate claim for the “visual” as opposed to “audiovisual” content from *Twilight*. McIntosh went through the same process: he disputed the claim, received an immediate rejection, and appealed. However, this time around, Lionsgate rejected the appeal, and the *Buffy vs Edward* remix was removed from YouTube.<sup>287</sup>

287 McIntosh, *supra* note 285 (summarizing the entire ordeal).

FIGURE 6: *BUFFY VS EDWARD* NO LONGER AVAILABLE

"Buffy vs Edward: Twilight R..." This video is no longer available due to a copyright claim by Lionsgate.

Sorry about that.



Losing his appeal meant that McIntosh was subject to a copyright infringement “strike” and thus locked out of his account pending attendance at YouTube’s “copyright school” and passing a test on fair use—a test that Lionsgate was obviously never asked to take. *Buffy vs Edward* was eventually restored after McIntosh initiated a DMCA counternotification.

#### e. Legal False Positives—Ownership

Copyright filtering systems are also prone to another kind of legal false positive: reckless and mistaken assertions of ownership. Although traditional content producers are quite happy to rely on fair use and the public domain in creating their own content, they often fail to recognize that their copyrights in their own work do not extend to preexisting material incorporated into such work. This becomes particularly problematic when inputs are used without permission in reliance on the fair use doctrine or the public domain status of the incorporated material.

There are abundant examples of this type of legal false positive. *Family Guy* is a popular satirical cartoon on the Fox Network that derives a great deal of its humor from cutaway scenes lampooning American culture. Like many successful television shows, *Family Guy* relies on fair use for its ability to engage with and comment on popular culture. In 2007, Fox successfully defended a lawsuit by comedian Carol Burnett who claimed that *Family Guy*’s unauthorized use of her Charwoman character violated her copyright in that character.<sup>288</sup> In 2009, Fox prevailed over the copyright owners of *When You Wish Upon a Star* who objected to *Family Guy*’s unauthorized parody appear-

<sup>288</sup> See *Burnett v. Twentieth Century Fox Film Corp.*, 491 F. Supp. 2d 962 (C.D. Cal. 2007).

ing in the episode *When You Wish Upon a Weinstein*.<sup>289</sup> In both these cases, and in countless other episodes that have not generated litigation, Fox and the producers of *Family Guy* relied successfully on fair use.

Fox is happy to rely on fair use to create compelling content that engages with popular culture, but its attitude to other people's rights of self-expression is at best cavalier. In May 2016, Fox aired an episode of *Family Guy* using footage of a 1987 Nintendo video game called *Double Dribble* taken directly from YouTube user swlTched's video without consultation or permission.<sup>290</sup> The video documents a known glitch in the game, namely that three-point shots taken from the corner always go in. Shortly after the *Family Guy* episode titled *Run, Chris, Run*<sup>291</sup> aired, swlTched's original video was taken down by Content ID because of an automatic claim by Fox. The video was restored six days later.

A more pernicious example of Content ID's legal false positives relates to the landing of NASA's Curiosity rover on Mars on August 6, 2012. Like all U.S. government works, photography and video footage created by NASA is not subject to copyright protection; instead it is dedicated to the public domain.<sup>292</sup> As part of the public domain, NASA's video should have enjoyed the widest possible distribution. In theory, the video was available to anyone to use for any purpose whatsoever. However, because Scripps News included the footage in a news broadcast and submitted the entire broadcast as a Content ID reference file, NASA's own post flagged as infringing, and the video was blocked. Again, this is the kind of mistake only a robot copyright enforcer could make; it seems very unlikely that a human being at Scripps who had seen the broadcast would ever think to complain to NASA about NASA's use of NASA's own footage. This was far from an isolated event. Scripps had made the same mistake with a NASA video only months before, and the Curiosity landing video itself was blocked just three days later in almost identical circumstances.<sup>293</sup>

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289 See *Bourne Co. v. Twentieth Century Fox Film Corp.*, 602 F. Supp. 2d 499 (S.D.N.Y. 2009).

290 See swlTched, *Double Dribble—NES—Automatic Shot*, YOUTUBE (Feb. 21, 2009), <https://www.youtube.com/watch?v=ED59WhzXlkk&lc=Z120ev0wr1jbi5zpd04cefbzjqrzhtwo53g>.

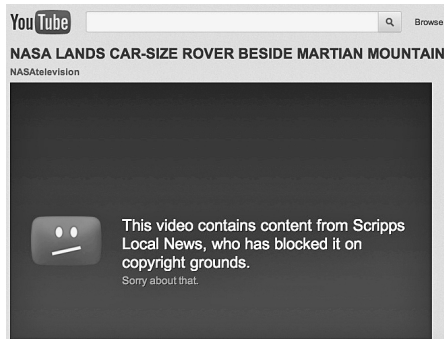
291 *Family Guy: Run, Chris, Run* (Fox television broadcast May 15, 2016).

292 17 U.S.C. § 105 (2012).

293 For a description of the NASA and Scripps event, see Alex Pasternack, *NASA's Mars Rover Crashed into a DMCA Takedown*, MOTHERBOARD BLOG (Aug. 6, 2012, 11:49 AM), [https://motherboard.vice.com/en\\_us/article/qkkv5q/nasa-s-mars-rover-crashed-into-a-dmca-takedown](https://motherboard.vice.com/en_us/article/qkkv5q/nasa-s-mars-rover-crashed-into-a-dmca-takedown).



FIGURE 7: CURIOSITY LANDING



The lazy and/or fraudulent inclusion of public domain source material in Content ID reference files is a persistent problem: NASA regularly receives Content ID claims and DMCA takedown notices for its own footage.<sup>294</sup> Ultimately, the story illustrates the potential for automated copyright enforcement to undermine the public domain. Of course, such results are not inevitable: whether systems like Content ID actually pose a threat to the public domain depends entirely upon how those systems are designed and implemented.

## 2. Beyond False Positives

Automated copyright enforcement systems may be the only plausible response to the problem of large scale online infringement on content-sharing platforms. With over 400 hours of video being uploaded to YouTube every minute, it is hard to imagine that either rightsholders, or the platform itself, could meaningfully prevent the evisceration of online copyright without relying on automation to some extent.<sup>295</sup> And yet, copyright robots will inevitably make mistakes, especially when it comes to fair use. The implications of automated copyright-filtering systems for fair use and for the functional balance of copyright in general are not immutable. Although some false positives are inevitable in any automated system, the likelihood of false claims and the burden such claims place on user rights are both endogenous to the system itself—the extent of their incidence is a product of the incentives of the current system.

### a. Delay and Denial of Review

As discussed above, there should be some scope for identifying potential fair use claims as part of copyright-matching algorithms.<sup>296</sup> However, improving matching algorithms is just the beginning. The ability of users to respond to false claims is also a central determinant of the degree to which

294 *See id.*

295 GOOGLE, *supra* note 75, at 21.

296 *See supra* subsection I.D.3.

automated copyright enforcement systems burden fair use. The DMCA notice-and-takedown process has been criticized for its potential to suppress speech without judicial oversight. But although notice-and-takedown has been frequently misused and occasionally abused, the counternotification procedure and a remedy for misrepresentation suggest some possibility of recourse for errant takedown notices. These safeguards are imperfect, but they at least provide a potential forum and a potential remedy for takedown abuse. Whether DMCA-plus agreements that provide for automatic copyright filtering adopt similar governance structures is entirely a matter of platform discretion. Platforms may choose to allow automatic content blocking and monetization without any appeals process or repercussions for false claims, to channel certain actions into the DMCA framework (thus engaging the machinery of notice-and-takedown and possible sanctions for misrepresentation), or some entirely different form of due process.

YouTube's current dispute resolution process, Content ID, provides a kind of shadow due process that appears to have made it very difficult for users with more than a handful of videos to rely on fair use. When YouTube's system detects a match between a rightsholder's reference file and a user's post, the post will be either flagged for further action by the rightsholder, blocked, muted or monetized immediately, or simply tracked.<sup>297</sup> None of these actions require the rightsholder to send a DMCA takedown notice, nor do they result in a copyright strike being placed on the user's account. Of course, the rightsholder may at any time raise the stakes by making a formal takedown request. Whenever this happens, the user is subject to a strike unless and until the user submits a DMCA counternotification. Confronted with a Content ID claim (but not a DMCA notification), a user has the option of doing nothing, swapping out the offending music track where applicable, or disputing the claim.<sup>298</sup> The first level of dispute sends the claim back to the rightsholder for reconsideration. The rightsholder may do nothing, in which case the claim is released after thirty days of inaction, or the rightsholder may "reinstate" its initial claim, in which case the claim stands unless appealed. As noted above, the rightsholder may also decide at this point to make a formal takedown request, but this is not required. Once the initial claim has been reinstated, the user can appeal.<sup>299</sup> The rightsholder then has another thirty days to respond to the user's appeal by either releasing its claim or filing a DMCA takedown notice.

This process accepts the rightsholder's claim of infringement as correct until proven otherwise. The first level of review of a Content ID claim simply returns the claim back to the rightsholder for verification. The rightsholder may reject the dispute out of hand without any consequences and without even bothering to review the underlying works or the reasons for the dispute. Although the second level of review is called an "appeal," it is more accu-

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297 See *What Is a Content ID Claim?*, *supra* note 262.

298 See *Dispute a Content ID Claim*, YOUTUBE HELP, <https://support.google.com/youtube/answer/2797454> (last visited Nov. 24, 2017).

299 See *id.*

rately a plea to the rightsholder for reconsideration. There is no neutral referee for Content ID disputes. The only difference between disputes and appeals is that a rightsholder can only reject an appeal by submitting a DMCA takedown notice. A user may then choose to submit a counternotification to have the video restored and the copyright strike against her account removed.<sup>300</sup> From beginning to end, and assuming no delay by the user, this process could take seventy days: thirty days for the initial dispute, thirty days for the appeal, and ten days for the counternotification.

YouTube must balance the demands of competing constituencies, and the significant time delays built into the Content ID dispute resolution system are no doubt intended to make the process more manageable for rightsholders. In the past, these delays compounded the problem that a user's ability to dispute false claims was strictly rationed. A user with a single copyright strike or two Content ID blocks within a thirty-day period was ineligible to appeal any "reinstated" copyright claims.<sup>301</sup> Even a user whose account was in good standing was still limited to no more than three appeals at a time, regardless of how many claims he or she might be dealing with. Under this regime, most users would not take the chance of disputing or appealing three claims at one time because the risk of getting three strikes and, as a result, having their account terminated, is too grave. Some YouTube creators report receiving unjustified Content ID claims "every other day"; thus being left unable to monetize some videos for months while they work through the dispute process one or two claims at a time.<sup>302</sup> YouTube has now revised some of the limitations on appealing Content ID claims.<sup>303</sup>

Spurious Content ID claims undermine fair use because of the time they take to resolve and the effect they have on the user's account. Although dealing with a single erroneous claim within the Content ID system might be preferable to immediately confronting a DMCA takedown notice, the compound effect of multiple spurious claims can be that the user has no standing to challenge any of them. Whereas the DMCA made prior restraint possible, DMCA-plus arrangements could serve to make it indisputable.

#### b. Rightsholder Incentives

The consequences (or lack of consequences) for making false claims are another consideration critical to the negative impact that automated copyright enforcement systems have on fair use. In the case of Content ID, it is not clear what adverse consequences YouTube imposes upon rightsholders who systematically overclaim by including other people's work within their reference files or setting their matching thresholds so low as to make false

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300 See *Copyright Strike Basics*, YOUTUBE HELP, [https://support.google.com/youtube/answer/2814000?hl=EN&ref\\_topic=2778545](https://support.google.com/youtube/answer/2814000?hl=EN&ref_topic=2778545) (last visited Nov. 24, 2017); *Counter Notification Basics*, YOUTUBE HELP, <https://support.google.com/youtube/answer/2807684> (last visited Nov. 24, 2017).

301 See *Changes to Account Standing*, *supra* note 267.

302 Channel Awesome, *supra* note 276, at minute 8:45–9:17.

303 See *Changes to Account Standing*, *supra* note 267.

positives more likely.<sup>304</sup> If automatic systems of copyright enforcement are going to address rightsholders' legitimate concerns about infringement, the penalty for making mistaken assertions must be kept low at first. However, rightsholders should have some incentives to minimize their mistakes, and a well-designed system would feature escalating costs for repeated or systematic overclaiming.

Rightsholder incentives are also important to consider in the design of an effective review system. For the reasons explained above, the significant time delays and limits on simultaneous disputes make it likely that dubious monetization claims will go unchallenged. It stands to reason that if false monetization claims are unlikely to be challenged, they are more likely to be made in the first place. Based on publicly available information, under the current system, even once a claim is disputed, rightsholders have no reason to seriously entertain the dispute unless and until the issue enters the appeal phase. It is only at the end of the appeal phase that rightsholders face *any* possible consequences for making a claim without a good faith basis, and that is because in rejecting an appeal, rightsholders must convert their Content ID claim into a DMCA claim.

### c. Monetizing Fair Use

Whether platforms relying on DMCA-plus implementations of automatic copyright enforcement will be more open or more closed is a difficult question to answer in the abstract. Systems like Content ID could plausibly make it easier for users to rely on fair use, at least in situations where the automation of copyright enforcement is combined with the option to monetize user content. Rightsholders may choose to monetize uses of their works that they would have otherwise blocked if the monetization option were not available. The extent of monetization on YouTube is significant: Google reports that its Content ID system “has generated over \$2 billion for [its] partners since it first launched.”<sup>305</sup> In an uncertain legislative climate, the availability of an intermediate position makes it easier for platforms to remain open to a wide range of remixes, including those whose fair use status is debatable or even unlikely.

However, there are also reasons to think that automatic copyright enforcement systems make it more difficult for platform users to exercise their fair use rights. Most obviously, using copyright robots makes it much easier for rightsholders to make claims of infringement and using robots within a DMCA-plus framework may enable them to make such claims without any responsibility to consider fair use and without any liability for their mistakes. As noted above, through Content ID rightsholders can block,

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304 YouTube states that it monitors Content ID use and disputes on an ongoing basis to ensure its guidelines are followed and warns rightsholders that “[c]ontent owners who repeatedly make erroneous claims can have their Content ID access disabled and their partnership with YouTube terminated.” *How Content ID Works*, *supra* note 231.

305 GOOGLE, *supra* note 75, at 4.

mute, or monetize without exposing themselves to the requirements of a DMCA takedown notice until very late in the dispute resolution process. Moreover, users facing other claims of infringement may be barred from reaching that stage of the dispute resolution process no matter the strength of their case.

The monetization option in automatic copyright enforcement systems may also do as much to erode fair use as it does to allow it. As noted above, rightsholders might choose to monetize certain uses they would have otherwise blocked, but the same logic also suggests that rightsholders may attempt to monetize fair uses they would not have taken the trouble to block with a takedown notice. Indeed, the asymmetry of consequences makes this quite likely. Monetization is socially beneficial when applied to uses that are probably harmless but do not qualify as fair use. The monetization of user posts whose fair use status is quite uncertain may also be socially optimal. In these cases, monetization acts like a licensing mechanism between the rightsholder and the user, except that the two parties are not required to agree or even to communicate with each other.<sup>306</sup> However, institutionalizing and normalizing the monetization of fair use would substantially undermine the doctrine.<sup>307</sup> Giving a user the latitude to borrow from a preexisting work while giving the owner of the original work advertising revenue associated with the use might seem like an elegant solution—after all, it provides compensation to the owner without blocking the user’s freedom of expression.<sup>308</sup> But this static perspective ignores the effect of monetization on the user. Just like the original copyright owner, if the user is within her fair use rights, she should be entitled to whatever rewards are associated with her new work. To deprive her of those rewards may deprive her of the incentive to create in the first place. The user whose creativity is not commercially motivated can also be negatively affected by monetization. Those who create to communicate a particular message may well find that advertising undermines or contradicts that message, or may have an intrinsic objection to the creator of a work targeted for criticism profiting from that very criticism. In sum, there are a variety of ways in which subjecting fair use to monetization places a burden on expression and creativity in a way that undermines the objectives of the fair use doctrine and copyright law.

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306 See Paul J. Heald, *How Notice-and-Takedown Regimes Create Markets for Music on YouTube: An Empirical Study*, 83 UMKC L. REV. 313, 313 (2014) (observing that, “[i]n theory, notice-and-takedown regimes can lower transaction costs by facilitating communication between users and copyright owners, especially where content filtering automates much of the process”).

307 Others may argue that it would substantially improve the doctrine. See Alex Kozinski & Christopher Newman, *What’s So Fair About Fair Use?*, 46 J. COPYRIGHT SOC’Y U.S.A. 513, 525–27 (1999) (arguing that permission conditioned on payment would be a more nuanced option than simply infringing or noninfringing).

308 *Id.* at 527, 528–29.

### 3. Choice and Accountability

Automated copyright matching and filtering systems consist of three fundamental elements: (1) the submission of reference files, (2) the application of matching technology, and (3) consequences. Each of these steps can be presented as merely technical or operational, but in fact, each step—reference, matching, and consequences—encodes a series of policy choices that determines the conditions under which users get to participate in online platforms. Whether fair use continues to balance the interests of copyright owners and subsequent creators in the online environment depends on both the actual content of copyright law and how that content translates to real-world experience. As we have seen in this Part, the ways in which automatic copyright enforcement systems operate outside the notice-and-takedown framework of the DMCA may significantly alter the functional balance of copyright law. DMCA-plus automated copyright enforcement systems have the potential to replicate something close to the existing balance of copyright law, but they can also produce outcomes that radically redefine the effective rights of copyright owners and internet users. The extent to which they do so is a matter of system design, and is thus a matter of choice. The defining feature of DMCA-plus arrangements is not that those choices are good or bad, but rather that they are choices made by rightsholders and platforms—not users, or Congress, or even courts.<sup>309</sup> Not only are these choices private, they are often obscure, such that it is difficult to determine from the outside even what choices have been made.

At the moment, the most significant example of an automatic copyright enforcement system is YouTube's Content ID. Content ID is a compelling illustration because of YouTube's market-leading position in online video; however, Content ID is just one example. Other platforms may implement automatic copyright enforcement with better or worse matching technology and with higher or lower standards of due process. They may even dispense with due process entirely. The popular music service SoundCloud took this step in 2014 when it gave the major record labels backend access to the site, giving them the power to remove any music upload without consultation, explanation, or review.<sup>310</sup>

Given that the effect on fair use of automatic copyright enforcement systems is ultimately contingent on the choices of platforms and rightsholders, the question becomes: what choices are likely given the incentives of decisionmakers? Rightsholders, such as film studios, record labels, and music publishers, are unlikely to favor policies that are strongly protective of fair use online. Platforms that host user-generated content will be motivated

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309 See Annemarie Bridy, *Copyright's Digital Deputies: DMCA-Plus Enforcement by Internet Intermediaries*, in RESEARCH HANDBOOK ON ELECTRONIC COMMERCE LAW (John A. Rothchild ed., 2016) (concluding that DMCA-plus agreements lack the deliberative transparency associated with public lawmaking).

310 Ernesto Van der Sar, *Universal Music Can Delete Any SoundCloud Track Without Oversight*, TORRENTFREAK (July 3, 2014), <https://torrentfreak.com/record-labels-can-remove-soundcloud-tracks-without-oversight-140703/>.

to be receptive to fair use; however, they also need to make an effort to satisfy rightsholders' demands for effective tools to address online infringement. How platforms balance those competing demands depends on the strength of those demands and the market power of any given platform with respect to users and rightsholders. It also depends substantially on the availability of the DMCA safe harbors. As long as the safe harbors are available as a fallback position, platforms can afford to fail to come to terms with rightsholders without exposing themselves to an unacceptable level of risk. However, if this default position were to be undermined by changes to the safe harbors that mandated automatic copyright enforcement, the negotiating strength of platforms would be reduced.

#### CONCLUSION

Like earlier watershed developments in technology—such as the printing press, the railroad, and electricity—the internet is transforming modern society. This Article has focused on just one aspect of this transformation: how the substantive content of copyright law is experienced in the online environment. Countless law review articles, policy papers, amicus briefs, and submissions to the Copyright Office have debated the wisdom and fairness of the DMCA safe harbors enacted by Congress in 1998.<sup>311</sup> However, assessing the full implications of the safe harbors is a much more difficult task than most commentators are ready to admit. Rightsholders contend that there is too much safety in the safe harbors and that online intermediaries could, and should, do more to prevent copyright infringement. Platforms, for their part, argue that the safe harbors have enabled the spectacular growth of e-commerce, online communities, and whole new genres of communication and expression. They see the safe harbors as essential to the openness and dynamism of the internet and as a fair allocation of responsibilities relating to the acknowledged problem of online infringement. The aim of this Article was to move beyond these talking points and to explore the impact of the safe harbors on the functional balance of copyright online.

The fair use doctrine and other traditional copyright doctrines maintain a balance between the interests of rightsholders and the public. Although it is true that the law in action never perfectly mirrors the law on the books, in traditional media environments there is an obvious link between the substantive content of copyright doctrine and the functional balance of copyright in practice. In contrast, as this Article has shown, the balance struck by the traditional levers of copyright policy is only indirectly and contingently relevant to the online environment.

The substance of copyright law is only indirectly relevant online because it has been overshadowed to a large extent by the procedures of the DMCA and agreements between platforms and rightsholders negotiated in the shadow of the DMCA. Platforms that rely on the DMCA safe harbors are usually open to all content by default and only take action to address

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311 See *supra* notes 25–26 and accompanying text.

infringement in response to takedown notices. On these platforms, the balance of publication is determined by the interaction between whatever users decide to post and whatever copyright owners decide to take down. Nominally, the actions of both users and rightsholders should be informed by the substance of copyright law, but experience suggests otherwise. Increasingly, significant internet platforms are shifting from the protections of the safe harbors to DMCA-plus arrangements.<sup>312</sup> A key feature of many DMCA-plus arrangements is the return of filtering by means of automated copyright enforcement systems. In a world where communication and expression is policed by copyright robots, the substantive content of copyright law is even more indirect; it matters only to the extent that those with power decide that it should matter.

In those parts of the internet that play by the rules of the DMCA notice-and-takedown regime, the relevance of substantive copyright law is contingent on the following: platforms' incentives to filter for copyright infringement *ex ante*; user expectations of direct enforcement action; rightsholders' incentives to avoid overreaching takedown notices; and users' practical ability to respond to erroneous takedowns. Prior to the Ninth Circuit's decision in *Lenz v. Universal Music Corp.*,<sup>313</sup> each of those considerations could be approximated to zero in many contexts. Recent submissions to the Copyright Office's Section 512 Study and the NTEP study suggest that the issuance of erroneous, mischievous, and patently abusive takedowns is endemic, as is copyright infringement.<sup>314</sup> As discussed, *Lenz* held that issuing a takedown notice without at least considering the possibility of fair use amounted to an actionable misrepresentation under the relevant provisions of the DMCA. Whether the decision in *Lenz* moves the needle on the rate of erroneous takedown notices remains to be seen.

In the world of DMCA-plus enforcement agreements, the relevance of substantive copyright law is contingent on the design choices of the relevant platforms and rightsholders. Automated copyright enforcement systems could be designed to replicate something close to the existing balance of copyright law, but that is only one option among many. Setting the threshold for what constitutes substantial similarity between two works is a design choice, as is whether and how to accommodate potential fair use claims. The choices made by platforms and rightsholders in the design of automated copyright enforcement systems may take the existing balance of copyright law as a starting point or they might radically redefine the effective rights of copyright owners and internet users. The point is that these choices will be made by rightsholders and platforms in a way that serves their interests and in a manner that is far from transparent. Just as important as design choices about substance are those about process. Because automated copyright enforcement systems are established by private fiat, they can bypass the

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312 See Bridy, *supra* note 309.

313 815 F.3d 1145 (9th Cir. 2015).

314 See *supra* notes 123–139 and accompanying text.



mandatory user safeguards built into the DMCA. The resulting review processes may be better, worse, or nonexistent.

Having established that the balance struck by the traditional levers of copyright policy is only indirectly and contingently relevant online, the next question is, what should we make of this development? This is a difficult question to answer because so many of the tradeoffs are incommensurable. Compared to the offline world, online platforms working within the DMCA safe harbors are typically more permissive of infringement and more open to new and unexpected speech and new forms of cultural participation. However, speech on these platforms is also more vulnerable to overreaching claims by rightsholders. There is no easy metric for comparing the value of noninfringing expression enabled by the DMCA safe harbors to that which has been unjustifiably suppressed by misuse of the notice-and-takedown system. Likewise, the harm that copyright infringement does to rightsholders is not easy to calculate, nor is it easy to weigh against the benefits of the safe harbors.

The normative implications of the shift toward automatic copyright enforcement systems are no clearer. These systems are a better fit with the modern scale of online activity and have obvious potential to reduce infringement. Whether such systems tend towards openness or prior restraint depends on their design. DMCA-plus environments could be more open to certain kinds of speech if they embrace monetization as opposed to blocking as the response to apparent infringement. If the deployment of such systems makes platforms more hospitable to user content on the borderline between fair use and infringement, users may benefit as well. However, monetization may be seen by some as an undue burden on fair use and other forms of noninfringing speech. Moreover, it is not hard to conceive that the push toward automated copyright enforcement might severely and arbitrarily limit certain forms of participation and make some platforms increasingly closed and constrained. The devil, as always, is in the details.

The attenuated relevance of substantive copyright law online has implications for how users understand copyright law. In general, the users of internet platforms have found the lack of prior restraint energizing, liberating, and democratizing. However, they have also found the vulnerability of posted content to removal to be frustrating and perplexing. Indeed, the disconnect between the formal rules of copyright and our experience of copyright online may have profound implications for how we understand the law. Both DMCA takedown notices and copyright filtering systems make the effect of copyright law more regularly apparent to end users, but also more baffling. A user familiar with popular video-sharing and music-sharing platforms might be able to form some impression of what copyright law allows and what it condemns based on the contents of those sites, but that impression would almost certainly be wrong. It would be wrong because DMCA takedown notices frequently cause the disappearance of noninfringing content; it would be wrong because much infringing content is never targeted for takedown; and it would be wrong because agreements between platforms and

rightsholders that permit some infringing content to remain are not visible to end users.<sup>315</sup>

In the online environment we are witnessing the exact opposite of the cycle of “risk aversion and rights accretion” described by Professor Jim Gibson: that the conservative impulses of gatekeepers would set up an endless cycle of risk aversion and rights accretion such that there was less and less space for unlicensed uses of copyrighted works over time.<sup>316</sup> Internet users are relatively free, in fact if not in theory, to post fan-fiction, synchronize their home movies to copyrighted music, and cut and paste copyrighted photographs. Each of these activities may be noninfringing in the right circumstances, but in other circumstances they easily could be infringing. The openness of internet platforms has made cut-and-paste, remix, and reinterpretation a normal part of everyday communication and expression. Assuming that users’ perceptions of fairness and legality are influenced by the common behaviors they observe, it stands to reason that the more prevalent such apparently unlicensed activities are, the more fair and reasonable they appear to be. Further empirical research is required to investigate this possibility.

Finally, we come to the questions of accountability and democracy. The DMCA notice-and-takedown regime was a first step along the path from public adjudication to private adjudication. It was only a first step because, ultimately, disputes about copyright infringement could still be resolved in federal court after the dust settled on notification, takedown, and counternotification. However, that shift from public to private is complete in the world of algorithmic enforcement. The convergence of rulemaking, adjudication, and enforcement in a few key platforms raises important questions of trust and accountability.<sup>317</sup> Copyright enforcement decisions by a relatively small number of private search engines, webhosts, and social media sites could have a profound effect on the flow of information.<sup>318</sup>

The convergence of copyright rulemaking, adjudication, and enforcement functions in platform algorithms may undermine the constitutional value of freedom of expression without triggering any kind of First Amendment scrutiny because of the absence of state action. One of the reasons the Supreme Court rejected a challenge to the retrospective extension of the duration of copyright in *Eldred v. Ashcroft* was that “copyright law contains built-in First Amendment accommodations.”<sup>319</sup> Specifically, the Court relied on the idea-expression distinction and the fair use doctrine to ensure that

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315 Yafit Lev-Aretz, *Second Level Agreements*, 45 AKRON L. REV. 137, 139 (2012) (using the term “Second Level Agreements” to denote “preemptive licenses granted by copyright owners to platform operators, with the purpose of ratifying the mass usage of copyrighted content by their users”).

316 See Gibson, *supra* note 11, at 882.

317 Maayan Perel & Niva Elkin-Koren, *Accountability in Algorithmic Copyright Enforcement*, 19 STAN. TECH. L. REV. 473, 481 (2016).

318 Perel & Elkin-Koren, *supra* note 196, at 185–86.

319 *Eldred v. Ashcroft*, 537 U.S. 186, 219 (2003).

exclusive rights in expression did not unduly interfere with people's ability to express themselves.<sup>320</sup> Shifting the resolution of copyright disputes to private fora does not directly trigger First Amendment review, because the safe harbors do not compel any action and private action in response to the safe harbors is too remote from state action to violate the prohibition on laws abridging the freedom of speech.<sup>321</sup> However, if the new private ordering in DMCA-plus arrangements forecloses any consideration of fair use, then it is not just the functional balance of copyright that has changed, but also the practical manifestation of our society's commitment to free expression.

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320 *See id.* at 219–20.

321 *See supra* notes 70–74 and accompanying text.