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The Best Laid Plans: How DMCA sec. 1201 Went Awry, Smothering Competition and Creating Giants,and Where We Go Now

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Cover Page Footnote

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Thank you to Professor Christian Turner for his helpful comments through this process.

THE BEST LAID PLANS: HOW DMCA § 1201 WENT AWRY, SMOTHERING COMPETITION AND CREATING GIANTS, AND WHERE WE GO NOW

*Tyler Fabbri**

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I. INTRODUCTION

"Whether it's Google or Apple or free software, we've got some fantastic competitors and it keeps us on our toes."[1] Competition plays a pivotal role in innovation and creation and competitors should absolutely keep major players on their toes.

Competition is, or should be, a defining characteristic of the American economic system.[2] Over time, structural changes have stifled competition instead of fostering it. This is clear particularly in the technology industry, where giants have emerged and assumed positions of unique societal importance. "In . . . communities, Facebook *is* the internet and Amazon *is* retail delivery. More widely, students, jobseekers, and journalists. . . require access to Google's educational suite, LinkedIn or Twitter just to do their work."[3]

Due to growing reliance on technology, consumers are constantly looking for new developments and improvements to goods and services being offered in the marketplace.[4] However, provisions of the Digital Millennium Copyright Act (DMCA) largely serve to hinder critical forms of competition that could lead to more consumer-friendly developments. Specifically, §1201 of DMCA prevents what is known as adversarial interoperability—essentially creating a product or service that works with an existing one without that creator's direct consent. Adversarial interoperability was the hallmark of the tech-growth era, and was used by Apple, Facebook, and IBM in their climbs to the top of their fields.[5]

Thus, Americans are largely stuck with what the tech companies are willing to give them. People hate Facebook.[6] General enthusiasm for Amazon is

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[1] *One-on-One with Bill Gates*, ABC NEWS (Feb. 21, 2008, 5:36 PM) (interview between Bill Gates and Peter Jennings, an ABC journalist, conducted on February 16, 2005).

[2] *FTC Fact Sheet: How Competition Works*, FEDERAL TRADE COMMISSION: PROTECTING AMERICA'S CONSUMERS, https://www.consumer.ftc.gov/sites/default/files/games/off-site/youarehere/pages/pdf/FTC-Competition_How-Comp-Works.pdf (last visited Oct. 6, 2020).

[3] Jeanette Herrle, *Tearing Down a Tech Giant's Walled Garden*, CTR. FOR INT'L. GOVERNANCE (Oct. 19, 2019), https://www.cigionline.org/articles/tearing-down-tech-giants-walled-garden.

[4] Amanda Mull, *Gadgets for Life on a Miserable Planet*, THE ATLANTIC (Jan. 14, 2020), https://www.theatlantic.com/health/archive/2020/01/why-do-people-still-love-consumer-tech/604909/.

[5] Cory Doctorow, *Adversarial Interoperability: Reviving an Elegant Weapon From a More Civilized Age to Slay Today's Monopolies*, ELECTRONIC FRONTIER FOUND. DEEPLINKS BLOG (June 7, 2019), https://www.eff.org/deeplinks/2019/06/adversarial-interoperability-reviving-elegant-weapon-more-civilized-age-slay.

[6] Mark Murray, *Poll: Americans Give Social Media a Clear Thumbs-Down*, NBC NEWS (Apr. 5, 2019), https://www.nbcnews.com/politics/meet-the-press/poll-americans-give-social-media-clear-thumbs-down-n991086 (showing that 60% of Americans do not trust Facebook's security measures, only 36% view Facebook favorably overall, and 82% view it is a waste of time).

shrinking.[7] People continue to use these services in droves because there are no meaningful or feasible alternatives.[8] The solution is permitting companies or innovators to deliver products that work with existing platforms to fill in gaps or offer new avenues for consumers to get what they want.[9] Two-thirds of Americans agree that tech giants like Google and Amazon are too big.[10] While it likely would not be a silver bullet solution, a repeal of §1201 of the DMCA would help reinvigorate entrepreneurial spirit and give consumers more choices.

Part II of this Note discusses the background of the Digital Millennium Copyright Act (DMCA) and §1201 of the law, which prevents technological circumvention of protected works. This part also discusses aspects of adversarial interoperability relevant to the Note's analysis and some of the impacts being seen in the big-tech space as a result. Specifically, this part further defines adversarial interoperability and explores the expansion of §1201 application to curtail it. Additionally, this part analyzes how many big companies are benefitted by the status quo and how they use §1201 to effectively dismantle competition from the very start by creating the "Kill Zone." Part III of this Note analyzes adversarial interoperability more specifically, looking at both the benefits and potential drawbacks of a redeveloped legal scheme surrounding the activity and then examines French efforts to balance consumer and developer interests.

II. BACKGROUND

A. THE DIGITAL MILLENNIUM COPYRIGHT ACT

In 1998, Congress passed the Digital Millennium Copyright Act (DMCA) with intentions of protecting owners of copyrights against acts of digital piracy

[7] Dennis Green, *Amazon's Reputation is Taking a Beating from All Sides. Here's What a Reputation Expert Says it Should Do to Turn Things Around*, BUSINESS INSIDER (Sept. 8, 2018, 10:40 AM), https://www.businessinsider.com/amazon-reputation-falls-in-annual-ranking-2018-9 (explaining that Amazon has lost the top spot in the Reputation Institute's retail reputation rankings and in the general American company rankings—falling to tenth place).

[8] Stuart Dredge, *You've Decided to Delete Facebook But What Will You Replace It With?*, THE GUARDIAN (Mar. 31, 2018) https://www.theguardian.com/technology/2018/mar/31/youve-decided-to-delete-facebook-but-what-will-you-replace-it-with (noting for example that Facebook itself owns other social media services and replacing its use would require a difficult patchwork of other services).

[9] *Id.*

[10] Emily Stewart, *Poll: Two-Thirds of Americans Want to Break up Companies Like Amazon and Google*, VOX (Sept. 18, 2019, 10:50 AM), https://www.vox.com/policy-and-politics/2019/9/18/20870938/break-up-big-tech-google-facebook-amazon-poll (detailing widespread support for breaking up the tech companies for competition purposes—support which is equally distributed amongst individuals self-identifying as Democrats, Republicans, or independents).

and theft of the protected works.[11] After going into effect in 2000, the DMCA worked to handle an array of copyright protection challenges inherent to an increasingly digital society.[12] The DMCA was the product of collaboration on the part of "publishers, scientists, civil rights groups and others," and is considered to be a "compromise measure" by these groups who often have directly competing interests.[13] Because the DMCA was the target of significant criticism from various parties in the technological space, revisions to the Act were made to carve out certain exceptions that would allow for activities such as encryption and security research.[14] Despite some of these revisions being made, calls for further changes remain.[15]

B. SECTION 1201 OF THE DMCA

The DMCA provisions most relevant to this paper are both in §1201. 17 U.S.C. § 1201(a)(2) states, "No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof" that works to circumvent technological measures aimed at restricting access to copyrighted works.[16] Section 1201(b) prohibits the same conduct and further protects the copyright owner from actions that could work against technological safeguards to that protected work.[17] The provisions largely take aim at devices or objects that are designed primarily with the circumventing of technological protection measures in mind.[18] The law also focuses on devices or objects which hold very limited commercial value outside of their ability to circumvent these technological protective measures on protected works.[19] In the current scheme, courts generally reason that

[11] *See generally* Dan I. Burk, *Anti-Circumvention Misuse*, 50 UCLA L. REV. 1095, 1135 (2003) (describing the legislative intent of Congress when it wrote and passed the DMCA).

[12] *The Ultimate Guide to Digital Millennium Copyright Act*, COPYRIGHTED (May 15, 2018) https://www.copyrighted.com/blog/dmca-guide.

[13] Margaret Rouse, *Digital Millennium Copyright Act (DMCA)*, TECHTARGET (Mar. 2011) https://whatis.techtarget.com/definition/Digital-Millennium-Copyright-Act-DMCA.

[14] *Id.* (explaining that Congress created a carve out that allows individuals to engage in otherwise illegal digital lock circumventing activity so long as the activity is a good faith effort in encryption security research).

[15] *It's Time to Fix the DMCA*, REPAIR, https://repair.org/copyright (last visited Sept. 27, 2020) (citing Kyle Wiens, *Forget the Cellphone Fight – We Should Be Allowed to Unlock* Everything *We Own*, WIRED (Mar. 18, 2013, 9:30 AM))(outlining the need for comprehensive reforms because products are becoming increasingly integrated with technology and the DMCA fundamentally changes the nature of ownership of tech-based products by giving more power to the creators even afterr commercial sales).

[16] 17 U.S.C. § 1201(a)(2)(A)-(C) (2020).

[17] *Id.* § 1201(b).

[18] *Id.* § 1201(a)(2)(A), (b)(1)(A).

[19] *Id.* § 1201(a)(2)(B), (b)(1)(B).

individuals charged with violating §1201 of the DMCA cannot use traditional intellectual property defenses like fair use, as actions taken in the spirit of circumventing digital copyright protections are not "use" per se, but are rather issues of "access."[20] The DMCA has included some enumerated defenses against charges for infringement, including those for nonprofit library actions, law enforcement related activities, intelligence analysis and gathering agencies, and other governmental agencies.[21]

C. INTEROPERABILITY

Interoperability is the term used to describe a product's capability to work with different products.[22] It is largely the same thing in the technological space: interoperability is "the technical ability to plug one product or service into another product or service."[23]

There are three distinct categories of technological interoperability, and the different versions impact consumers and copyright holders in different ways. First, there is "indifferent" interoperability, where the copyright holder largely does not mind or care about the device that works with their protected work.[24] A basic example of this is cigarette lighter phone chargers.[25] The developer of the cigarette lighter in a car would have no reason to know someone is plugging a phone charger into their product, and even if they did, there is no tangible threat to their protected work.

Next, there is "cooperative" interoperability, where the developer of the protected product is eager to allow others to create add-ons or features to their existing product.[26] For this, one can think of phone manufacturers including standard 3.5mm headphone jacks into their phones or installing standard Bluetooth chips[27] into their phones; consumers are allowed to plug in or connect

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[20] *See* Universal City Studios, Inc. v. Reimerdes, 82 F. Supp. 2d 211, 217 (S.D.N.Y. 2000) (holding that fair use cannot be used as a valid defense against charges brought under 17 U.S.C. § 1201 of the DMCA for copyright infringement).

[21] 17 U.S.C. § 1201(e) (2020) (providing specific defenses for "lawfully authorized investigative, protective, information security, or intelligence activity" among other protected classes of activities).

[22] *Interoperability*, MERRIAM-WEBSTER.COM, https://www.merriam-webster.com/dictionary/interoperability (last visited Oct. 10, 2020).

[23] Cory Doctorow, *Interoperability: Fix the Internet, Not the Tech Companies*, ELECTRONIC FRONTIER FOUND. DEEPLINKS BLOG (July 19, 2019), https://www.eff.org/deeplinks/2019/07/interoperability-fix-internet-not-tech-companies.

[24] *Id.*

[25] *Id.*

[26] *Id.*

[27] *Id.* (describing how things can get tricky here if the copyright holder uses "digital standards," which can discriminate by allowing certain products to be compatible with theirs, depending on the manufacturer or individual product. This can also benefit consumers if

any compatible device, and the phone manufacturer benefits from the widened array of capabilities their product now offers.

Finally, there is "adversarial" interoperability, which involves a manufacturer developing a product that works with another product whose developer is openly hostile toward it.[28] This could be something like third-party replacement parts or unauthorized computer or phone applications.[29] Simply put, regardless of whatever advances or improved service experience is offered by the new device, the copyright holder does not want that development taking place, as that device is generally seen as a threat to its economic interests in the copyrighted material.[30]

D. THE RAPID EXPANSION OF §1201 APPLICATION IN THE WAKE OF *LEXMARK*

Section 1201 of the DMCA was once a relatively small puzzle piece in the copyright enforcement regime. However, as "smart" devices and technology have become significantly less expensive, the provision has become increasingly important.[31] One of the first major cases to involve §1201 concerned Lexmark and its printer ink cartridges designed specifically for use with Lexmark's own printers.[32] Lexmark sold refillable ink cartridges, but offered customers a sizable discount on "Prebate" toner that required users to return the empty cartridges to Lexmark to be refilled.[33] If users wanted to retain the right to refill the cartridges on their own or through a third party, a full priced option was available for purchase.[34] The "Prebate" cartridges came equipped with a rudimentary computer chip which calculated the amount of ink used over time and prevented the printer from operating when the ink was set to run out, regardless of whether the user had refilled the ink.[35]

A second company, Static Control Components ("SCC"), developed a computer chip that could communicate with the Lexmark printer and allow the refilled cartridge to satisfy the printer's "Toner Loading Program."[36] SCC began selling these "Smartek" computer chips to retailers offering cartridge-refilling

consumers are warned that a certain device may be more susceptible to security or other defects.).

28 *Id.*

29 *Id.*

30 Adam Thierer, *On Doctorow's "Adversarial Interoperability",* THE TECHNOLOGY LIBERATION FRONT (Aug. 29, 2020).

31 Cory Doctorow, *America's Broken Digital Copyright Law Is About to Be Challenged in Court*, THE GUARDIAN (July 21, 2016) https://www.theguardian.com/technology/2016/jul/21/digital-millennium-copyright-act-eff-supreme-court.

32 Lexmark Int'l, Inc. v. Static Control Components, Inc., 387 F.3d 522 (6th Cir. 2004).

33 *Id.* at 529.

34 *Id.* at 530.

35 *Id.*

36 *Id.*

services.[37] SCC's new computer chips were found to *not* violate §1201 largely because the lockout feature of the Lexmark program was not safeguarding a protected work.[38]

> Anyone who buys a Lexmark printer may read the literal code of the Printer Engine Program directly from the printer memory, with or without the benefit of the authentication sequence, and the data from the program may be translated into readable source code after which copies may be freely distributed.[39]

The concurrence of the opinion even went as far as to suggest that the computer chip's relative lack of sophistication added to its failure to rise to the level of a protectected work under §1201 and other copyright laws.[40] The core of the holding was that for computer systems to be protectable under copyright theories, there needed to be a creative aspect separate from the functional aspect of the targeted work.[41] Thus, a simple digital lockout feature like the printer cartridge computer chip could be bypassed through interoperability if the interoperating product included independently-created programs.[42]

In the years following the *Lexmark* decision, it became increasingly feasible for companies to add relatively sophisticated computer chips or other digital locking mechanisms to products that *could* rise to the level of a protected work under §1201. Companies now look at the inexpensive nature of embedded systems as an avenue to making §1201 a very useful tool in heading off any worthy attempts at adversarial interoperability.

For example, Hasbro is now using embedded computer chip systems in its current line of Nerf toy guns.[43] The plastic darts come equipped with RFID chips that are required for the gun to "fire."[44] The computer chips were introduced to provide users the ability to more accurately determine which toy gun was responsible for a "hit."[45] These chips serve the dual function of also preventing users from buying and using alternative darts found on the secondary

37 *Id.*

38 *Id.* at 549.

39 *Id.* at 547.

40 *Id.* at 552.

41 *Id.* at 529.

42 *Id.* at 546-47.

43 *Smart Dart*, NERF WIKI, https://nerf.fandom.com/wiki/Smart_Dart (last visited Oct. 20, 2020).

44 *Id.*

45 *See id.* (explaining that "[d]arts can be scanned to clarify who 'owns' which dart").

market.[46] While secondary darts can be purchased by the hundreds for around twenty dollars, the official Hasbro RFID-equipped rounds sell for ten dollars for twenty units.[47] As the toy guns read these computer chips, they "won't fire and will skip to the next chamber" if "the blaster detects an incompatible dart in the drum."[48]

These computer chip access locks are sophisticated and widespread.[49] Consequently, these types of electronic access locks are found in products like car parts, advanced toner and ink cartridges, electronics parts, coffee pods, and children's toys.[50] Essentially, this expansion of computer chip access control technology has led to §1201 becoming something of a first line of defense against adversarial interoperability.

E. ADVERSARIAL INTEROPERABILITY IN BIG TECH

Before the passage of the DMCA, and even to an extent after its passage, adversarial interoperability was generally allowed and not prohibited wholesale.[51] "Adversarial interoperability was once the driver of tech's dynamic marketplace, where the biggest firms could go from [the] top of the heap to scrap metal in an eyeblink, where tiny startups could topple dominant companies before they even knew what hit them."[52] Court decisions after *Lexmark* have shown a greatly expanded scope of §1201 application that is now a useful tool wielded by some manufacturers or patent holders.[53] As §1201 of the DMCA continues to limit

[46] Cory Doctorow, *Nerf Unveils "DRM for Darts,"* BOINGBOING (Sept. 24, 2019, 8:59 PM), https://boingboing.net/2019/09/24/unauthorized-darts.html?_ga=2.268342413.2078055967.1574439202-594014214.1574439202.

[47] Paul Ziobro, *Parents, Beware: Nerf's Newest Blasters Won't Fire Knockoff Darts*, WALL ST. J. (Sept. 23, 2019), https://www.wsj.com/articles/parents-beware-nerfs-newest-blasters-wont-fire-knockoff-darts-11569240001.

[48] *Id.*

[49] *See, e.g.* Sean Gallagher, *HP's DRM Sabotages Off-Brand Printer Ink Cartridges with Self-Destruct Date*, ARS TECHNICA (Sept. 19, 2016) https://arstechnica.com/information-technology/2016/09/hps-drm-sabotages-off-brand-printer-ink-cartridges-with-self-destruct-date/ (describing HP's chip lock technology allowing printers to label off-brand cartridges as "damaged" and in need of replacement).

[50] *Id.*; *see also* Kyle Wiens, *WTF! It Should Not Be Illegal to Hack Your Own Car's Computer*, WIRED (Jan. 23, 2015, 6:00 AM), https://www.wired.com/2015/01/let-us-hack-our-cars/ (describing the complex web of computer chips built into modern cars to prevent owners from using certain after-market parts or customizations); *see also Keurig 2.0 Coffeemakers Have a Built-In Detective*, MOUSEPRINT (May 4, 2015, 6:04 AM), https://www.mouseprint.org/2015/05/04/keurig-2-0-coffeemakers-have-a-built-in-detective/.

[51] Doctorow, *supra* note 5.

[52] *Id.*

[53] *Unintended Consequences: Sixteen Years under the DMCA*, ELECTRONIC FRONTIER FOUND. (Sept. 2014), https://www.eff.org/files/2014/09/16/unintendedconsequences2014.pdf.

the ability for potential competitors to develop interoperable products or services that directly conflict with the dominant party's service, the dominant parties have experienced tremendous growth and exert significant control over the marketplace.[54] Ironically, many of these tech giants reached their dominant status after using adversarial interoperability to compete with more well-established competitors during their formative stages.[55] Facebook used adversarial interoperability to take on Myspace, and now Facebook boasts nearly 2.5 billion users, many of whom are dissatisfied with the service but have no viable alternative to join.[56]

Under normal market conditions, a steadily-growing company with over two billion customers would be a perfect target for investors in competing businesses.[57] Instead, companies like Facebook are firmly cemented in a position of dominance, as user and service information remain protected behind digital locks and competing startups essentially have a nonexistent chance of disrupting the market.

Many useful and valuable tech ideas are not inherently revolutionary. They are simply a logical leap from already existing technology and push the market forward. Because tech giants have a stranglehold on the use of their products and infrastructure, potential competitors cannot develop new products that are aimed at improving the consumers' overall experiences.[58] The widespread dissatisfaction with platforms like Facebook creates a large target for tech startups to focus on, but innovators are severely limited in their efforts to deliver new products.[59]

F. THE KILL. ZONE

The dominance of big tech companies is poised to remain intact. While entrepreneur and tech startups used to play a huge role in the American economy, the creation of startups is close to a 40-year low.[60] Investors,

54 *Id.*

55 Doctorow, *supra* note 5 (discussing how Facebook expedited its own development by creating a tool that allowed its subscribers to continue communicating with Myspace subscribers, decreasing the utility of Myspace's product, and serving as a recruiting tool for its own service).

56 *Id.* (discussing how Facebook users are "stuck" with the service because their friends are also using the service).

57 *Id.*

58 *Id.*

59 Doctorow, *supra* note 5.

60 Heather Long, *Where Are All the Startups? U.S. Entrepreneurship Near 40-Year Low*, CNN (Sept. 8, 2016, 10:10 AM), https://money.cnn.com/2016/09/08/news/economy/us-startups-near-40-year-low/index.html (discussing how big tech companies are beginning to adopt more of an entrepreneurial culture that captures much of what startups can offer and that the "Great Recession" had a fatal impact for startups that has not yet been remedied).

developers, and entrepreneurs "are now wary of entering into direct competition with giants like Google and Facebook. Both companies, along with Amazon and Apple, effectively have a 'Kill Zone' around them—areas not worth operating or investing in, since defeat is guaranteed."[61] That guaranteed defeat comes in the form of either an outright market loss to the dominant company or having no choice but to sell to the dominant company with which they would otherwise have competed.[62] The "Big Five" tech companies (Alphabet, Amazon, Apple, Facebook, and Microsoft) have completed purchases and acquisitions of nearly 500 competing companies in the past decade.[63] Investors see the "Kill Zone" as being a very real thing, with angel investors noting that they will only invest "in things that are not in Facebook's, Apple's, Amazon's, or Google's kill zone."[64] While consolidation is not specific to the big tech industry, "initial venture-capital financings have declined by much more in the past few years than in comparable industries. This suggests the kill zone is real."[65]

Given the tech giants' current footprint in digital communication, it is difficult for startups to invest in and develop competing technology in that space.[66] Development of these types of products requires access to cloud services, social and search advertisements, and app stores. Amazon and Google control the largest cloud services products, and tech giants generally control app stores.[67] As such, the entry of these innovators into a dominant player's market can be closely monitored by that dominant player. It is not hard to see how this level of access in the development stage would give the dominant player yet

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[61] Asher Schechter, *Google and Facebook's "Kill Zone": "We've Taken the Focus Off of Rewarding Genius and Innovation to Rewarding Capital and Scale"*, U. CHI. BOOTH SCH. BUS. STIGLER CTR.: PROMARKET BLOG (May 25, 2018), https://promarket.org/google-facebooks-kill-zone-weve-taken-focus-off-rewarding-genius-innovation-rewarding-capital-scale/.

[62] *Id.*

[63] *Id.* (describing the resources the Big Five have at their disposal to absorb competing entities without any resistance at all from antitrust authorities).

[64] *Id.*

[65] Noah Smith, *Big Tech Sets up a "Kill Zone" for Industry Upstarts*, BLOOMBERG (Nov. 7, 2018, 7:00 AM), https://www.bloomberg.com/opinion/articles/2018-11-07/big-tech-sets-up-a-kill-zone-for-industry-upstarts (discussing a study looking at investments in internet retail, internet software, and social/platform software, areas directly relating to the industries dominated by Amazon, Google, and Facebook); *see also* James Pethokoukis, *A New Analysis Takes a Shot at the Idea Big Tech Has Created a "Kill Zone" for Startups*, AMERICAN ENTERPRISE INSTITUTE: AEIDEAS (July, 12 2018) https://www.aei.org/economics/a-new-analysis-takes-a-shot-at-the-idea-big-tech-has-created-a-kill-zone-for-startups/ (discussing how the one major study conducted which criticizes the view that major tech companies have created a "kill zone" was funded by Facebook itself).

[66] *Id.*

[67] James Pethokoukis, *Are the Mega-Platforms Good or Bad for Tech Innovation? An Interesting Conversation*, AMERICAN ENTERPRISE INSTITUTE: AEIDEAS (Nov. 13 2017), https://www.aei.org/economics/are-the-mega-platforms-good-or-bad-for-tech-innovation-an-interesting-conversation/.

another advantage. Essentially, investors can see the threat of the dominant player either coming in and developing a similar product (with the benefit of more resources) or buying out the innovator early to then sit on the new technology.[68]

While much innovation used to happen in the "fabled garage," spurred by innovators in unsophisticated startups, the world of technology innovation and product development has become "a playground for giants."[69] Smaller startups no longer have the same potential they did twenty years ago. The chances that a startup will succeed continue to drop, and the Big Five own or control much of the digital infrastructure necessary to play in the tech space.[70] In other words, "the smaller guys must pay a sizable tax just for existing."[71] The current legal framework allows these giants to continue operating unchallenged.[72]

As an illustrative example of this kill-zone's implications, "Facebook and its subsidiaries are over ten times more valuable than the next two largest social media companies outside China—Twitter and Snapchat—combined."[73] As Facebook continues to grow in power and market share, the ability for any potential competitors to penetrate the market takes a sizable hit.[74] Steady, unchecked growth enables Facebook to continue to buy out potential competitors (like Instagram) and to "wag[e] wars . . . against others (like Snapchat)" when it cannot buy them out.[75]

Consequently, users have no viable alternatives in the social media space, regardless of users' thoughts on Facebook's censorship of certain public

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[68] Farhad Manjoo, *How the Frightful Five Put Start-Ups in a Lose-Lose Situation*, N.Y. TIMES (Oct. 18, 2017), https://www.nytimes.com/2017/10/18/technology/frightful-five-start-ups.html.

[69] *Id.*

[70] *Id.*

[71] *Id.* (describing how smaller startups must pay money to the dominant competitors for using tech infrastructure like clouds, app stores, ad networks, and venture firms).

[72] Schechter, *supra* note 61 (quoting Albert Wenger, Managing Partner, Union Square Ventures, Remarks at the Stigler Center's 2018 Antitrust and Competition Conference (Apr. 20, 2018)) ("Facebook's position is not contestable by a new startup, because [the new startup] can't create software that would let people participate simultaneously without extra effort in both my system and Facebook's system, because Facebook can shut me out.").

[73] Bennett Cyphers & Danny O'Brien, *Facing Facebook: Data Portability and Interoperability Are Anti-Monopoly Medicine*, ELECTRONIC FRONTIER FOUND. DEEPLINKS BLOG (July 24, 2018), https://www.eff.org/deeplinks/2018/07/facing-facebook-data-portability-and-interoperability-are-anti-monopoly-medicine.

[74] *See* Will Oremus, *The Search for the Anti-Facebook: Why Rival Social Networks Keep Emerging—And Keep Failing*, SLATE (Oct. 28, 2014) https://slate.com/technology/2014/10/ello-diaspora-and-the-anti-facebook-why-alternative-social-networks-cant-win.html (describing viable alternative social networks and their inability to take hold because no matter how many users they gain, they still feel like "ghost towns" compared to the wildly popular Facebook).

[75] *Id.*

speech,[76] performance of massive psychological experiments on users without knowledge or permission,[77] and sizable influence on election results.[78] These problems are significantly worsened when there are no viable competing products for consumers to choose.[79] Virtually everyone using the same platform makes potentially dangerous speech even more dangerous and arguably necessitates steps to curb that speech.[80] Large user pools are easy targets for advertising, and even psychological, experimentation without user knowledge.[81] This same user pool represents a large portion of voters, making information campaigns easier and more direct than if conducted over numerous platforms.[82]

G. DMCA §1201 LITIGATION

Section 1201 of the DMCA has been the subject of many lawsuits since it took effect in 2000, and predictably, the litigation focuses largely on instances

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[76] Betsy McCaughey, *Don't Let Zuckerberg Kill Free Speech*, REALCLEAR POLITICS (May 15, 2019), https://www.realclearpolitics.com/articles/2019/05/15/dont_let_zuckerberg_kill_free_speech_140331.html (detailing how representatives from Facebook, Google, and Twitter joined with European leaders to propose limitations on free speech because "[t]he question of what speech should be acceptable and what is harmful needs to be defined by regulation, by thoughtful governments").

[77] Samuel Gibbs, *Facebook Apologises for Psychological Experiments on Users*, THE GUARDIAN (July 2, 2014), https://www.theguardian.com/technology/2014/jul/02/facebook-apologises-psychological-experiments-on-users (detailing a Facebook executive's public apology for conducting a psychological experiment on nearly 700,000 users by selectively removing emotional words from users' news feeds to monitor effects on "likes" and reactions to posts).

[78] George Riedel, *Facebook and Election Influence: Will History Repeat Itself?*, FORBES (Aug. 8, 2019), https://www.forbes.com/sites/hbsworkingknowledge/2019/08/08/facebook-and-election-influence-will-history-repeat-itself/#4a42ff48126b (detailing how technology-driven efforts to sway voter opinions in the 2016 election reached new heights, with Facebook being the primary weapon of choice for influencers as far away as Russia, and highlighting how these efforts were so successful that "spending by U.S. politicians in the 2018 midterm elections was up 25 times from 2014 midterms").

[79] Ezra Klein, *Facebook Is a Capitalism Problem, Not a Mark Zuckerberg Problem*, VOX (May 10, 2019) https://www.vox.com/recode/2019/5/10/18563895/facebook-chris-hughes-mark-zuckerberg-break-up-monopoly.

[80] Luke Darby, *Facebook Knows It's Engineered to "Exploit the Human Brain's Attraction to Divisiveness"*, GQ (May 27, 2020) https://www.gq.com/story/facebook-spare-the-share.

[81] Kashmir Hill, *Facebook Manipulated 689,003 Users' Emotions for Science*, FORBES (June 28, 2014) https://www.forbes.com/sites/kashmirhill/2014/06/28/facebook-manipulated-689003-users-emotions-for-science/#623643a9197c; *see also* Andrew Hutchinson, *Facebook Adds a New "Experiments" Element to Ad Manager to Help Optimize Ad Performance*, SOCIAL MEDIA TODAY (Mar. 31, 2020) (describing Facebook's addition of an explicitly experimental function available to advertisers to better understand consumers).

[82] Dipayan Ghosh & Ben Scott, *Facebook's New Controversy Shows How Easily Online Political Ads Can Manipulate You*, TIME (Mar. 19, 2018) https://time.com/5197255/facebook-cambridge-analytica-donald-trump-ads-data/.

where copyright holders challenge adversarial interoperability.[83] Most of these cases involve competing companies developing actual, tangible goods designed to have interoperability capacity with an established product.[84] In *United States v. Reichert*, the court upheld a man's conviction after he was found to have modified people's video game consoles to allow them to run other software on the machines.[85] Reichert provided the service to people who had already legally purchased or acquired the video game consoles and did not sell any additional services or subscriptions that were counter to the video game console developer's interests.[86]

Other examples have included litigation surrounding the use of third-party replacement automatic garage door openers, third-party replacement parts for cars or trucks, and the unlocking or "jailbreaking" of smartphones to be used on any wireless service network.[87] While most of these cases deal with the development of tangible products that offer consumers interoperable services, the Craigslist example is rather different. Craigslist initiated two suits which dealt with a party actually creating a service that allowed for adversarial interoperability by letting consumers access the information or infrastructure of a competing party (essentially the same type of adversarial interoperability used by Facebook when allowing users to access Myspace contacts and information).[88]

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[83] *See, e.g.* Lexmark Int'l, Inc. v. Static Control Components, Inc., 387 F.3d 522 (6th Cir. 2004) (challenging third party printer cartridges).

[84] *See* United States v. Elcom Ltd., 203 F. Supp. 2d 1111 (N.D. Cal. 2002) (concerning the creation of an add-on that allowed users to remove PDF file restrictions enabling e-book owners to store and access protected files on any e-reading device); Sony Comput. Entm't. Am., Inc. v. Divinio, Inc., 457 F. Supp. 2d 957 (N.D. Cal. 2006) (concerning the creation of "mod chips" that enabled Playstation owners to run third-party software on the consoles); Apple, Inc. v. Psystar, Corp., 673 F. Supp. 2d 931 (N.D. Cal. 2009) (dealing with the creation and sale of computer systems that worked with a modified version of Apple's OS X operating system).

[85] 747 F.3d 445 (6th Cir. 2014).

[86] *Id.* at 448.

[87] *See* Chamberlain Grp., Inc. v. Skylink Techs., Inc., 381 F.3d 1178 (Fed. Cir. 2004) (discussing defendant business of making replacement garage door openers that involved reverse engineering the replacements by accessing the original computer code); United States v. Wittich, 54 F. Supp. 3d 613 (E.D. La. 2014) (discussing defendant business of selling replacement Mercedes-Benz parts and diagnostic tools that would allow individuals to load diagnostic software onto third-party electronic devices, meaning consumers could diagnose issues with their cars without going to the dealership); TracFone Wireless, Inc. v. Dixon, 475 F. Supp. 2d 1236 (M.D. Fla. 2007) (discussing defendant business of unlocking or jailbreaking cellphones to allow consumers to connect purchased phones to any wireless service network they choose).

[88] *See generally* Craigslist, Inc. v. Naturemarket, Inc., 694 F. Supp. 2d 1039 (N.D. Cal. 2010) (concerning the defendant's operation of a website that helped automate Craigslist ad postings); Craigslist, Inc. v. Hubert, 278 F.R.D. 510 (N.D. Cal. 2011) (similar to *Naturemarket*, but here the competing service focused on allowing users to store information for ads that could be uploaded to market websites at later times).

H. CURRENT, ONGOING LITIGATION

A federal judge partially denied summary judgment in a case challenging §1201 of the DMCA as being unconstitutional on First Amendment grounds.[89] This lawsuit challenges §1201 because the plaintiffs believe it "has interfered with educational uses of copyrighted works, accessibility, security research, remix art, and even your ability to repair your own car or tractor."[90] While the results of this lawsuit are likely a long way off, it does represent the possibility that §1201 could be struck down on constitutional grounds. This Note, however, will critique §1201 not on constitutional grounds, but on market principles of competition and innovation. As of the time of this publication, there are no lawsuits challenging the law on those grounds, which may not be feasible, but this paper advocates for legislative efforts to remedy the law's deficiencies.

III. ANALYSIS

Section 1201 of the Digital Millennium Copyright Act is controversial. A cost-benefit analysis shows that the benefits exceed the costs in repealing the provision and allowing for adversarial interoperability. This section will analyze those costs and benefits and then look at an illustrative pair of cases to demonstrate what sorts of competition would have been held as permissible in the absence of the legislation's restrictive provision.

A. ARGUMENTS FOR ADVERSARIAL INTEROPERABILITY

Adversarial interoperability facilitated the rise of the current dominance of the tech giants.[91] Proscribing any further adversarial interoperability cements the tech giants' dominant status and disincentivizes competition that benefits the average consumers.[92]

The benefits of adversarial interoperability can be widespread.[93] Cases demonstrate an attempt to create tangible goods which open new avenues of

[89] Memorandum Opinion, Green v. U.S. Dept. of Justice, No. 1:16-cv-01492-EGS (D.D.C. July 27, 2019).

[90] Kit Walsh, *First Amendment Case Against Restrictive Copyright Law Can Proceed, Says Judge*, ELECTRONIC FRONTIER FOUND. DEEPLINKS BLOG (June 28, 2019), https://www.eff.org/deeplinks/2019/06/first-amendment-case-against-restrictive-copyright-law-can-proceed-says-judge.

[91] Doctorow, *supra* note 5.

[92] Cory Doctorow, *Adversarial Interoperability*, ELECTRONIC FRONTIER FOUND. (Oct. 19, 2019) https://www.eff.org/deeplinks/2019/10/adversarial-interoperability.

[93] Cory Doctorow, *Interoperability and Privacy: Squaring the Circle*, TECH POLICY GREENHOUSE BY TECHDIRT (June 10, 2020) https://www.techdirt.com/articles/20200609/13350244675/interoperability-privacy-squaring-circle.shtml.

usability for product owners as in the Playstation case.[94] Perhaps more important, however, would be proscribed competition involving intangible uses of platform information. This is the kind of adversarial interoperability used by Facebook when it overtook Myspace, and this will be the type of adversarial interoperability most useful in creating genuine competition for the tech giants.[95]

When Facebook was being rolled out, Myspace was the dominant player in the social media sphere.[96] Myspace had a catalog of users, and thus, Facebook designed a tool that allowed its own users to communicate with Myspace users.[97] Facebook's messaging system could directly message individuals on Myspace which took away Myspace's status as the only viable option and served as a direct advertisement to Myspace users of Facebook's capabilities.[98] Myspace was not an untouchable competitor, but a competitor that could serve as a resource with a "reservoir of conveniently organized potential users. . . that could be easily reached with a compelling pitch about why they should switch."[99] Facebook now has nearly 2.5 billion users, many of whom are dissatisfied with the platform and its product.[100] This presents a unique opportunity for a competitor to make a move and keep Facebook on its toes.

This competition can benefit consumers by either directly challenging a firm's dominance in the same way Facebook did Myspace or by encouraging a pluralistic dismantling of the platforms altogether. If a competitor could reverse engineer a way to access communication channels or contact information of another party's website membership, that competing company could allow members to partially detach from the service and enable them to defect to a small, tailored alternative.

For example, Facebook has individual group pages and other sites have marketplaces or forums. A competing entity, however, could target the highly specific and unique needs of specialized groups, like cancer survivors, and create a network or service for those individuals. Adversarial interoperability would allow them to continue to exchange messages with members who still have not left the dominant platform. The new platform could encrypt or otherwise

94 *See, e.g.*, *Sony*, 457 F. Supp. 2d 957 (concerning the creation of "mod chips" that enabled Playstation owners to run third-party software on the consoles).

95 Doctorow, *supra* note 5.

96 Harrison Jacobs, *Former MySpace CEO Explains How Facebook Was Able to Dominate Social Media Despite Coming Second*, BUSINESS INSIDER (May 9, 2015) https://www.businessinsider.com/former-myspace-ceo-explains-why-facebook-was-able-to-dominate-social-media-despite-coming-second-2015-5.

97 Doctorow, *supra* note 5.

98 *Id.* (demonstrating the appeal of Facebook's messaging technology, especially because the messages appeared on Myspace with a footer describing Facebook's superiority over Myspace).

99 *Id.*

100 Doctorow, *supra* note 5.

protect parts of messages going out to the other platform, with footer messages letting the recipient know how to join the new platform. Imagine someone created an account with Diaspora, a Facebook alternative premised on the assumption that decentralized data caches are superior to data hosted on central servers. To reach Facebook contacts, this individual would need interoperability for messages to reach across platforms. There is certainly an argument to be made that value exists in having large numbers of people reachable on one platform—network effects are powerful, after all.[101] Nonetheless, the benefits of change would likely outweigh those of the status quo.

This scenario has the potential to serve two important functions. First, provide consumers the opportunity to find and use a service that is tailored to their needs. Dominant platforms are often used out of convenience, and it is nearly impossible to start from scratch.[102] Second, inform the dominant platform of the specific services or capabilities its users are genuinely interested in—at least interested in enough to be willing to leave the platform—and they can attempt to change course.[103] The whole purpose of competition is to continue pushing and encouraging advancement.

There are billions of people with countless needs and interests. If dominant platforms with millions of subscribers are subject to competition from innovators attuned to those needs, the dominant player either improves or is nibbled to death by ducks, leaving behind a constellation of community-driven alternatives.

Large tech companies have proven very resistant to allowing such interoperability.[104] Facebook filed lawsuits to shut down Power Ventures, a tech company that designed a platform that would allow users to manage their social media accounts or profiles from a single website.[105] Facebook wanted to maintain complete control over all user data, and as the sheer size of its user base increases, that control becomes significantly more important.[106]

As an alternative to forcing Facebook to allow competing platforms to communicate with and potentially siphon off users, adversarial interoperability may also serve to remedy some of the real consequences of Facebook controlling

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101 Doctorow, *supra* note 5.

102 Dina Srinivasan, *The Antitrust Case Against Facebook*, 16 BERKELEY BUS. L.J. 1 (2019).

103 *Id.* (describing Facebook users' attempts at using third-party ad-blocking software giving Facebook notice of those desires, and Facebook's unsuccessful attempts to demonstrate a change in course to acknowledge that user interest).

104 Doctorow, *supra* note 5.

105 *Facebook v. Power Ventures*, ELECTRONIC FRONTIER FOUND. DEEPLINKS BLOG, https://www.eff.org/cases/facebook-v-power-ventures (last visited Sept. 28, 2020) (describing the 2008 lawsuit in which Facebook successfully sued Power Ventures under various legal theories because of its accessing Facebook's data); *Facebook, Inc. v. Power. Ventures, Inc.*, 844 F.Supp. 2d 1025 (N.D. Cal. 2012).

106 *Id.*

so much user data, such as the Cambridge Analytica debacle.[107] This problem emerged when a political consulting firm was given access to personal information for over 87 million Facebook users through the creation of a quiz developed specifically through Facebook's own application programming interface ("API").[108] While critics of adversarial interoperability maintain that tech companies must "be able to observe and analyze everything every user does, both to train automated filers and to allow them to block abusers" and allowing interoperability weakens that ability to monitor and control users' bad behavior,[109] that line of thinking relies on the faulty assumption that a party like Facebook actually has the will and ability to stop billions of people from abusing the systems and each other.[110]

Facebook's sheer size has created tremendous problems and is indicative of others.[111] The company is obsessed with active user metrics, leading to the creation and implementation of "addictive design theories."[112] One such measure was the creation of the "People You May Know" feature.[113] This seemingly innocuous addition allows users to digitally connect their real-life network by accessing users' address books in efforts even Facebook officers deemed "questionable contact-importing practices."[114] This practice led to an almost unbelievable string of problems.[115] One man was connected to his secret biological daughter because the couple he donated sperm to was still in his address book, and psychologists' patients were connected because they all had contact information in a common address book.[116] Because of Facebook's continual hoarding of user information, there is simply too much of it in one place to comfortably believe data security is genuinely feasible.[117]

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107 *See* Ghosh and Scott, *supra* note 82 (discussing major issues stemming from Facebook's most famous data scandal).

108 Alvin Chang, *The Facebook and Cambridge Analytica Scandal, Explained with a Simple Diagram*, VOX, (May 2, 2018), https://www.vox.com/policy-and-politics/2018/3/23/17151916/facebook-cambridge-analytica-trump-diagram (outlining how Cambridge Analytica, through Facebook's API system, created a quiz that allowed the company to harvest and then sell data from 87 million users without their knowledge or permission).

109 Doctorow, *supra* note 5.

110 *Id.*

111 Hannah Kuchler, *How Facebook Grew Too Big to Handle*, FINANCIAL TIMES, (Mar. 28, 2019), https://www.ft.com/content/be723754-501c-11e9-9c76-bf4a0ce37d49.

112 *See Id.*(quoting a former Google employee discussing "the industry's relentless pursuit of user time and attention").

113 *Id.*

114 *Id.*

115 *Id.*

116 *Id.*

117 Doctorow*, supra* note 5.

Nothing about Facebook's past gives a strong or reasonable inclination that the organization possesses the requisite will or capacity to secure user data or interests and to prevent the next Cambridge Analytica scandal.

B. ARGUMENTS AGAINST ADVERSARIAL INTEROPERABILITY

Major players would vigorously condemn any measure that significantly allowed for adversarial interoperability.[118] Some of the bases for this stance would have merit. Adversarial interoperability can be dangerous or undesirable.[119] A recent suit was filed by WhatsApp (owned by Facebook) against an Israeli company for using spyware fitted to the WhatsApp platform to infect phone and surveil 1,400 users.[120] The defendant's conduct was expressly forbidden by the WhatsApp terms of service.[121] It involved the development of special malware that translated encrypted messages from WhatsApp to allow for that content to be mined.[122] Opponents of adversarial interoperability would contend that such invasions of privacy could only be prevented by their ability to sue the offending parties. Furthermore, Facebook's sheer size and practice of hoarding metadata can help in these situations. It would allow analysts to dig through the data to try and learn something from the hacking attempts and to boost security using that learned information.[123]

However, the idea that allowing for adversarial interoperability would prevent major players from suing or trying to prevent NSO type infractions holds little water. Indeed, WhatsApp's complaint against NSO includes causes of action based in the Computer Fraud and Abuse Act, the California Comprehensive Computer Data Access and Fraud Act, and contract breach theories.[124]

If a party chooses to use adversarial interoperability measures to carry out illegal surveillance activities or to pursue another endeavor that obviously violates public policy, there are enforcement regimes in place to tackle those problems as

118 *See id.*(describing major players as "notorious" opponents of interoperability).

119 Thierer, *supra* note 30.

120 Complaint and Demand for Jury Trial at 2, WhatsApp Inc. v. NSO Group Tech. Ltd., No. 3:19-cv-07123-JSC (N.D. Cal. Oct. 29, 2019), 2019 WL 5571028. *See also* Nicole Perlroth, *WhatsApp Says Israeli Firm Used its App in Spy Program,* N.Y. TIMES (Oct. 29, 2019), https://www.nytimes.com/2019/10/29/technology/whatsapp-nso-lawsuit.html.

121 *Id.*

122 *Id.*

123 Nicholas Weaver, *Lessons (So Far) From WhatsApp v. NSO*, LAWFARE BLOG (Nov. 5, 2019), https://www.lawfareblog.com/lessons-so-far-whatsapp-v-nso (detailing Facebook's ability to notify each individual hacking target and boosting privacy and security for those individuals).

124 Complaint and Demand for Jury Trial, WhatsApp Inc. v. NSO Group Tech. Ltd., No. 3:19-cv-07123-JSC (N.D. Cal. Oct. 29, 2019), 2019 WL 5571028.

they come up.[125] Certain tech companies might have a diminished cache of metadata to use when designing security measures if competitors absorb some of their market share.[126] This alone is no reason to discourage competition. Just because a provider has grown to enormous size and has commensurate resources does not mean its dominant status should be protected just for the sake of continuity.

Other arguments center around the notion that adversarial interoperability amounts to theft. Whether it is a web browser extension that allows for users to block ads or measures that allow access to a platform's user base, something of value is lost by the target platform.

While the dominant players' use of adversarial interoperability was a vehicle for progress, the current uses are vehicles for crimes. It is hypocritical to make use of a tool to establish viability in the market and then try to ensure the tool can never be used again.

C. THE CRAIGSLIST CASES

Craigslist initiated several lawsuits challenging other parties from offering services that worked alongside the Craigslist platform.[127] In these cases, the defending party created a service that allowed for its subscribers to automatically post its sales advertisements on Craigslist's platform.[128] The creation of these services and software programs violated the Craigslist terms of service agreed to by the defending parties.[129]

While there are certainly valid concerns to be raised concerning spam and automated advertisements, giving consumers the opportunity to save and store ad information for later use on the website is a valuable service that does not threaten the existence of the primary platform. In *Kerbel*, the utility of the service

[125] *See, e.g. Abuse Using Technology*, WOMENSLAW.ORG (Aug. 23, 2016) https://www.womenslaw.org/about-abuse/abuse-using-technology/ways-abusers-misuse-technology/electronic-surveillance-spying-2 (describing applicable laws and statutes regarding unauthorized digital surveillance and harassment).

[126] *See* Brian Contos, *Making Metadata Meaningful for Network Security*, CSOONLINE (Oct. 30, 2013) https://www.csoonline.com/article/2135537/making-metadata-meaningful-for-network-security.html (describing the usefulness of metadata caches in developing security measures).

[127] *See* Craigslist, Inc. v. Naturemarket, Inc., 694 F. Supp. 2d 1039, 1047-49 (N.D. Cal. 2010); *see also* 278 F.R.D. 510, 512; *see also* Craigslist, Inc. v. Kerbel, No. C-11-3309 EMC, 2012 WL 3166798 at *1. (N.D. Cal. Aug. 2, 2012).

[128] Maria Dinzeo, *Craigslist Seeks to Stop Auto-Posting Software*, COURTHOUSE NEWS (Oct. 8, 2009) https://www.courthousenews.com/craigslist-seeks-to-stop-auto-posting-software/.

[129] *Id.*

was ignored entirely in the court's granting of a default judgment for Craigslist on the §1201 claims.[130]

If a platform is concerned with spam messages or other problems that can arise from competitor access to digital infrastructure, reasonable restrictions can be put into place to discourage or penalize flagrant violations.[131] However, wholesale proscription of third-party services from accessing platforms only serves to prop up the host platform at the expense of the consumer experience.[132]

D. THE FRENCH CONNECTION: LESSONS FROM FRANCE'S INTEROPERABILITY REGULATIONS

As laws similar to §1201 of DMCA have developed in other countries, the impact of technological protection measures (TPM) have been felt by consumers globally. In response to consumer criticisms, the French Parliament passed the "Loi Relative au Droit d'Auteur et aux Droits Voisins dans la Société l'Information" (DADVSI) in 2006, which attempts "to counterbalance the rights granted to copyright owners, through the protection of TPMs, with guarantees for consumers of cultural goods, notably in terms of interoperability of these TPMs."[133]

DADVSI included a requirement that TPMs not prevent "effective interoperability between digital file formats and the various software and devices on which they can be played."[134] In 2007, France created l'Autorité de Régulation des Mesures Techniques (ARMT), to enforce the interoperability mandate.[135] This independent authority could impose hefty fines.[136] This apparatus was limited in effect because the rules defining the parties eligible to

[130] Craigslist, Inc. v. Kerbel, No. C-11-3309 EMC, 2012 WL 3166798 at *10 (N.D. Cal. Aug. 2, 2012).

[131] *See* Don Marti, *Note on Adversarial Interoperability*, ZGP BLOG (Nov. 16, 2019) https://blog.zgp.org/adversarial-interoperability/ (describing Usenet as a cautionary tale against adversarial interoperability, but suggesting stronger, dedicated spam filters as a solution).

[132] *See* Doctorow, *supra* note 5 (explaining that growing reliance on digital rights management creates legal obligations to use products in only the way developers wish, boosting their profits at the expense of the user).

[133] Jane K. Winn & Nicolas Jondet, *A New Deal for End Users? Lessons from a French Innovation in the Regulation of Interoperability*, 51 WM. & MARY L. REV. 547, 552 (2009), https://digitalcommons.law.uw.edu/faculty-articles/141.

[134] *Id.* at 555 (describing how French lawmakers were particularly focused on issues with digital music and Apple's use of TPMs to tether iTunes music purchases to iPod device playback).

[135] *Id.*

[136] *Id.*

bring an interoperability case forward were so strict that the rules "might ensure that no interoperability case would ever be brought."[137]

While there are certainly limitations in what the regime can accomplish, the effort was not completely toothless. The existence of a regulatory body "may have played an important part in Apple's decision in early 2007 to push record labels to offer digital music without TPMs . . . the prospect of dealing with French regulators could have been the deciding factor in the company's change of direction."[138]

The United States could similarly pursue a position with the interests of consumers in mind. French efforts were focused on access to materials with a cultural connection: music, the arts, and the like.[139] American efforts could also be narrow in scope. Regardless, steps taken by the American government to legitimize interoperability would send a clear message to dominant tech players that their time of invulnerability from competition is over.

IV. CONCLUSION

The dominant technology companies competed to reach their statuses as industry titans. In a world rapidly becoming more technology-dependent, innovation and improvements are more important than ever. Allowing tech giants to be insulated in their positions of power does not enhance the consumer experience. By subjecting tech giants to the same competitive tactics they used to reach levels of success, consumers can get what they want and tech companies will be forced to improve. These improvements are wanted and needed. As tech giants continue to grow, the threat they pose to competition and notions of data security also grow. The United States should take steps to legitimize interoperability and inform the marketplace of such efforts. This ultimately promotes fairness, innovation, and consumer interests.

[137] *Id.* at 561 (explaining that this avenue is open only to a select group of tech-related companies such as software publishers, technical system manufacturers, or service providers).

[138] *Id.*

[139] *Id.* at 555.