

Internet Safe Harbors and the Transformation of Copyright Law

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ABSTRACT

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 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 not only indirect, but 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 over-reaching claims by rightsholders. There is no easy metric for comparing the value of non-infringing 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.

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DMCA-plus agreements raise additional incommensurable potential costs and benefits. Automatic copyright enforcement systems have obvious advantages for both platforms and rightsholders: 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 non-infringing 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 private 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.

Keywords: Copyright, DMCA, Infringement, Internet, Safe harbors, Enforcement, Fair use, Automation, Algorithms, Robots.

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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.¹ 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 non-statutory limitations and exceptions to the scope of copyright.² These doctrines help ensure that copyright law enables, rather than chills creativity and freedom of expression.³ 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 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.⁴ Copyright law protects rightsholders from copying that is quantitatively and qualitatively significant, but trivial amounts of copying or any reproduction that lacks

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 generally Matthew 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).

⁴ The idea-expression distinction is reflected in the Section 102(b) exclusion of (among other things) ideas, processes, systems, and discoveries from copyright protection. 17 U.S.C.A. § 102(b) (West 2016).

substantial similarity is non-infringing.⁵ The fair use doctrine permits copying without permission in certain circumstances depending on the purpose, proportionality, and effect of that copying.⁶ 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 that law is designed to foster.”⁷ 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.⁸ 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 publishers, distributors, broadcasters, and insurance companies. These gatekeepers consult their own self-interest, including potential legal liability, and they 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 emboldened television networks to rely on fair use in comedy programs, such as the *Daily Show*, *Last Week Tonight*, and

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 17 U.S.C.A. § 107 (West 2016) (“[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 (2005) (internal quotation omitted).

⁸ This problem has been significantly ameliorated by the Documentary Filmmakers’ Statement of Best Practices in 2005. See DOCUMENTARY FILMMAKERS’ STATEMENT OF BEST PRACTICES IN FAIR USE (2005), available at 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 (2010) (explaining how the Best Practices reduced uncertainty and came to be relied upon by E&O insurers; thus enabling documentarians to rely on fair use).

@Midnight that lampoon current events.⁹ 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.¹⁰ 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.¹¹

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 and other online intermediaries; these safe harbors were also designed to give rightsholders an expeditious mechanism to address online infringement.¹² 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.¹³ 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.¹⁴

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-

⁹ 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. *Kane v. Comedy Partners*, No. 00 CIV. 158 (GBD), 2003 WL 22383387, at *4 (S.D.N.Y. Oct. 16, 2003), *aff'd*, 98 F. App'x 73 (2d Cir. 2004) (holding that a presentation of plaintiff's original work in a mocking context is fair use).

¹⁰ James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 YALE L.J. 882, 884–85 (2007).

¹¹ 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, 198–203 (2012). Likewise, a new equilibrium in relation to consumer copying for personal use arose out of *Sony v. Universal City Studios*, 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. See Jessica Litman, *Campbell at 21/Sony at 31*, 90 WASH. L. REV. 651 (2015).

¹² See *infra* Part I.A.

¹³ See *infra* Part I.B.

¹⁴ See *infra* Part I.B.2.

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 December of 2014,¹⁵ 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.¹⁶ 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; so far, individual YouTubers have never been subject to follow-up litigation.

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 counter-notification procedure, 10 days had elapsed, and as Trevor Potter, General Counsel of the McCain campaign, noted in a letter pleading with YouTube to restore the videos, “10 days can be a lifetime in a political campaign.”¹⁷ 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 counter-notification-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.¹⁸ 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

¹⁵ Miss Zizie, *Taylor Swift Blank Space (Karaoke Version)*, YOUTUBE (Dec. 24, 2014), https://www.youtube.com/watch?v=KH3MYRx0ILs&ab_channel=MissZizie.

¹⁶ See *Leadsinger, Inc. v. BMG Music Publ’g*, 429 F. Supp. 2d 1190, 1192 (C.D. Cal. 2005), *aff’d sub nom. Leadsinger, Inc. v. BMG Music Publ’g*, 512 F.3d 522 (9th Cir. 2008).

¹⁷ Letter from Trevor Potter, General Counsel, McCain Campaign, to Chad Hurley, CEO, YouTube, LLC (Oct. 13, 2008), *available at* <https://www.eff.org/files/McCain%20YouTube%20copyright%20letter%2010.13.08.pdf>.

¹⁸ See generally CTR. FOR DEMOCRACY & TECH., CAMPAIGN TAKEDOWN TROUBLES: HOW MERITLESS COPYRIGHT CLAIMS THREATEN ONLINE POLITICAL SPEECH (2010), *available at* 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*, FUSION (Jan. 26, 2016, 1:37 PM), <http://fusion.net/story/259216/trump-freedom-kids-song-youtube-takedown/>.

from misguided to nefarious.¹⁹ The McCain campaign's experience is only unusual in one respect: very few Internet users take advantage of the DMCA counter-notification procedure. In most cases, content that is taken down after a copyright notice stays down.²⁰

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 provides against state law claims, such as defamation,²¹ the Internet safe harbors have propelled the growth of social networking and other "Web 2.0" businesses.²² 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.²³ For example Lital Hellman 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

¹⁹ See e.g., Alex Hern, *WordPress Pulls Interview with Anti-Gay Group Straight Pride UK*, GUARDIAN (Aug. 13, 2013, 6:47 AM), <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, 6:32 PM), <http://www.wsj.com/articles/twitter-deletes-oil-data-tweets-following-industry-complaints-1457566322>; Rob Price, *Terrorists Are Using DMCA Notices to Hunt Down Their YouTube Critics*, DAILY DOT, <http://www.dailydot.com/politics/dmca-youtube-terrorism-dox-al-hayat/> (last updated Dec. 11, 2014, 12:28 PM); James Ball & Paul Hamilos, *Ecuador's President Used Millions of Dollars of Public Funds to Censor Critical Online Videos*, BUZZFEEDNEWS (Sept. 24, 2015, 6:27 AM), https://www.buzzfeed.com/jamesball/ecuadors-president-used-millions-of-dollars-of-public-funds?utm_term=.wo4ba34Q1; Timothy B. Lee, *Music Publisher Uses DMCA to Take Down Romney Ad of Obama Crooning*, ARS TECHNICA (July 16, 2012, 6:59 PM), <http://arstechnica.com/tech-policy/2012/07/major-label-uses-dmca-to-take-down-romney-ad-of-obama-crooning/>.

²⁰ Jennifer Urban, Joe Karaganis & Brianna Schofield, *Notice and Takedown in Everyday Practice* (Mar. 29, 2016) (UC Berkeley Public Law Research Paper No. 2755628), *available at* <http://ssrn.com/abstract=2755628>. See *infra* Part I.D.4 (expanding on this point).

²¹ 47 U.S.C.A. § 230 (West 2016) (Section 230 of the CDA has been interpreted as giving interactive computer service providers a grant broad immunity from liability for content provided by third parties.) See generally Eric Goldman & Venkat Balasubramani, *Brief of Amici Curiae Internet Law Professors in the Garcia v. Google Case* (Nov. 25, 2014) (Santa Clara Univ. Legal Studies Research Paper No. 2-15), *available at* <http://ssrn.com/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.").

²² 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.").

²³ For a representative sample of criticisms of the safe harbors, see Jennifer L. Pariser, *Comments of Motion Picture Association of America, Inc. in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-7 (Apr. 1, 2016), *available at* <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-90285&attachmentNumber=1&disposition=attachment&contentType=pdf>; Jeffrey Harleston, Alasdair McMullan & David Kokakis, *Comments of Universal Music Group in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-7 (Apr. 1, 2016), *available at* <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-90321&attachmentNumber=1&disposition=attachment&contentType=pdf>.

Office).²⁴ 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.²⁵ 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 over-reaching claims by rightsholders. Moreover, the rules of notice-and-takedown do not represent a stable equilibrium. 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.

PART 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 41 percent of American households were connected to the Internet, and an

²⁴ Lital Helman & Gideon Parchomovsky, *The Best Available Technology Standard*, 111 COLUM. L. REV. 1194 (2011)

²⁵ Roscoe Pound, *Law in Books and Law in Action*, 44 AM. L. REV. 12 (1910).

hour of television would take more than 24 hours to download, assuming you had the latest 56k modem.²⁶ Google was founded on September 4, 1998, less than two months before the DMCA was signed into law.

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, forum shopping,²⁷ and horse-trading—morphed into the DMCA that we have today.²⁸ 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 the same time it sought to ensure quick access to movies, music, software, and literary works via the Internet.²⁹ 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.³⁰

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 seen before. 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.³¹

²⁶ See Susannah Fox, *The Internet Circa 1998*, PEW RESEARCH CTR. (June 21, 2007), <http://www.pewInternet.org/2007/06/21/the-Internet-circa-1998/>. A file of 577 MB would take 24 hours to download on a 56k modem with dialup access. See *Download Speed Calculator - How Long Will a Download Take?*, CALCULATORCAT.COM, http://www.calculatorcat.com/free_calculators/download_speed_calculator.phtml (last visited Aug. 16, 2016).

²⁷ Pamela Samuelson, *The U.S. Digital Agenda at WIPO*, 37 VA. J. INT'L L. 369 (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).

²⁸ 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).

²⁹ S. REP. NO. 105-190 (1998). This account risks crossing the line from simplification into fable, but it is sufficient for present purposes.

³⁰ See PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX (rev. ed. 2003); *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).

³¹ GOLDSTEIN, *supra* note 30.

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.³² This liability could be direct or indirect. Cases in the 1990s, such as *Playboy Enterprises, Inc. v. Frena*³³ and *Playboy Enterprises, Inc. v. Russ Hardenburgh, Inc.*³⁴ suggested that online service providers, such as Internet bulletin boards, would be held directly liable for unlawful material posted by their users.³⁵ However, other cases, such as *Religious Technology Center v. Netcom On-Line Communication Services, Inc. (“Netcom”)*³⁶ and *CoStar Group, Inc. v. LoopNet, Inc. (“CoStar”)*,³⁷ 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. 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.”³⁸ In *CoStar*, the Fourth Circuit likewise explained that copyright infringement required more than “mere ownership of a machine used by others to make illegal copies”³⁹

Even if it had been clear that courts would adopt the ‘volitional copy’ doctrine from *Netcom*—as many subsequently have⁴⁰—service providers would still have faced the possibility of indirect liability under copyright law principles of contributory and vicarious liability.⁴¹ Under the principle of contributory copyright

³² *Id.* at 105–90.

³³ 839 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).

³⁴ 982 F. Supp. 503 (N.D. Ohio 1997).

³⁵ See Eric Goldman, *How the DMCA’s Online Copyright Safe Harbor Failed*, 3 NTUT J. OF INTELL. PROP. L. & MGMT. 195 (2014) (citing *Playboy Enters., Inc. v. Frena*, 839 F. Supp. 1552 (M.D. Fla. 1993); *Playboy Enters., Inc. v. Russ Hardenburgh, Inc.*, 982 F. Supp. 503 (N.D. Ohio 1997)).

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

³⁷ 373 F.3d 544, 550 (4th Cir. 2004).

³⁸ *Religious Tech.*, 907 F. Supp. at 1370.

³⁹ *CoStar*, 373 F.3d at 544–50. See also *Fox Broad. Co. v. Dish Network LLC*, 747 F.3d 1060, 1066–1068 (9th Cir. 2014); *Cartoon Network LP, LLLP v. CSC Holdings, Inc.*, 536 F.3d 121, 130–31 (2d Cir. 2008); *Parker v. Google, Inc.*, No. 06-3074, 2007 WL 1989660, at *2–4 (3rd Cir. 2007) (per curiam).

⁴⁰ *Am. Broad. Cos., Inc. v. Aereo, Inc.*, 134 S. Ct. 2498, 2512–13, 189 L. Ed. 2d 476 (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.”); see also *Fox Broad. Co. v. Dish Network LLC*, 747 F.3d 1060, 1066–68 (9th Cir. 2014); *Cartoon Network*, 536 F.3d at 130–31; *CoStar*, 373 F.3d at 549–50.

⁴¹ *Metro-Goldwyn-Mayer 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 the Copyright Act does not expressly render anyone liable for infringement committed by another,

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.⁴² 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.⁴³ 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.⁴⁴ 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 is widely used for legitimate, unobjectionable purposes. Indeed, it need *merely be capable of substantial noninfringing uses.*"⁴⁵ 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,⁴⁶ nor if it makes the service available "with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement"⁴⁷

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.⁴⁸ 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

these doctrines of secondary liability emerged from common law principles and are well established in the law.") (internal citations and quotations omitted).

⁴² *Gershwin Publ'g Corp. v. Columbia Artists Mgmt., Inc.*, 443 F.2d 1159, 1162 (2d Cir. 1971); *see also Metro-Goldwyn-Mayer*, 545 U.S. at 915.

⁴³ *Gershwin*, 443 F.2d at 1162.

⁴⁴ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 491 (1984).

⁴⁵ *Id.*

⁴⁶ *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1020 (9th Cir. 2001).

⁴⁷ *Metro-Goldwyn-Mayer*, 545 U.S. at 936–37.

⁴⁸ 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.A. § 512(c)(1)(B) (West 2016) (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.' *Metro-Goldwyn-Mayer*, 545 U.S. at 936–37.

infringing uploads by their users is unclear.⁴⁹ 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 expansion of the speed and capacity of the Internet” without reasonable assurances of limited liability for copyright infringement.⁵⁰

Although the Clinton Administration initially focused on the reforms that Hollywood was demanding, principally anti-circumvention rules now found in section 1201 of the Copyright Act,⁵¹ telecom companies and fledgling ISPs demanded and eventually received safe harbor protection as a quid pro quo.⁵² Eventually, Congress enacted a patchwork of reforms, concessions, and incentives tailored to the interests of the major participants.⁵³ Congress sought to preserve “strong incentives for service providers and copyright owners to cooperate” in dealing with online infringement.⁵⁴ 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.”⁵⁵ 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.⁵⁶ As the term “safe harbor” suggests, Title II of the DMCA was intended to offer legal certainty to Internet

⁴⁹ See *Viacom Int’l Inc. v. YouTube, Inc.*, 718 F. Supp. 2d 514 (S.D.N.Y. 2010) [hereinafter *Viacom I*] (defendant motion for summary judgment on the application of the DMCA safe harbors granted); *Viacom Int’l Inc. v. YouTube, Inc.*, 676 F.3d 19 (2d Cir. 2012) [hereinafter *Viacom II*] (summary judgment on DMCA safe harbors, *aff’d in part, vacated in part, remanded*); *Viacom Int’l Inc. v. YouTube, Inc.*, 940 F. Supp. 2d 110 (S.D.N.Y. 2013) [hereinafter *Viacom III*] (defendant motion for summary judgment on the application of the DMCA safe harbors granted), *appeal withdrawn*, No. 13-1720 (2d Cir. Mar 19, 2014). Note that in *Amazon v. Perfect 10, Inc.*, 508 F.3d 1146 (9th Cir. 2007) 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.

⁵⁰ S. REP. NO. 105-190, at 8-9.

⁵¹ To put it simply, the anti-circumvention rules make it illegal to break digital locks (i.e., encryption or digital rights management) or to traffic in digital lock-breaking tools. 17 USC 1201.

⁵² See, Pamela Samuelson, *The U.S. Digital Agenda at WIPO*, 37 VA. J. INT’L L. 369 (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). See also, Timothy Wu, *Copyright’s Communications Policy*, 103 MICH. L. REV. 278, 350–56 (2004) (discussing the tradeoff between section 512 and section 1201).

⁵³ LITMAN, *supra* note 28 (reviewing the legislative history of DMCA); see Pamela Samuelson, *The Copyright Grab*, WIRED (Jan. 1, 1996, 12:00 PM), <http://www.wired.com/1996/01/white-paper/> (reviewing the legislative history of DMCA). Traditional commercial copyright producers obtained a number of important concessions under the DMCA that are not directly relevant to this Article; most notably, anti-circumvention rules.

⁵⁴ See S. REP. NO. 105-190, at 20.

⁵⁵ *Id.*

⁵⁶ Title II of the DMCA, also known as the Online Copyright Infringement Liability Limitation Act, now forms Section 512 of the Copyright Act of 1976, as amended. See generally 17 U.S.C.A. § 512.

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.⁵⁷ 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.⁵⁸

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

1. The Safe Harbors

Although a wide range of entities rely on the DMCA safe harbors, the most important safe harbors for the purposes of this Article are Internet access providers, Internet search engines, and platforms that incorporate user-generated content. 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 to 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.” In effect, and as long 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

⁵⁷ 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”).

⁵⁸ 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*, B.U. L. REV. (forthcoming 2016).

or network.⁵⁹ 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.⁶⁰ 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, 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.

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. 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.⁶¹

There are two additional safe harbors in Section 512, both of which are vital to companies, such as Comcast and AT&T, which provide Internet access to businesses and households. 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. Finally, the “System Caching” safe harbor in Section 512(b) provides similar protection for the routine intermediate and temporary storage data on the network—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.

⁵⁹ Under the safe harbors, service providers are not be liable for monetary relief. Limited injunctive and other equitable relief is limited under Section 512(j).

⁶⁰ The section 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, or 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 . . .” 17 U.S.C.A. § 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.

⁶¹ There is some authority to suggest that a search engine operator could be liable for contributory infringement simply by directing search engine uses 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).

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* in 1964⁶² and again in *New York Times Co. v. United States* in 1971,⁶³ 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 “abridge the freedom of speech.”⁶⁴ The DMCA has profound effects on the infrastructure that enables free expression, but those effects are manifest through the actions of non-state actors responding to the incentives of the DMCA; the law itself does not restrain speech any more than copyright, in general, does.⁶⁵ The DMCA safe harbors do not implicate the First Amendment 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.⁶⁶ 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.⁶⁷ 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.⁶⁸

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

⁶² 376 U.S. 254 (1964).

⁶³ 403 U.S. 713 (1971).

⁶⁴ 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, Ariz.*, 135 S. Ct. 2218, 2226 (2015).

⁶⁵ *See generally* Jack M. Balkin, *Old-School/New-School Speech Regulation*, 127 HARV. L. REV. 2296, 2297 (2014) (warning that “the infrastructure of free expression increasingly is merging with the infrastructure of speech regulation and the infrastructure of public and private surveillance”).

⁶⁶ Facebook reports that it had an average of 1.13 billion daily active users in June 2016. *Stats*, FACEBOOK NEWSROOM, <http://newsroom.fb.com/company-info/> (last visited Aug. 16, 2016).

⁶⁷ GOOGLE, HOW GOOGLE FIGHTS PIRACY 21 (2016) (“Today, more than 400 hours of video are uploaded to YouTube every minute”), *available at* <https://drive.google.com/file/d/0BwxyRPFduTN2TmPqGajJ6TnRLaDA/view>.

⁶⁸ *See supra* Part I.A.

noninfringing use for their service; and (iv) refrain from any action that could be regarded as encouraging or inducing infringement.⁶⁹ The case law 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 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

To understand 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 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 "conditions of eligibility" under the DMCA, an Internet platform must accommodate "standard technical measures . . . that are used by copyright owners to identify or protect copyright works."⁷⁰ Safe harbor protection is also contingent upon appointing a designated agent to receive takedown notices from copyright owners.⁷¹ 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.⁷² This requirement to reasonably

⁶⁹ 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.

⁷⁰ Under § 512(i) of the DMCA, qualifying service providers must implement "standard technical measures." 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;" and 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." See 17 U.S.C.A. § 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 28, at 92.

⁷¹ 17 U.S.C.A. § 512(c)(1)(C), (d)(3).

⁷² 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

implement a repeat-infringer policy is a substantive condition on safe harbor eligibility, but it has not been interpreted to be a particularly onerous one.⁷³ Courts have not, for example, equated a repeat-infringer policy with a three-strikes policy of graduated response.⁷⁴

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 denial. 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.⁷⁵ 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;”⁷⁶ or “in the absence of such actual knowledge,” it must not be “aware of facts or circumstances from which infringing activity is apparent”⁷⁷ 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”⁷⁸

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.⁷⁹ 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.⁸⁰ A great deal of this material is copied and performed without prior permission from the copyright owner.

provides for the termination in appropriate circumstances of subscribers and account holders of the service provider’s system or network who are repeat infringers” 17 U.S.C.A. § 512(i)(1)(A).

⁷³ 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”). However, the requirement is far from *de minimis*. See e.g., Ellison v. Robertson, 357 F.3d 1072, 1080 (9th Cir. 2004) (holding that a reasonable jury could conclude that AOL had not reasonably implemented its policy against repeat infringers).

⁷⁴ Bridy, *supra* note 28, at 100–103.

⁷⁵ 17 U.S.C.A. § 512(c)(1)(A)(i–ii), (d)(1)(A)–(B).

⁷⁶ 17 U.S.C.A. § 512(c)(1)(A)(i), (d)(1)(A).

⁷⁷ 17 U.S.C.A. § 512(c)(1)(A)(ii), (d)(1)(B).

⁷⁸ 17 U.S.C.A. § 512(c)(1)(A)(iii), (d)(1)(C).

⁷⁹ *Viacom II*, 676 F.3d 19.

⁸⁰ GOOGLE, *supra* note 67, 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.”).

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."⁸¹ At the relevant time, various surveys suggested that between half and three-quarters of the content streamed on YouTube was infringing.⁸² Moreover, e-mail 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 co-founder 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 cnn legal. 2 weeks later, we get a cease & desist letter. we take the video down.⁸³

Viacom asked for a billion dollars in damages and claimed that 63,497 video clips on the site infringed its rights. Essentially, Viacom argued that widespread patterns of infringement themselves constituted "facts or circumstances from which infringing activity is apparent" that should have disqualified YouTube from safe harbor eligibility. 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.⁸⁴

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 are 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.'⁸⁵ This strategy was particularly important to two programs central to Viacom's suit against YouTube: *The Daily Show* and *The Colbert Report*. The principles of those programs, "Jon Stewart and Stephen

⁸¹ *Viacom I*, 718 F. Supp. 2d at 518.

⁸² Note that because YouTube ultimately prevailed on summary judgment, none of these accusations was ever put to the test of a fully litigated trial. *Viacom II*, 676 F.3d at 32–33 (discussing various estimates).

⁸³ *Viacom II*, 676 F.3d at 33–34.

⁸⁴ *Viacom I*, 718 F. Supp. 2d at 523; *Viacom II*, 676 F.3d at 30.

⁸⁵ Memorandum of Law in Support of Defendants' Motion for Summary Judgment at 48, *Viacom v. YouTube*, 718 F. Supp. 2d 514 (S.D.N.Y. 2010), *appeal docketed*, No. 10-3270 (2d. Cir. Dec. 3, 2010) (No. 07-2103).

Colbert believed that their presence on YouTube was important for their ratings as well as for their relationship with their audience.⁸⁶ Stealth marketing on Internet platforms remains common practice today.⁸⁷

The cumulative effect of the 2012 *YouTube* decision, and other similar cases,⁸⁸ 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 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.⁸⁹ 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, production companies, distributors, and insurers who underwrite their creations are not.⁹⁰ 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.⁹¹

⁸⁶ *Id.*; see also Amir Hassanabadi, *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).

⁸⁷ Urban et al., *supra* note 20, at 57.

⁸⁸ Many cases indicating that infringement notices must identify the allegedly infringing content or information with specificity to trigger the knowledge threshold under Section 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), *opinion withdrawn and superseded on reb'g by* 718 F.3d 1006 (9th Cir. 2013), and *aff'd sub nom.* UMG Recordings, Inc. v. Shelter Capital Partners LLC, 718 F.3d 1006 (9th Cir. 2013); Hendrickson v. eBay, Inc., 165 F. Supp. 2d 1082, 1093 (C.D. Cal. 2001).

⁸⁹ 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 34; *Viacom III*, 940 F. Supp. 2d at 117 (no showing of willful blindness to specific infringements of clips-in-suit).

⁹⁰ Gibson, *supra* note 10, at 884–85.

⁹¹ *Id.* at 893.

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.⁹²

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 enforcer and seemingly⁹³ 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’ into the forefront and given rise to a great deal of spontaneity, creativity, and diversity in cultural production—also, many cat videos.⁹⁴

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,⁹⁵ 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.⁹⁶ Accordingly,

⁹² See *infra* Part II.

⁹³ *Id.*

⁹⁴ Edward Lee, *Warming Up to User-Generated Content*, 2008 U. Ill. L. Rev. 1459 (2008).

⁹⁵ See 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”); 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”).

⁹⁶ CTR. FOR SOCIAL MEDIA, CODE OF BEST PRACTICES IN FAIR USE FOR ONLINE VIDEO 2–3 (2008), available at http://cmsimpact.org/wp-content/uploads/2016/01/online_best_practices_in_fair_use.pdf.

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 that “this is the most important election of our 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.⁹⁷ 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.

By way of illustration, the user video, *Endless Love Lionel Ritchie Duet w [sic] Diana Ross w [sic] Lyrics*, posted to YouTube in 2011 is not fair use.⁹⁸ The video simply synchronizes the entire romantic ballad, *Endless Love*, with appropriate and harmonious photos of peaceful scenery.⁹⁹ 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 is clearly fair use.¹⁰⁰ The video combines just over a minute of the music of *Endless Love* with video footage of then English 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 U.S. 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, video gamers, skateboarders, teachers, poets, activists, and noodle eaters¹⁰¹ (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

⁹⁷ *Full Frontal with Samantha Bee: 2010 Elections* (TBS television broadcast Feb. 29, 2016).

⁹⁸ Tintin Emilou, *Endless Love Lionel Ritchie Duet w [sic] Diana Ross w [sic] Lyrics*, YOUTUBE (Jan. 23, 2011), https://www.youtube.com/watch?v=JM_R1R28kLM.

⁹⁹ *Id.*

¹⁰⁰ Siegharuto, *Bush Blair Endless Love*, YOUTUBE (Nov. 10, 2005), <https://www.youtube.com/watch?v=UtEH6wZXP44>.

¹⁰¹ Forever Eating ASMR, *ASMR Eating Ramen*, YOUTUBE (Dec 29, 2015), <https://www.youtube.com/watch?v=qbKvCPKPuSk>.

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.¹⁰² 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.¹⁰³ Traditional media companies have resisted loss of control and loss of revenue online, but they have 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.¹⁰⁴ 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

¹⁰² JEAN BURGESS, *YOUTUBE: ONLINE VIDEO AND PARTICIPATORY CULTURE* 13 (1st ed. 2009).

¹⁰³ See, for example, *@midnight with Chris Hardwick*, a popular program on Viacom's subsidiary cable channel, Comedy Central from 2013 to 2017.

¹⁰⁴ Of course, noncommercial users exhibit a range of attitudes to and awareness of copyright law. See e.g., Katharina Freund, "Fair Use is Legal Use": *Copyright Negotiations and Strategies in the Fan-Vidding Community*, 17 *NEW MEDIA & SOC'Y* 1 (2014); Aram Sinnreich & Mark Latonero, *Tracking Configurable Culture from the Margins to the Mainstream*, 19 *J. COMPUTER-MEDIATED COMM.* 798 (2014); Casey Fiesler, Jessica L. Feuston & Amy S. Bruckman, *Understanding Copyright Law in Online Creative Communities*, in *PROCEEDINGS OF THE 18TH ACM CONFERENCE ON COMPUTER SUPPORTED COOPERATIVE WORK & SOCIAL COMPUTING* 116 (2015).

digitization and the Internet. The generally unfiltered nature of platforms operating within the DMCA safe harbors has 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.¹⁰⁵ 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.

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 developed world household, digital technology has also made enforcing copyright much harder.¹⁰⁶

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.¹⁰⁷ In the late 1990s, record companies used to sell compact discs by the millions; some fear that in the future they will only sell each album only once.¹⁰⁸ However, like much discussion of the Internet, the distributed nature of online

¹⁰⁵ Luis Aguiar & Joel Waldfoegel, *Even the Losers Get Lucky Sometimes: New Products and the Evolution of Music Quality Since Napster*, 34 INFO. ECON. & POL'Y 1 (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).

¹⁰⁶ In 2015, 84 percent of American adults used the Internet. Andrew Perrin & Maeve Duggan, *Americans' Internet Access: 2000-2015*, PEW RESEARCH CTR. (June 26, 2015), <http://www.pewInternet.org/2015/06/26/americans-Internet-access-2000-2015/>.

¹⁰⁷ As of 2016, there over one billion websites online, and 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 Aug. 16, 2016).

¹⁰⁸ 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 e-mails 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 *List of Best-Selling Albums by Year in the United States*, WIKIPEDIA, https://en.wikipedia.org/wiki/List_of_best-selling_albums_by_year_in_the_United_States#1990s (last visited Aug. 16, 2016).

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.¹⁰⁹ 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, they 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.

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.¹¹⁰ 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 it 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 non-infringing uses are protected. As discussed below,¹¹¹ 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 notices illustrates why this is to be expected.¹¹²

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 30 percent of those studied ranged from “legally dubious” to “without any legal basis whatsoever”¹¹³ Urban and

¹⁰⁹ Free in the sense of no marginal cost on a standard data plan.

¹¹⁰ See *supra* Part I.B.1.

¹¹¹ See *infra* Part I.D.2.

¹¹² See *infra* Part I.D.3.

¹¹³ 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).

Quilter also found that well over half of DMCA takedown notices sent to Google in their limited sample “were sent by businesses targeting apparent competitors”¹¹⁴ 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 percent of takedown demands in the study period failed to comply with the statutory requirements of Section 512(c)(3), and that a further 1 percent were “substantively” improper.¹¹⁵ Seng used automated techniques to identify defective notice, and then confirmed this initial judgment with manual review.¹¹⁶ As a result, these numbers are a good starting point, but they are likely under-inclusive.

In 2016, Urban and two new co-authors 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.¹¹⁷ 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. The authors of the study sampled over 1800 notices of the more than 108 million requests archived by Lumen in that period.¹¹⁸

The NTEP study concluded that 4.2 percent 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 percent—that is roughly two out every seven—were of questionable validity.¹¹⁹ Within this broad category of suspect notices, the study found that: more than 15 percent of takedown requests appeared to fail to meet statutory requirements, such as sufficiently identifying the allegedly infringed work or the material alleged to infringe;¹²⁰ 7.3 percent of takedown requests raised questions of potential fair use defenses;¹²¹ and 2.3 percent of takedown requests involved non-copyright issues, such as allegations of trademark infringement or defamation.¹²²

These are extraordinary findings; they suggest that rightsholders are sending takedown notices without due diligence and presumably without regard to the costs of suppressing non-infringing expression. The methodology used in the NTEP study

¹¹⁴ *Id.*

¹¹⁵ Daniel Seng, *Who Watches the Watchmen? An Empirical Analysis of Errors in DMCA Takedown Notices* (Jan. 23, 2015) (working paper), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2563202.

¹¹⁶ *Id.*

¹¹⁷ Urban et al., *supra* note 20. Assuming a normal distribution and a 95 percent confidence interval, the margin of error for the results in this section of the NTEP study would be +/- 3 percent.

¹¹⁸ *Id.* at 77.

¹¹⁹ *Id.* at 11.

¹²⁰ *Id.* at 12.

¹²¹ *Id.*

¹²² *Id.*

is sound, but there is some danger that the results could be misunderstood for two reasons. First, the 4.2 percent of notices, which 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 site¹²³ 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.

Second, takedown requests addressed to Google Web Search comprised 99.8 percent of the Lumen archive in the six month period of the NTEP study.¹²⁴ Thus although the study is highly informative in the context of Google Search,¹²⁵ 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.¹²⁶ 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 to 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

¹²³ 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.” Urban et al., *supra* note 20, at 91.

¹²⁴ *Id.* at 82.

¹²⁵ 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. The Image Search study figures are distorted by thousands of demands sent from one single person attempting to suppress content that was allegedly defamatory but clearly not infringing. Even after excluding this individual over a third (36.8 percent) of demands were potentially problematic. Specifically, 11.6 percent of Image takedown requests raised possible fair use defenses, 15.1 percent seemed to be attempts to use the DMCA to address privacy or defamation issues, 6.1 percent appeared to raise issues ownership issues, 2.9 percent failed to appropriately identify material, and 1 percent related to material in public domain.

¹²⁶ 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, 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. 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 via their 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 125, *supra*.

of these notices. Search engines receive different kinds of notices and are less constrained by user privacy and customer relations.¹²⁷

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.¹²⁸ 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 infringing.¹²⁹ However, even after excluding this tenacious individual, over a third (36.8 percent) of demands relating to Google Image Search were found to be potentially problematic.¹³⁰ Specifically, 11.6 percent of Image takedown requests raised possible fair use defenses, 15.1 percent seemed to be attempts to use the DMCA to address privacy or defamation issues, 6.1 percent appeared to raise ownership issues, 2.9 percent failed to appropriately identify material, and 1 percent related to material in public domain.¹³¹

Evidence directly from Internet companies in the context of the Copyright Office's recent Section 512 Study supports the conclusion that substantive flawed takedown requests are common.¹³² 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."¹³³ For example, the Internet Archive received a takedown notice

¹²⁷ Urban et al., *supra* note 20, at 50.

¹²⁸ Urban and her coauthors reviewed and coded a randomized sample of 1,732 of the 33,409 Google Image Search takedown requests in the Lumen dataset from May to October in 2013. Again, this yields a margin of error of +/- 3 percent. Urban et al., *supra* note 20, at 106.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² In addition to the comments cited below, see Evan Engstrom, *Comments of Engine, GitHub, Kickstarter, Medium and Redbubble in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-7 (Apr. 1, 2016) at 9, available at <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-90694&attachmentNumber=1&disposition=attachment&contentType=pdf> (Kickstarter rejected approximately 39 percent of the DMCA notices it received.); Rebecca Tushnet, *Comments of Organization for Transformative Works in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-07 (Mar. 31, 2016) at 4, available at <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").

¹³³ See Lila Bailey, *Comments of the Internet Archive in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-7 (Mar. 22, 2016) at 5, available at <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-85991&attachmentNumber=1&disposition=attachment&contentType=pdf>.

regarding an Old Salem cigarette commercial based on the term “Salem” which also happened to be title of a major television series.¹³⁴ 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 percent of notices fail to meet those 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. . . . even many notices that comply with the statute’s requirements are fraudulent, abusive, or otherwise unfounded.¹³⁵

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 DMCA notice-and-takedown system fairly and effectively.¹³⁶ 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.” And 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.”¹³⁷ 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 suggests 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

¹³⁴ *Id.*

¹³⁵ Paul Sieminski, *Comments of Automattic, Inc. in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-07 (Mar. 31, 2016) at 2, available at <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-87349&attachmentNumber=1&disposition=attachment&contentType=pdf>.

¹³⁶ Jarret S. Cummings, Tobin L. Smith & Alan R. Mabe, *Comments of EDUCAUSE, the Association of American Universities, and the Association of Public and Land-Grant Universities in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-7 (Mar. 29, 2016) at 2, available at <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-85999&attachmentNumber=1&disposition=attachment&contentType=pdf>.

¹³⁷ *Id.*

to locate the material that should be blocked or removed.¹³⁸ This need for specificity leaves rightsholders playing a rather unedifying game of Whack-A-Mole in which they must constantly scour the various search engines, social media, and content-sharing websites to identify particular instances of infringement.¹³⁹ Usually, infringing material reappears in a new post just as quickly as the old post is taken down.¹⁴⁰ A notification must also attest to the complaining party's "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,"¹⁴¹ 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."¹⁴²

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.¹⁴³ Early case law 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.*,¹⁴⁴ the district court applied an objective standard to section 512(f) and held that the term "knowingly" encompassed actual knowledge of falsity and also where a party that "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."¹⁴⁵ However, very shortly thereafter the Ninth Circuit Court of Appeals in *Rossi v. Motion Picture Association of America Inc.*¹⁴⁶ held that the good faith belief requirement "encompasses a subjective, rather than objective, standard."¹⁴⁷ 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

¹³⁸ 17 U.S.C.A. § 512(c)(3)(A)(ii)–(iii). 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. 17 U.S.C.A. § 512(c)(3)(B)(i)–(ii).

¹³⁹ See e.g., *Comments of Universal Music Group*, *supra* note 23, at 14.

¹⁴⁰ *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. . . . It does nothing to address the so-called "whack-a-mole" problem, in which content that is taken down in response to Section 512 takedown notice is almost immediately reposted on the same site").

¹⁴¹ 17 U.S.C.A. § 512(c)(3)(A)(iv).

¹⁴² 17 U.S.C.A. § 512(c)(3)(A)(v).

¹⁴³ 17 U.S.C.A. § 512(f).

¹⁴⁴ 337 F. Supp. 2d 1195, 1204 (N.D. Cal. 2004).

¹⁴⁵ *Id.*

¹⁴⁶ 391 F.3d 1000, 1004 (9th Cir. 2004).

¹⁴⁷ *Id.*

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.¹⁴⁸

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 29 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.¹⁴⁹ 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, 2007.¹⁵⁰ YouTube removed the video the following day. Lenz issued a counter-notification, and her video was eventually restored some six weeks later.¹⁵¹

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.¹⁵² The legal assistant at Universal who reviewed the video described his process as follows: “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.¹⁵³ 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. The assistant also based his decision on the fact that the audio track included a voice asking the children whether they liked the music. 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.” 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.¹⁵⁴

¹⁴⁸ *Diebold*, 337 F. Supp. 2d at 1205.

¹⁴⁹ Stephanie Lenz, “*Let's Go Crazy*” #1, YOUTUBE (Feb. 7, 2007), <https://www.youtube.com/watch?v=N1KfjHFWlhQ>.

¹⁵⁰ *Lenz v. Universal Music Corp.*, 572 F. Supp. 2d 1150, 1152 (N.D. Cal. 2008).

¹⁵¹ *Id.* at 1152.

¹⁵² *Id.* at 1156 (discussing the “Prince Policy”).

¹⁵³ Deposition, *Lenz v. Universal Music Corp.*, No. 5:07-CV-03783-JF, 2013 WL 271673, at *1 (N.D. Cal. Jan. 24, 2013), *aff'd*, 801 F.3d 1126 (9th Cir. 2015).

¹⁵⁴ *Lenz v. Universal Music Corp.*, No. 5:07-CV-03783-JF, 2013 WL 271673, at *5 (N.D. Cal. Jan. 24, 2013), *aff'd*, 801 F.3d 1126 (9th Cir. 2015).

Universal's omission was unfortunate because it is a 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. The baby turns to the camera and, off screen, a woman asks "what do you think the music?" 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. For the remaining 17 seconds of the video, the baby stays in the center of the frame, not exactly dancing but apparently enjoying the music. 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. The dancing baby video captures a child's reaction to a well-known pop song in an ordinary family setting. 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.

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.*¹⁵⁵ 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.¹⁵⁶ On appeal to the Ninth Circuit, Universal argued that it was under no obligation to consider fair use before issuing a takedown notice. Universal asserted that fair use is an affirmative defense to infringement and not a legal authorization. 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,"¹⁵⁷ was correct, regardless of the application of fair use. Moreover, Universal relied on the subjective standard in *Ross*¹⁵⁸ 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. 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

¹⁵⁵ 572 F. Supp. 2d 1150, 1154–1155 (N.D. Cal. 2008).

¹⁵⁶ *Id.*

¹⁵⁷ 17 U.S.C.A. § 512(c)(3)(A)(v).

¹⁵⁸ 391 F.3d at 1004.

that confers rights on the public and defines the outer limits of the copyright owner's enumerated exclusive rights.¹⁵⁹ 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."¹⁶⁰ The fact that, procedurally, fair use must usually be pleaded as a defense does not alter its substance.¹⁶¹ As the court stated, "Fair use is not just excused by the law, it is wholly authorized by the law."¹⁶²

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," 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."¹⁶³ 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 the law, i.e., did not constitute fair use."¹⁶⁴ 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.¹⁶⁵

¹⁵⁹ The court agreed with Birch, J., in *Bateman v. Mnemonics, Inc.* that "Although 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." *Lenz v. Universal Music Corp.*, 815 F.3d 1145, 1153 (9th Cir. 2016) (citing *Bateman v. Mnemonics, Inc.*, 79 F.3d 1532, 1542 n.22 (11th Cir. 1996)); Lydia Pallas Loren, *Fair Use: An Affirmative Defense?*, 90 WASH. L. REV. 685, 688 (2015).

¹⁶⁰ 17 U.S.C.A. § 107.

¹⁶¹ *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."); Loren, *supra* note 159, at 685 ("Congress did not intend fair use to be an affirmative defense; a defense, yes, but not an affirmative defense.").

¹⁶² *Lenz v. Universal Music Corp.*, 801 F.3d 1126, 1123 (9th Cir. 2015).

¹⁶³ 17 U.S.C.A. § 512(f) (emphasis added); 17 U.S.C.A. § 512(c) (emphasis added).

¹⁶⁴ *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.

¹⁶⁵ 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 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.

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.¹⁶⁶ 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 decision-making 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 identify common situations associated with a higher probability of fair use.¹⁶⁷ In certain well-defined contexts, computers could be trained to make an initial assessment of the likelihood of fair use issues requiring further investigation.¹⁶⁸ To give a concrete example, a user video with 15 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.

Maayan Perel and Niva Elkin-Koren warn that translating qualitative doctrines such as fair use into “codish” thresholds or proxy measures is a process

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?

¹⁶⁶ Dan L. Burk & Julie E. Cohen, Fair Use Infrastructure for Rights Management Systems, 15 HARV. J.L. & TECH. 41, 56 (2001) (noting that “building the range of possible uses and outcomes into computer code would require both a bewildering degree of complexity and an impossible level of prescience.”)

¹⁶⁷ Sag, *supra* note 95 (undertaking a comprehensive empirical study of the fair use doctrine in copyright law and identifying testable hypothesis relating to various fair use factors).

¹⁶⁸ Helman & Parchomovsky, *supra* note 24 at 1230 (proposing that quantitative benchmarks could effectively substitute for qualitative criteria, to some degree). See also, Gideon Parchomovsky & Kevin A. Goldman, Fair Use Harbors, 93 VA. L. REV. 1483, 1511–17 (2007) (proposing specific ceilings for uses of copyright content without liability).

that in itself may result in unintentional alterations of settled doctrines.¹⁶⁹ Without downplaying these concerns, it must be remembered that the alternative, in all likelihood, is a bored and over-worked 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 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.¹⁷⁰ 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."¹⁷¹ The obvious implication of omitting the court of appeals' initial suggestion that rightsholders might be able to satisfy their obligations under 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. 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."¹⁷² 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 rightsholder had developed a checklist or an algorithm that reliably identified potential fair uses when tested, I see no reason why that could

¹⁶⁹ Maayan Perel & Niva Elkin-Koren, *Black Box Tinkering: Beyond Disclosure in Algorithmic Enforcement*, 69 FLA. L. REV. 181, 197 (2017).

¹⁷⁰ See *Lenz*, 801 F.3d 1126, amended and superseded on denial of reh'g by 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 *Ross*'s guidance that formation of a subjective good faith belief does not require investigation of the allegedly infringing content.").

¹⁷¹ *Lenz*, 815 F.3d at 1154.

¹⁷² James Grimmelmann, *Copyright for Literate Robots*, 101 IOWA L. REV. 657, 672 (2016).

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 DMCA misrepresentation remedy in section 512(f) of the Act; however, the provision is still quite limited. *Lenz* requires that copyright owners take slightly more care when issuing DMCA takedown notices, but the incentives against over-reaching 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."¹⁷³ 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.¹⁷⁴ This is important because we should not 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 v. Universal Music Corp.* may have ramifications for the broader public debate on the future of fair use in the U.S. 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. If the fair use 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" in an individual case, as the statute requires? If I assume that 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 RIAA and the MPAA out of this conundrum would be to articulate and defend their views on the scope of fair use,

¹⁷³ *Seinfeld: The Beard* (NBC television broadcast Feb. 9, 1995).

¹⁷⁴ *Lenz*, 801 F. 3d at 1134–35 ("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.").

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.¹⁷⁵

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 counter-notification. However, most users find that there is little incentive to take this step. To begin with, the counter-notification procedure has a built-in 10-day delay period that severely limits its utility for users wishing to restore access to time sensitive content.¹⁷⁶ Moreover, nothing in the DMCA guarantees that a platform will comply with a counter-notification. The service provider's safe harbor eligibility does not depend on complying with the restoration request in a counter-notification. 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.¹⁷⁷ This is virtually meaningless in practice because service providers are usually well insulated against such claims by virtue of their terms of service.¹⁷⁸

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. *Open* is a video of a 49-minute lecture Lessig delivered as the keynote address to a Creative Commons conference in Seoul, South Korea. 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. 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 10 to 47 seconds—clearly no more than was reasonable to illustrate and comment on the phenomenon. It should

¹⁷⁵ 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 that "[the] prospect of automated fair use might after all not prove as preposterous as first impression suggests" may be the first sign of a shift in this direction. See June Besek, *Comments of Kernochan Center for Law, Media and the Arts, Columbia Art School, in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-07 (Apr. 1, 2016) at 9, available at <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-90892&attachmentNumber=1&disposition=attachment&contentType=msw12>.

¹⁷⁶ 17 U.S.C.A. § 512 (g)(2)(c).

¹⁷⁷ 17 U.S.C.A. § 512(g) ("[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.")

¹⁷⁸ See, e.g., *Terms of Service*, YOUTUBE, <https://www.youtube.com/static?template=terms> (last visited Aug. 16, 2016).

have been more than apparent that Lessig's use of the *Lisztomania* song in that context was fair use under U.S. copyright law.¹⁷⁹

At the end of June 2013, Liberation Music submitted a DMCA takedown notice to YouTube demanding the removal of Lessig's video, *Open*. YouTube promptly complied, and *Open* was taken down. Lessig responded with a counter-notice under section 512(g) of the DMCA, which, in the ordinary course of events, should have led to YouTube restoring the video 10 days after the initial notification.¹⁸⁰ However, Liberation Music responded by threatening Lessig with legal proceedings if he did not retract his counter-notice, and two days later, Lessig did so. 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 § 512(f) of the DMCA. 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.¹⁸¹

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 take into account the reality that many individual users are not legally sophisticated enough to effectively wield the limited rights the law bestows upon them.¹⁸² The NTEP study's survey of Internet platforms reports that they mostly consider counter-notification "a dead letter—impractical and rarely used."¹⁸³ Asserting one's legal rights requires knowledge of those rights and a sense of empowerment, and so the counter-notification 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 counter-

¹⁷⁹ As Liberation Music was eventually forced to concede. See *Lawrence Lessig Settles Fair Use Lawsuit Over Phoenix Music Snippets*, ELEC. FRONTIER FOUND. (Feb. 27, 2014), <https://www EFF.ORG/press/releases/lawrence-lessig-settles-fair-use-lawsuit-over-phoenix-music-snippets>.

¹⁸⁰ 17 U.S.C.A. § 512 (g)(2)(c).

¹⁸¹ *Id.*

¹⁸² Mark A. Lemley, *Rationalizing Internet Safe Harbors*, 6 J. TELECOMM. & HIGH TECH. L. 101, 114–15 (2007).

¹⁸³ Urban et al., *supra* note 20, at 44.

notice means submitting to the jurisdiction of U.S. courts and abandoning anonymity makes the process worse than useless for political dissidents.¹⁸⁴ The First Amendment commitment to freedom of speech includes a right to anonymous speech,¹⁸⁵ 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 forego counter-notification in substantial numbers. For example, a study of almost 500 documentary filmmakers found that almost a quarter (23 percent) had seen their own videos taken down by DMCA notices, that 60 percent 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.¹⁸⁶ 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 counter-notification provisions, at least in the context of search related takedowns, are pirates in overseas jurisdictions acting in transparent bad faith.¹⁸⁷

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

¹⁸⁴ 17 U.S.C.A. § 512(g).

¹⁸⁵ See *McIntyre v. Ohio Elections Comm'n*, 514 U.S. 334, 357 (1995).

¹⁸⁶ 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 (2016), available at <http://dx.doi.org/10.1080/1369118X.2015.1050050>.

¹⁸⁷ Urban et al., *supra* note 20, at 46 (“More than one respondent described bogus counter-notices from obvious foreign copyright pirates claiming the right to post infringing material.”).

relevant to the online experience of copyright law. They have created a new, more volatile balance of publication that is both more permissive of potential infringement *ex ante*, but also more vulnerable to over-reaching claims by rightsholders *ex post*.

PART 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, they 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.¹⁸⁸ To date, platforms have successfully fought off attempts to revise or reinterpret the safe harbors to impose such a requirement.¹⁸⁹ But despite the lack of a *de jure* obligation to filter under the

¹⁸⁸ See *supra* note 23 and 24.

¹⁸⁹ There are many significant cases in this regard. See, e.g., *CCBill*, 488 F.3d at 1114; *Vcob Networks*, 665 F. Supp. 2d 1099, *aff'd sub nom.* *UMG Recordings, Inc. v. Shelter Capital Partners LLC*, 667 F.3d

DMCA,¹⁹⁰ 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.¹⁹¹ 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 of the modern Internet without automated systems. 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;¹⁹² that number reached 1 billion in 2014.¹⁹³ Collectively, YouTube users now upload more than half a million hours of video and watch hundreds of millions of hours of video every day.¹⁹⁴ A non-trivial fraction of these uploads and views infringe one or more copyrights. From the perspective of rightsholders, notice-and-takedown as conceived in mid-1990s simply does not scale the realities of mid-2010s. In an effort to persuade both courts and legislators, major rightsholder groups argue that platforms must implement filtering

1022 (9th Cir. 2011), *withdrawn and superseded on reh'g* by 718 F.3d 1006 (9th Cir. 2013), *aff'd sub nom.* UMG Recordings, Inc. v. Shelter Capital Partners LLC, 718 F.3d 1006 (9th Cir. 2013); *Viacom I*, 718 F. Supp. 2d 514; *Viacom II*, 676 F.3d 19; *Viacom III*, 940 F. Supp. 2d 110.

¹⁹⁰ In fact, quite the opposite. Section 512(m) expressly provides that “[n]othing in this section shall be construed to condition the applicability of [the safe harbors] 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).”

¹⁹¹ See Cloud Fender, *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> (Dropbox); *How Content ID Works*, YOUTUBE HELP, <https://support.google.com/youtube/answer/2797370?hl=en> (last visited Aug. 16, 2016) (YouTube); *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/> (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); Jay Rosenthal & Steven Metalitz, *Comments of American Association of Independent Music et al. in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-07 (Apr. 1, 2016), available at <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.”)

¹⁹² *Total Number of Websites*, *supra* note 107.

¹⁹³ *Id.*

¹⁹⁴ GOOGLE, *supra* note 67, at 21 (“Today, more than 400 hours of video are uploaded to YouTube every minute . . .”).

and other DMCA-plus measures, and that those that fail to do so are deliberately benefiting from and enabling widespread copyright infringement.¹⁹⁵

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.”¹⁹⁶ 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 quote 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].¹⁹⁷

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.¹⁹⁸ 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.¹⁹⁹ 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.”²⁰⁰ Even companies that believe they are well within the law have a lot to lose from protracted federal court litigation.²⁰¹ As a result, although the safe harbors are

¹⁹⁵ One commentator’s description of “Google’s open philosophical contempt for most property rights online” is typical. See Scott Cleland, *Google’s Piracy Liability*, FORBES (Nov. 9, 2011, 8:49 AM), <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*, BPI, <https://www.bpi.co.uk/home/bpi-response-to-how-google-fights-piracy-2016-update.aspx> (last visited Aug. 16, 2016) (describing Google as “one of the key enablers of piracy on the planet”).

¹⁹⁶ Urban et al., *supra* note 20, at 55–56.

¹⁹⁷ Urban et al., *supra* note 20.

¹⁹⁸ See *supra* Part I.B.2.

¹⁹⁹ For a representative sample of industry views, see generally *Comments of Motion Picture Association of America, Inc.*, *supra* note 23; *Comments of Universal Music Group*, *supra* note 23.

²⁰⁰ *Comments of the Organization for Transformative Works*, *supra* note 132, at 19.

²⁰¹ 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

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 on by the Viacom litigation that began almost as soon as Google acquired the video sharing company in 2006.²⁰² 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.²⁰³ 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.²⁰⁴ 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 the form of advertising revenue associated with the challenged video. 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.²⁰⁵ Rightsholders are apparently free to block all infringing content rather than monetize it, but most implement some kind of mixed strategy. However that

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.”)

²⁰² Viacom's \$1 Billion lawsuit alleging that YouTube had engaged in “brazen” copyright infringement was filed on March 13, 2007. Complaint, *Viacom Int'l, Inc. v. YouTube, Inc.*, 718 F. Supp. 2d 514 (2010) (No. 07-2103), 2010 WL 2532404.

²⁰³ 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, *Comments of Getty Images in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-07 (Mar. 31, 2016) at 6, available at <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-87425&attachmentNumber=1&disposition=attachment&contentType=pdf>. 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 (2015) (discussing the government's role in procuring voluntary agreements and the “paradox of non-regulatory regulation” in the anti-piracy and anti-counterfeiting space); see also DiCola & Sag, *supra* note 11 (examining the role of various government institutions in content-technology disputes in historical and contemporary context).

²⁰⁴ Email correspondence between Professor Justin Hughes and the author.

²⁰⁵ See *How Content ID Works*, *supra* note 191.

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.²⁰⁶

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.²⁰⁷ And yet Google has voluntarily embraced many of these same anti-piracy 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.²⁰⁸ 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.²⁰⁹ 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.²¹⁰

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.

²⁰⁶ Ben Popper, *Youtube Will Block Videos from Artists Who Don't Sign Up for Its Paid Streaming Service*, THE VERGE (June 17, 2014), <http://www.theverge.com/2014/6/17/5817408/youtube-reportedly-block-videos-indie-artists/>.

²⁰⁷ See Derek E. Bambauer, *Against Jawboning*, 100 MINN. L. REV. 51, 52–53 (2015).

²⁰⁸ See GOOGLE, *supra* note 67, at 21.

²⁰⁹ Indeed, on December 31, 2015, the United States Copyright Office announced that it was undertaking a public study to evaluate the impact and effectiveness of the DMCA safe harbor provisions. See Section 512 Study: Notice and Request for Public Comment, 80 Fed. Reg. 81,862 (Dec. 31, 2015).

²¹⁰ Facebook warns that “a statutory provision designating specific solutions would almost certainly be outdated as soon as it was enacted.” Mark Fiore, *Comments of Facebook, Inc. in Response to Section 512 Study: Notice and Request for Public Comment*, Docket No. 2015-07 (Apr. 1, 2016) at 6, available at <https://www.regulations.gov/contentStreamer?documentId=COLC-2015-0013-90724&attachmentNumber=1&disposition=attachment&contentType=pdf>. Facebook also warns the Copyright Office, quite candidly, that if it were required to take certain proactive measures by law, it would lessen its appetite to experiment with other tools to address copyright infringement. Facebook maintains that “[t]he 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.

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.²¹¹ 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 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 percent of DMCA notices sampled were “fundamentally flawed” and a further 28.4 percent were of questionable validity²¹²—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,²¹³ massive volumes of such notices are clearly sent, and often acted upon, without meaningful human review.²¹⁴ 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 counter-notification 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 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

²¹¹ Google indexed around 45 billion webpages in March 2016. That same month, more than 6,000 individuals or entities used Google's notice-and-takedown interface to request the remove of more than 80 million webpages from its search index. That is less than 0.2 percent. These are all large numbers, and perspectives differ as to whether it is the ratio of infringing to non-infringing that matters or simply the absolute number of infringing websites.

²¹² Urban et al., *supra* note 20, at 11.

²¹³ 17 U.S.C.A. § 512(c)(3)(A)(iv).

²¹⁴ Urban et al., *supra* note 20, at 54.

that advertising to the claimant—or to simply monitor the content and give the claimant the benefit of the associated data.²¹⁵

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.²¹⁶ 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 with it 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 ways in which the copyright filtering technology in operation today leads to false positives—i.e., claims of infringement directed at non-infringing 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 the failing to appreciate fair use,

²¹⁵ Automated matching systems are also key to those DMCA-plus agreements in which platforms agree to give trusted rightsholders ‘backend’ access to their systems to so that they can takedown infringing content on their own initiative. *See* Urban et al., *supra* note 20, at 55 (reporting that “backdoor access agreements are relatively common among digital music file-hosting services”).

²¹⁶ *See supra* Part I (the weakness of these safeguards is addressed).

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.

(i) *Fraudulent Claims*

Content ID begins by taking reference files submitted by a person claiming to represent the copyright owner and converting these files into a hash-file or a digital fingerprint. 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.²¹⁷ The consequences of a match also depend on YouTube’s complicated and oft-changing policies and procedures and on the response (or non-response) 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: (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 DMCA counter-notification. If the user does not appeal or does not file a counter-notification, the revenue goes to the rightsholder.

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.²¹⁸ After three copyright strikes, the user’s account is terminated.²¹⁹ A Content ID block

²¹⁷ See *How Content ID Works*, *supra* note 191.

²¹⁸ <https://support.google.com/youtube/answer/2814000?hl=en> (last visited Aug. 16, 2016).

²¹⁹ *Id.*

occurs when a rightsholder has claimed that user's post is infringing and has used Content ID to block that post.²²⁰ Users with a single copyright strike or two Content ID blocks within a 30-day period are unable to appeal.²²¹ Furthermore, YouTube currently limits the number of claims a user can appeal at any one time.²²² 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.²²³ 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.²²⁴ The user in question was either very unlucky or this practice is widespread.

(ii) *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*.” Judging from Copyright Office records, *Focus* is either a track from rap group USDA's debut studio album *Cold Summer*, Brandy's album *Afrodisiac*, or Erick Sermon's *Double Or Nothing*.²²⁵

If that seems odd, Content ID has also been reported to trigger matches based on music that is inaudible to the human ear.²²⁶ Still more bizarre, film reviewer, Brad Jones, received a strike on his account for one of his “Midnight Screening” reviews in which Jones and another person:

²²⁰ *What is a Content ID Claim?*, YOUTUBE HELP, <https://support.google.com/youtube/answer/6013276?hl=en> (last visited Aug. 16, 2016).

²²¹ *Keep Your YouTube Account in Good Standing*, YOUTUBE HELP, <https://support.google.com/youtube/answer/2797387> (last visited Aug. 16, 2016).

²²² *Id.*

²²³ Lauren D. Shinn, *YouTube's Content ID as a Case Study of Private Copyright Enforcement Systems*, 43 AIPLA Q.J. 359, 373–74 (2015). (Contrast to other forms of Copyright Trolling and the problem of Patent Trolls.)

²²⁴ Tim Cushing, *YouTube's Content ID Trolls: Claim Copyright on Lots of Gameplay Videos, Hope No One Complains, Collect Free Money [Updated]*, TECHDIRT (Feb. 28, 2013, 10:56 AM), <https://www.techdirt.com/articles/20130227/20563322144.shtml>. (The video, *Let's Play Far Cry 3 Part 09* by Sandy4338, is available on YouTube at <https://www.youtube.com/watch?v=PM74xsQ3hlQ>.) For a discussion of copyright trolling other contexts, see Matthew Sag, *Copyright Trolling, An Empirical Study*, 100 IOWA L. REV. 1105 (2015).

²²⁵ See Dighaven, *!!Happiest Cat Purring loud 1 hour - Calm, Relax for Study, Sleep, Phantom*, YOUTUBE (Mar. 29, 2014), <https://www.youtube.com/watch?v=bzadyuv2ute>.

²²⁶ Fred Von Lohmann, *Testing YouTube's Audio Content ID System*, ELEC. FRONTIER FOUND. (Apr. 23, 2009), <https://www.eff.org/deeplinks/2009/04/testing-youtubes-aud>.

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.²²⁷

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.²²⁸

(iii) *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.²²⁹ Not long afterwards, Michelle Obama's speech to the Democratic National Convention was also rendered unplayable by Content ID.²³⁰ Users were told that "This 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."

(iv) *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. 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

²²⁷ Channel Awesome, *Where's the Fair Use? - Nostalgia Critic*, YOUTUBE (Feb 16, 2016), <https://www.youtube.com/watch?v=zVqFAMOtwaI> (minute 9:30–9:55).

²²⁸ 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 *Comments of the Internet Archive*, *supra* note 133, at 5.

²²⁹ See Will Oremus, *Sci-Fi Awards Webcast Shut Down by Rogue Copyright Bots That Refuse To Obey Human Commands*, SLATE (Sept. 4, 2012, 4:21 PM), http://www.slate.com/blogs/future_tense/2012/09/04/hugo_awards_ustream_science_fiction_webcast_blocked_by_rogue_copyright_bots.html.

²³⁰ Geeta Dayal, *The Algorithmic Copyright Cops: Streaming Video's Robotic Overlords*, WIRED (Sept. 6, 2012, 6:00 AM), <https://www.wired.com/2012/09/streaming-videos-robotic-overlords-algorithmic-copyright-cops/>.

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 insightful remix of scenes from *Buffy the Vampire Slayer* and the Lionsgate *Twilight* film series.²³¹ 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” 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 is not really a big turn on for girls.” Defeated, Edward duly sulks away.²³²

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.²³³ The video was even mentioned the Copyright Office’s recommendations on exemptions to the DMCA in 2012 as an example of a transformative noncommercial video.²³⁴ 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.

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 to 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

²³¹ Jonathan McIntosh, *Buffy vs Edward: Twilight Remixed -- [original version]*, YOUTUBE (June 19, 2009), <https://www.youtube.com/watch?v=RZwM3GvaTRM>.

²³² *Id.* at minute 3:30.

²³³ This account is based on Jonathan McIntosh’s blog post. See Jonathan McIntosh, *Buffy vs Edward Remix Unfairly Removed by Lionsgate*, REBELLIOUSPIXELS (Jan. 9, 2013), <http://www.rebelliouspixels.com/2013/buffy-vs-edward-remix-unfairly-removed-by-lionsgate>.

²³⁴ UNITED STATES COPYRIGHT OFFICE, SECTION 1201 RULEMAKING: FIFTH TRIENNIAL PROCEEDING TO DETERMINE EXEMPTIONS TO THE PROHIBITION ON CIRCUMVENTION 133 2012, *available at* http://www.copyright.gov/1201/2012/Section_1201_Rulemaking_2012_Recommendation.pdf.

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.

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 counter-notification.

(v) *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 ownership of copyright in their own work does not extend to pre-existing material incorporated into that 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.²³⁵ In 2009, Fox prevailed over the copyright owners of *When You Wish Upon a Star* who objected to *Family Guy*’s unauthorized parody appearing in the episode *When You Wish Upon a Weinstein*.²³⁶ 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 Sw1tched’s video without consultation or permission.²³⁷ 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* aired,

²³⁵ Burnett v. Twentieth Century Fox Film Corp., 491 F. Supp. 2d 962 (C.D. Cal. 2007).

²³⁶ Bourne Co. v. Twentieth Century Fox Film Corp., 602 F. Supp. 2d 499 (S.D.N.Y. 2009).

²³⁷ Sw1tched, *Double Dribble - NES - Automatic Sho*, YOUTUBE (Feb. 21, 2009), <https://www.youtube.com/watch?v=Ed59WhzXlkk&lc=z120ev0wrljbi5zpd04cefbzjqrzhtwo53g>.

Sw1tched's original video was taken down by Content ID because of an automatic claim by Fox. The video was restored four 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.²³⁸ 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.

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.²³⁹ 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 minutes 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. 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.

²³⁸ 17 U.S.C.A. § 105 (West 2016).

²³⁹ Alex Pasternack, *NASA's Mars Rover Crashed into a DMCA Takedown*, MOTHERBOARD (Aug. 6, 2012, 11:49 AM), <http://motherboard.vice.com/blog/nasa-s-mars-rover-crashed-into-a-dmca-takedown>.

(i) Delay and Denial of Review

As discussed in Part I-D-3, there should be some scope for identifying potential fair use claims as part of copyright matching algorithms. 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 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 counter-notification procedure and the 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 any 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 Content ID resolution process 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.²⁴⁰ 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 counter-notification. 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.²⁴¹ 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 30 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, but only if the user's account is in good standing.²⁴² The significance of this

²⁴⁰ See *What Is a Content ID Claim?*, *supra* note 220.

²⁴¹ See *Dispute a Content ID Claim*, YOUTUBE HELP, <https://support.google.com/youtube/answer/2797454> (last visited Aug. 16, 2016).

²⁴² See *Keep Your YouTube Account in Good Standing*, *supra* note 221. Being subject to more than one Content ID block at any one time puts a user into bad standing, as does receiving a second Content ID block within 30 days.

limitation will be addressed below. The rightsholder then has another 30 days to respond to the user's appeal by either releasing its claim or filing a DMCA takedown notice.

The 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 rightsholders 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 accurately 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 counter-notification to have the video restored and the copyright strike against her account removed.²⁴³ From beginning to end, and assuming no delay by the user, this process could take 70 days: 30 days for the initial dispute, 30 days for the appeal, and 10 days for the counter-notification.

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. But these delays compound the problem that a user's ability to dispute false claims is strictly rationed. A user with a single copyright strike or two Content ID blocks within a 30-day period is ineligible to appeal any 'reinstated' copyright claims.²⁴⁴ Even a user whose account is in good standing is still limited to no more than three appeals at a time, regardless of how many claims he or she might be dealing with. In any event, 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.²⁴⁵

Spurious Content ID claims undermine the exercise of fair use because of the time such claims take to resolve and the effect that certain types of claims 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.

²⁴³ See Counter-Notification Basics, YOUTUBE HELP, <https://support.google.com/youtube/answer/2807684> (last visited Aug. 16, 2016).

²⁴⁴ See *Keep Your YouTube Account in Good Standing*, *supra* note 221.

²⁴⁵ Channel Awesome, *supra* note 227 (minute 8:59).

(ii) Rightsholder Incentives

The consequences, or lack of consequences, for making false claims is 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 positives more likely.²⁴⁶ 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 over-claiming.

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.

(iii) 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.²⁴⁷ 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.

²⁴⁶ 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 191.

²⁴⁷ GOOGLE, *supra* note 67, at 4.

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, in Content ID, rightsholders can block, 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 what 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 that 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.²⁴⁸ However, institutionalizing and normalizing the monetization of fair use would substantially undermine the doctrine.²⁴⁹ Giving a user the latitude to borrow from a pre-existing 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.²⁵⁰ 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 they may have an intrinsic objection to the creator of a work targeted for criticism profiting from that very criticism. In sum,

²⁴⁸ See Paul J. Heald, *How Notice-and-Takedown Regimes Create Markets For Music On YouTube: An Empirical Study*, 83 U. MO. KAN. CITY L. REV. 313 (2014) (arguing that 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).

²⁴⁹ Others may argue that it would substantially improve the doctrine. See, Hon. J. Alex Kozinski & Christopher Newman, *What's So Fair About Fair Use?* The 1999 Donald C. Brace Memorial Lecture, 46 J. COPYRIGHT SOC'Y U.S.A. 513 (1998-1999) (arguing that permission conditioned on payment would be a more nuanced option than simply infringing or non-infringing.)

²⁵⁰ *Id.*

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.

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 that 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; it 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.²⁵¹ 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 back-end access to the site, giving them the power to remove any music upload without consultation, explanation, or review.²⁵²

Given that the effect on fair use of automatic copyright enforcement systems is ultimately contingent on the choices made by platforms and rightsholders, the

²⁵¹ 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) (forthcoming) (concluding that DMCA-plus agreements lack the deliberative transparency associated with public law-making).

²⁵² Ernesto, *Universal Music Can Delete Any SoundCloud Track Without Oversight*, TORRENTFREAK (July 3, 2014), <https://torrentfreak.com/record-labels-can-remove-soundcoud-tracks-without-oversight-140703/>.

question becomes: what choices are likely given the incentives of decision makers? 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 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 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, platforms negotiating strength 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. 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 law 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 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 infringement in response to a takedown notice. 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. 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.*,²⁵³ 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. 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 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 mandatory user safeguards built into the DMCA. The resulting review processes may be better, worse, or non-existent.

²⁵³ 801 F.3d 1126 (9th Cir. 2015).

Having established that the balance struck by the traditional levers of copyright policy is only indirectly and contingent 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 trade offs 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 over-reaching claims by rightsholders. There is no easy metric for comparing the value of non-infringing 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 to the scale of activity and have to 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 non-infringing 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 non-infringing content; it would be wrong because much infringing content is never targeted for takedown;

and it would be wrong because the agreements between platforms and rightsholders that permit some infringing content to remain are not visible to end users.²⁵⁴

In the online environment we are witnessing the exact opposite of the cycle of “risk aversion and rights accretion” described by Prof. 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 activities over time.²⁵⁵ 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 non-infringing 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 user’s 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 counter-notification. However, that shift from public to private is complete in the world of algorithmic enforcement. The convergence of rule-making, adjudication and enforcement in a few key platforms raises important questions of trust and accountability.²⁵⁶ 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.²⁵⁷

The convergence of copyright rule-making, 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 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.²⁵⁸ Specifically, the Court relied on the idea-expression distinction and the fair use

²⁵⁴ Yafit Lev-Aretz, *Second Level Agreements*, 45 AKRON L. REV. 137 (2012) (Lev-Aretz uses the term “second level agreements” to denote “preemptive licenses granted by copyright owners to platforms operators, with the purpose of ratifying the mass usage of copyrighted content by their users.”)

²⁵⁵ Gibson, *supra* note 10.

²⁵⁶ Maayan Perel & Niva Elkin-Koren, *Accountability in Algorithmic Copyright Enforcement*, 19 STAN. TECH. L. REV. 473, 481 (2016).

²⁵⁷ Maayan Perel & Niva Elkin-Koren, *Black Box Tinkering: Beyond Disclosure in Algorithmic Enforcement*, 69 FLA. L. REV. 181, 185–86 (2017).

²⁵⁸ *Eldred v. Ashcroft*, 537 U.S. 186, 219 (2003) (copyright law contains built-in First Amendment accommodations).

doctrine to ensure that exclusive rights in expression did not unduly interfere with people's ability to express themselves.²⁵⁹ Shifting the resolution of copyright disputes to private fora does not directly trigger First Amendment review—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.²⁶⁰ 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.

²⁵⁹ *Id.* at 219-220.

²⁶⁰ See *supra* notes 62-65 and accompanying text.