

# MAN, MOD, AND LAW: REVISITING THE LAW OF COMPUTER GAME MODIFICATIONS

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In late 2004, I wrote a paper for a seminar on Computer Law while a 3L at Northwestern on copyright aspects of computer game modifications (“mods”). I was proud of the piece, and the following year it was published in the Chicago-Kent Journal of Intellectual Property Law.<sup>1</sup> The title was meant to be a play on a verse from Bob Dylan’s song Maggie’s Farm, with the verse “[w]ell, she talks to all the servants/About man and God and law,” which I naturally mangled into “Mod, Man, and Law.”<sup>2</sup>

The idea of the piece, in a nutshell, was that there were two different types of mods and that their differences

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<sup>1</sup> Zvi Rosen, *Mod, Man, and Law: A Reexamination of the Law of Computer Game Modifications*, 4 CHI.-KENT J. INTELL. PROP. 196 (2005).

<sup>2</sup> One of the matters I hoped to remedy with this piece.

resulted in different types of copyright protection.<sup>3</sup> More specifically, I argued that a mod which rises to the level of a “total conversion” might not be a derivative work of the original game, but instead might be an independent work, capable of its own copyright protection without reference to the original work. I then turned to the question of whether the original game’s license agreement might be able to prevent the legal creation of an otherwise lawful total conversion, including doctrines of preemption and copyright misuse. Finally, I concluded by urging game developers and publishers should embrace mods, and even allow mod developers to charge for their creations, provided of course that the mods require a legitimate paid-for version of the original game.

In this paper, written for the wonderful IP Scholarship Redux Conference at UNH Law, I’ve been given a chance to do something we rarely get to do in academic writing—to revisit what I wrote and explore what I got right, what I got wrong, and what has yet to be decided. PC gaming has changed a lot in thirteen years, and the law has changed with it – to a degree. While the law has perhaps failed to keep up, though, mods remain more popular than ever. The gaming industry has adapted to the challenges and opportunities they offer and has increasingly shown a willingness to work with third-party creators, even sharing profits with them. Given that the electronic entertainment industry is now dramatically larger in terms of grosses than the film industry,<sup>4</sup> mods will continue to be even more important.

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<sup>3</sup> Rosen, *supra* note 1, at 201–204.

<sup>4</sup> Patrick Shanley, *Why Aren’t Video Games as Respected as Movies*, HOLLYWOOD REP. (Dec. 14, 2017, 9:00 AM), <https://www.hollywoodreporter.com/heat-vision/why-arent-video-games-as-respected-as-movies-1067314> (“[T]he video game industry earned \$30.4 billion in 2016 in the United States. Films, meanwhile, generated \$11.6 billion in total box office revenue in 2016. This does

## I. ORIGINS OF THE PROJECT

As a savvy reader might assume, the project arose from personal experience with PC games, mostly in the late 90s through the early 00s. PC game mods existed even earlier (for instance *Castle Smurfenstein*, a loose parody of the original *Castle Wolfenstein* from 1981)<sup>5</sup> but took off in earnest with two parallel developments – the rise of the first-person shooter genre in the early 1990s and the concomitant rise of the World Wide Web, which made sharing mods much simpler than it had been before.<sup>6</sup>

The three-dimensional (“3D”) shooter genre began in earnest with the release of *Wolfenstein 3D* in 1992 (inspired by the 1981 original) by id Software.<sup>7</sup> Computers at the time didn’t have the power to render an action game in real 3D, but id’s chief programmer realized that if the game set the perspective of the player to be in first person walking along a flat surface, you don’t need a real 3D environment to simulate the experience of moving in three dimensions.<sup>8</sup> The result was a 3D action game that worked on computers of the day, and it was a critical and commercial

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not include home entertainment sales for films, but Blu-ray and download sales of films do not make up the nearly \$20 billion gap between the two industries.”).

<sup>5</sup> THE FIRST ‘OFFICIAL’ CASTLE SMURFENSTEIN HOME PAGE, <https://www.evl.uic.edu/aej/smurf.html> (last visited Aug. 9, 2018).

<sup>6</sup> Kyle Andrew Moody, *Modders: Changing the Game Through User Generated Content and Online Communities*, at iii (May, 2014) (unpublished Ph.D. Dissertation, University of Iowa) (on file with Iowa Research Online, the University of Iowa’s Institutional Repository) (“Modding for computer games...has grown considerably due to the expansion of the internet’s capabilities for connecting people and distributing large bands of data.”).

<sup>7</sup> *Wolfenstein 3D*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Wolfenstein\\_3D](https://en.wikipedia.org/wiki/Wolfenstein_3D).

<sup>8</sup> See DAVID KUSHNER, *MASTERS OF DOOM: HOW TWO GUYS CREATED AN EMPIRE AND TRANSFORMED POP CULTURE* 7 (2014).

success.<sup>9</sup> More to the point, it set the template for games of that genre to this day.

Generally speaking, a level of Wolfenstein 3D or a successor game like Doom involves a common set of tools for navigating the particular level, such as the game’s perspective, weapons and tools, and enemies which typically repeat over multiple levels.<sup>10</sup> On the other hand, each level involves a unique locale in which to do battle with enemy hordes, and before long users figured out that they could create their own maps and fight battles of their choosing.<sup>11</sup> In such a mod, the mod-maker specifies the dimensions of the physical space, including the locations of walls and doors, the locations of enemies, and the locations of other elements already present in the original game.<sup>12</sup> This is the first and simpler type of mod I identified, which I referred to using the somewhat archaic form of “.map files.”<sup>13</sup> .map files can be fairly simple, providing a new environment in which to play an existing game – for instance battling DOOM’s Spider-Demon<sup>14</sup> in a football stadium instead of the environment called for in the stock version of the game.

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<sup>9</sup> K. Thor Jensen, *The Complete History of First Person Shooters*, GEEK (Oct. 11, 2017, 9:00 AM), <https://www.geek.com/games/the-complete-history-of-first-person-shooters-1713135/> (going into more detail on some of the antecedents to Wolfenstein 3D, which are beyond the scope of this piece.).

<sup>10</sup> See, e.g., *Doom WAD*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Doom\\_WAD](https://en.wikipedia.org/wiki/Doom_WAD).

<sup>11</sup> The first known such mod was shared on March 9, 1994. *Origwad*, FANDOM, <http://doom.wikia.com/wiki/Origwad> (last visited Sep. 23, 2018).

<sup>12</sup> See, e.g., *Doom WAD: Types of WADs*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Doom\\_WAD#Types\\_of\\_WADs](https://en.wikipedia.org/wiki/Doom_WAD#Types_of_WADs)

<sup>13</sup> *MAP File Format*, VALVE SOFTWARE: DEVELOPER COMMUNITY, [https://developer.valvesoftware.com/wiki/MAP\\_file\\_format](https://developer.valvesoftware.com/wiki/MAP_file_format) (MAP was the file extension for level maps in the Quake engine, popular in first person shooter games in the late 1990s.).

<sup>14</sup> A poorly-tempered giant brain sitting atop a mechanical spider body, and with a large Gatling gun at its centerline.

These maps typically have minimal new artwork or other independently created creative works—they are all about the design of the level using existing resources from the underlying game.<sup>15</sup>

At the other extreme are those mods which are essentially completely new games, typically called “total conversions.”<sup>16</sup> These may have a storyline, although some of the most popular ones, like Team Fortress and Counter-Strike, are designed more as playgrounds for online multiplayer mayhem. Some total conversions retain a veneer of the original game, while others are only related to the original game under the surface. My original thesis was that at least some of these total conversions might be independent copyrightable works and not derivative works.

Although I’ve heard of my piece being described as “the paper about Counter-Strike,” I never really played that mod. However, in the course of playing an expansion to 2001’s *Return to Castle Wolfenstein*, entitled *Wolfenstein: Enemy Territory*,<sup>17</sup> I came into contact with a variety of mods, both new maps and gameplay modifiers, and started thinking about how copyright law governed these works. For instance, in one map, the mod-maker meticulously recreated the Campo San Barnaba in Venice and made the mission for one team to steal gold while the other defends the square.<sup>18</sup> The basic player graphics and game user interface are the same as for the stock maps shipped with the game, but it got me thinking about what, if anything, the maker of the map can own. So, I wrote it up as a seminar

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<sup>15</sup> *Doom WAD: Types of WADs*, *supra* note 12.

<sup>16</sup> PC Gamer, *The Best Total Conversion Mods*, PC GAMER (Aug. 28, 2017), <https://www.pcgamer.com/the-best-total-conversion-mods-ever/>.

<sup>17</sup> Those noticing a lot of *Wolfenstein* games will be pleased to know that the series has continued with 2014’s *Wolfenstein: The New Order*, 2015’s *Wolfenstein: The Old Blood*, and recently with its sequel, 2017’s *Wolfenstein II: The New Colossus*.

<sup>18</sup> *Venice Final*, TRACKBASE, <http://et.trackbase.net/?mod=mapinfo&midx=11>.

paper, and to my surprise the Chicago-Kent Journal of IP Law agreed to publish it.

## II. CITATIONS

This article was my first piece published, and was published while I was still in law school, so naturally being cited in the American Law Reports (A.L.R.) was a thrill, and my piece was well-timed – they published a new section on “Intellectual Property Rights in Video, Electronic, and Computer Games” just after my article came out.<sup>19</sup> Shortly thereafter, I was cited in a student note about whether distribution of fan-made translations of mostly Asian video games constituted copyright infringement.<sup>20</sup> That piece largely applied the fair use analysis, something I did not do in my article, perhaps because it is difficult to argue that a translation is not a derivative work.<sup>21</sup> In addition, like many piece of its type, my article was cited more for its background on mods than the legal arguments therein.<sup>22</sup>

My central argument also found itself being repeated in a student note, which adopted my argument that a total conversion mod can be independently copyrightable and is not necessarily a derivative work of the original game.<sup>23</sup> A

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<sup>19</sup> Deborah F. Buckman, Annotation, *Intellectual Property Rights in Video, Electronic, and Computer Games*, 7 A.L.R. Fed. 2d 269 (2018).

<sup>20</sup> Jaime E. Muscar, *A Winner Is Who? Fair Use and the Online Distribution of Manga and Video Game Fan Translations*, 9 VAND. J. ENT. & TECH. L. 223, 248 (2006).

<sup>21</sup> *Id.*

<sup>22</sup> Erez Reuveni, *Authorship in the Age of the Conducer*, 54 J. COPYRIGHT SOC’Y U.S.A. 285, 286 (2007).

<sup>23</sup> See Note, *Spare the Mod: In Support of Total-Conversion Modified Video Games*, 125 HARV. L. REV. 789 (2012). My classification of different types of mods for a derivative works analysis was also used, with variations, in another student work. See John Baldrice, Note, *Mod as Heck: Frameworks for Examining Ownership Rights in User-Contributed Content to Videogames, and a More Principled Evaluation*

second student piece took issue with that conclusion, stating that “All mods are derivative works.”<sup>24</sup> This argument was that, on the one hand, many total conversions still included copyrightable elements of the original commercially sold game, and, on the other hand, that accessing the game engine was sufficient to render the work derivative.<sup>25</sup> The response to both of these is that any actual inquiry would necessarily be fact-specific. However, this piece noted something that became increasingly apparent between my article’s publication in 2005 and the student note’s publication in 2014—the question of whether mods are copyrightable had become largely irrelevant and barely litigated for PC game mods.<sup>26</sup> Most of the litigation involving mods would instead involve interoperability, cheating, and piracy.<sup>27</sup>

My article’s only citation in a judicial opinion involves a criminal prosecution for violation of the anti-circumvention provisions of the Digital Millennium Copyright Act (“DMCA”).<sup>28</sup> In 2007, the federal government began an investigation, “focusing on the sale and installation of modification chips (a.k.a. “mod chips”) used to circumvent copyright protection measures designed into various video game systems.”<sup>29</sup> Jeffrey J. Reichert ran a business modifying consoles *inter alia* so they could be used to play pirated games by installing “mod chips.”<sup>30</sup> As part of that investigation, an undercover federal agent made

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*of Expressive Appropriation in User-Modified Videogame Projects*, 8 MINN. J.L. SCI. & TECH. 681 (2007).

<sup>24</sup> Ryan Wallace, Note, *Modding: Amateur Authorship and How the Video Game Industry Is Actually Getting It Right*, 2014 B.Y.U. L. REV. 219, 239 (2014).

<sup>25</sup> *Id.* at 241.

<sup>26</sup> *Id.* at 254.

<sup>27</sup> *Infra* at III.

<sup>28</sup> See *U.S. v. Reichert*, 747 F.3d 445 (6th Cir. 2014).

<sup>29</sup> Sentencing Memorandum at 2, *United States v. Reichert*, 747 F.3d 445 (2014) (No. 13-3479).

<sup>30</sup> *Id.* at 3.

contact with Reichert and paid \$350 to purchase a modified Nintendo Wii, from which Reichert made a \$50 profit.<sup>31</sup> After a jury trial, Reichert was found guilty of trafficking devices designed to bypass a technological protection measure for a copyrighted work in contravention of the DMCA<sup>32</sup> and was sentenced to a year and a day in prison, below the range for the offense in the sentencing guidelines.<sup>33</sup> Reichert then appealed his conviction and sentence to the 6th Circuit Court of Appeals.<sup>34</sup>

The 6th Circuit Affirmed the conviction and sentence, but Judge Bernice Donald dissented, questioning whether Reichert’s violation of the DMCA had truly been “willful,” especially focused on jury instructions that the majority had also found questionable but not sufficiently prejudicial.<sup>35</sup> Judge Donald felt that the questionable jury instructions were particularly problematic given that “the actual legal status of mod chips and video game console modifications is not entirely clear.”<sup>36</sup> To buttress this provision, she cited a number of law review articles, including mine, noting that “several law review articles published around the time of Reichert’s arrest suggest that his understanding of mod chips’ legal status was no different from the views expressed by individuals who had a much more sophisticated understanding of the law.”<sup>37</sup>

While I appreciate the compliment, a difficulty is that I’m not sure how apposite my article is to the question in that case (the other three articles are all about mod chips and

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<sup>31</sup> *Id.*

<sup>32</sup> 17 U.S.C. §§ 1201(a)(2), 1204(a) (2012); Sentencing Memorandum, *supra* note 29, at 3.

<sup>33</sup> *Reichert*, 747 F.3d at 448.

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

<sup>35</sup> *Id.* at 456.

<sup>36</sup> *Id.* at 459.

<sup>37</sup> *Id.* at 463.



modifying consoles).<sup>38</sup> This case was all about the DMCA, and my article does not address the DMCA at all. This may have been my mistake on my part, though, as the DMCA would prove critical to a number of other cases, more widely discussed, regarding the intersection of mods and copyright law.

### III. CHANGES IN THE LAW

When I wrote my article, the jury was still relatively out on whether a game's license agreement could prevent the creator of the original game from modifying it. I also made the choice not to consider fair use or the DMCA, instead focusing on issues of preemption and copyright misuse. The 7th Circuit's decision in *ProCD v. Zeidenberg* was already well known, but that was readily distinguishable.<sup>39</sup> Attempts to establish enforceability for software license agreements by uniform statute had recently failed, and the enforceability of such agreements seemed tenuous.<sup>40</sup> However, shortly

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<sup>38</sup> The other articles being: Lewis Stevenson, *Fair Circumvention: A Judicial Analysis for the Digital Millennium Copyright Act Using the Playstation 3 as a Case Study*, 21 S. CAL. INTERDISC. L.J. 681 (2012); Phillip A. Harris Jr., *Mod Chips and Homebrew: A Recipe for Their Continued Use in the Wake of Sony v. Divineo*, 9 N.C. J.L. & TECH. 113 (2007); Vijay G. Brijbasi, *Game Console Modification Chips: The Effect of Fair Use and the Digital Millennium Copyright Act on the Circumvention of Game Console Security Measures*, 28 NOVA L. REV. 411 (2004).

<sup>39</sup> *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996).

<sup>40</sup> Vito A. Costanzo & Shelley G. Hurwitz, *Uniform Computer Information Transactions Act (UCITA) Doomed to Crash — Consumer Rights Prevail Over Uniformity in Electronic Transactions*, HOLLAND & KNIGHT (Oct. 2003), <https://www.hklaw.com/publications/uniform-computer-information-transactions-act-ucita-doomed-to-crash-consumer-rights-prevail-over-uniformity-in-electronic-transactions-10-13-2003/>. The Uniform Computer Information Transactions Act (UCITA) was meant to become section 2(b) of the Uniform Commercial Code, but it only became law in two states and faded away.

after my article was finished, the 8th Circuit Court of Appeals released its opinion in *Davidson v. Jung*, and largely rejected such arguments in enforcing the software license agreement for games including Starcraft and Diablo, released by Blizzard Software.<sup>41</sup>

Blizzard centralized multiplayer features in all its games in the early 2000s with a service called Battle.net, and that service also served as copy protection – pirate installations of Blizzard games were unable to play online because they did not work with Battle.net.<sup>42</sup> Around this time a project began to create an open-source alternative to Battle.net, which became known as the “bnetd project.”<sup>43</sup> The reasons given for the service varied – Blizzard insisted that it only existed to facilitate piracy,<sup>44</sup> while its creators insisted that it was really about deficiencies in the Battle.net service.<sup>45</sup> Whatever the reasons, Blizzard sued the bnetd team for copyright infringement and violation of the DMCA.<sup>46</sup> In a legal move I hadn’t anticipated, the Court found that a DMCA claim could go hand in hand with license agreement terms and that the license agreement was not preempted.<sup>47</sup>

A similar result followed a number of years later, in a case involving another Blizzard product, World of Warcraft. In that case, defendants had built a product called

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<sup>41</sup> *Davidson & Assocs. v. Jung*, 422 F.3d 630, 633 (8th Cir. 2005).

<sup>42</sup> *Battle.net*, WIKIPEDIA, <https://en.wikipedia.org/wiki/Battle.net>.

<sup>43</sup> *BNETD FAQ*, CARNEGIE MELLON UNIVERSITY, <https://www.cs.cmu.edu/~dst/DMCA/BNETD/bnetd-0.4.25/docs/FAQ.html>.

<sup>44</sup> Second Amended Complaint at 53, *Davidson & Assocs., Inc. v. Internet Gateway*, 334 F. Supp. 2d 1164 (E.D. Mo. 2002) (No. 4:02-CV-498-CAS).

<sup>45</sup> Defendants’ Motion for Summary Judgment at 3, *Davidson & Assocs., Inc. v. Internet Gateway*, 334 F. Supp. 2d 1164 (E.D. Mo. 2003) (No. 4:02-CV-498-CAS).

<sup>46</sup> Second Amended Complaint, *supra* note 44.

<sup>47</sup> *Davidson & Assocs.*, 422 F.3d at 633.

Glider, which allowed a player to automate certain tedious aspects of gameplay.<sup>48</sup> Although the Court found that using Glider was not copyright infringement, it nonetheless found that Glider violated the DMCA.<sup>49</sup> And although it did not involve games, the decision of the 9th Circuit in finding that copies of AutoCAD software were licensed and not sold has been influential, even though the facts of that case are readily distinguishable from a consumer software transaction.<sup>50</sup> Indeed, although none of the above-cited cases quite holds it, it has become common consensus that a software license agreement is at least probably enforceable,<sup>51</sup> meaning that restrictions on the software license agreement for a game that prohibit mod creation are at least likely enforceable.

In my article, I briefly tried to argue copyright misuse could prevent the owner of a software copyright from preventing the creation and marketing of an independently copyrightable mod. I gave this argument less than a page in my original paper, and since then the copyright misuse argument hasn't come up much. There have been a number of recent decisions that applied copyright misuse, but it has been in the context of preventing copyright holders from controlling resale rights under copyright exhaustion, better known as the "first sale doctrine."<sup>52</sup> It is possible to imagine a judicial decision holding an attempt to prevent the release of a total conversion via the original game's license would

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<sup>48</sup> *Glider (bot)*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Glider\\_\(bot\)](https://en.wikipedia.org/wiki/Glider_(bot)).

<sup>49</sup> *MDY Indus., LLC v. Blizzard Ent. Inc.*, 629 F.3d 928, 950 (9th Cir. 2010).

<sup>50</sup> *Vernor v. Autodesk, Inc.*, 621 F.3d 1102, 1111 (9th Cir. 2010).

<sup>51</sup> Guy A. Rub, *Copyright Survives: Rethinking the Copyright-Contract Conflict*, 103 VA. L. REV. 1141, 1179 (2017).

<sup>52</sup> *Omega S.A. v. Costco Wholesale Corp.*, No. CV 04-05443 TJH, 2011 WL 8492716, at \*2 (C.D. Cal. Nov. 9, 2011), *aff'd on other grounds*, 776 F.3d 692 (9th Cir. 2015) (concurring opinion urging affirmance on the grounds of copyright misuse as well); *Disney Enters., Inc. v. Redbox Automated Retail, LLC*, No. CV1708655DDPAGRX, 2018 WL 1942139, at \*7 (C.D. Cal. Feb. 20, 2018).

be copyright misuse, but as it was in 2005, this wouldn't be the top choice of an argument.

As mentioned, there are also two roads I didn't travel in my article – I didn't discuss possible DMCA objections to modmaking, and I didn't discuss fair use. Fair use is, of course, a bit of a rabbit hole, but in discussing potentially transformative works like mods it's an analysis that should be applied. Some of the scholarship that follows my piece does discuss such a fair use analysis, notably "Spare the Mod" and "Mod as Heck," and I'd simply note that any fair use analysis of a mod is going to be very fact-specific, and categorical statements of how fair use will treat mods are best avoided.

On the other hand, the DMCA proved very important, in ways I should have anticipated. Without such defenses as fair use, first sale, etc., the anti-circumvention provisions of the DMCA effectively make it a civil and possibly criminal offense to tinker with aspects of software that have anti-circumvention provisions.<sup>53</sup> And although some types of mods, especially .map files, are less likely to raise problems under the DMCA, it is more likely the creation of total conversions; less involved mods will come into contact with technological protection measures.<sup>54</sup>

The *MDY v. Blizzard*<sup>55</sup> case was especially notable, since it did not have any real nexus with piracy (unlike *Davidson v. Jung*,<sup>56</sup> where the court seemed to view the existence of non-infringing uses for the bnetd project as mostly pre-textual, and the ruling is focused on the uses of bnetd to have multiplayer gaming with pirate copies of

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<sup>53</sup> 17 U.S.C. 1201 (2012) et seq.

<sup>54</sup> This is because someone creating a total conversion is more likely to engage with the aspects of the game that have been bundled together and protected by a technological measure than someone creating a new .map file to be simply fed into the game engine.

<sup>55</sup> *MDY Indus., LLC*, 629 F.3d at 928.

<sup>56</sup> *Davidson & Assocs.*, 422 F.3d at 630.

games). The Glider mod in that game copied no visual/gameplay aspects of the game, and it required a legitimate copy of the game and an active paid subscription to the game's service to work. Nonetheless, the Court held that even without a nexus to copyright infringement, the mod violated the DMCA and was subject to civil penalties. In practice, someone making a mod should be wary of the DMCA.

And yet, as will be shown below, mods have thrived. And that is perhaps the most interesting postscript to my piece. The next section will demonstrate that copyright owners in the gaming space have gained stronger rights but have generally applied them with a loose hand, doubtless looking to maximize both goodwill and potential profits.

#### **IV. LOOKING BACK**

To close my article in 2005, I urged game publishers to support mods more actively, regardless of how copyright law treated them because an active community of modders should help a game's sales. I even urged game copyright owners to consider allowing modders to sell their creations. Unlike my predictions regarding copyright law, this would prove prescient.

##### ***A. Evolution of Mods Since 2005***

In late 2004-early 2005, first person shooter genre was the most active modding genre and from a personal perspective, it felt like the genre had reached a plateau.<sup>57</sup> This impression was reinforced by a visit to the E3 trade

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<sup>57</sup> *History of First-Person Shooter Games*, CEREBROS GAMES (Feb. 5, 2018), <https://www.cerebrogames.com/development-blog/history-of-fps> (identifying 2001-2005 as the third generation of first-person shooter games, which unbeknownst to me the genre was about to evolve).

show in spring of 2005, where the games being shown frankly seemed uninspired, derivative, and juvenile.<sup>58</sup> However, what was really being shown at E3 was a new generation of consoles – the Nintendo Wii, Xbox360, and PS3, which would take games hardware and eventually games themselves to the next level. PC gaming technology would also continue to advance – and games would diversify and allow for greater possibilities. Over the next decade, mods would become more important than ever, continuing to drive sales of games.

In 2008, Valve Software revealed that it had sold 9.3 million retail copies of their game *Half-Life*, released a decade earlier, spurred by the popularity of the *Counter-Strike Mod*.<sup>59</sup> For the sequel to *Half-Life*, 2004's *Half-Life 2*, Valve required players to use its own Steam client to play the game, with Steam functioning as a digital marketplace but also as copy protection.<sup>60</sup> At first, Steam was a problematic program used only for Valve's own games, but by 2008 Valve had signed agreements to distribute most of the leading game studios, and over time Steam became the

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<sup>58</sup> For a discussion of E3 in 2005, see *E3 2005*, IGN (Mar. 26, 2013), [http://www.ign.com/wikis/e3/E3\\_2005](http://www.ign.com/wikis/e3/E3_2005). From the description, the conference sounds fairly cutting edge, but my main memory of the show floor was booths advertising games such as “Hot Dogs Hot Girls,” later renamed before release as “Hot Dog King,” although unfortunately the original name was a better descriptor. See *Hot Dog King*, METACRITIC (Apr. 9, 2007), <http://www.metacritic.com/game/pc/hot-dog-king-a-fast-food-empire>. The following year would prove the last iteration of E3 in that form, which had become excessive and a bit tawdry. See Conrad Quilty-Harper, *E3 cancelled for next year and beyond [update 4]*, ENGADGET (July 30, 2006), <https://www.engadget.com/2006/07/30/e3-canceled-for-next-year-and-beyond/>.

<sup>59</sup> Chris Remo, *Analysis: Valve's Lifetime Retail Sales for Half-Life, Counter-Strike Franchises*, GAMASUTRA (Dec. 3, 2008), [https://www.gamasutra.com/php-bin/news\\_index.php?story=21319](https://www.gamasutra.com/php-bin/news_index.php?story=21319).

<sup>60</sup> Luke Plunkett, *Steam Is 10 Today. Remember When It Sucked?*, KOTAKU (Sept. 12, 2013), <https://kotaku.com/steam-is-10-today-remember-when-it-sucked-1297594444>.

largest online marketplace for games, comprising 75% of digital sales of PC games.<sup>61</sup> Although mods were not included in Steam initially, the service incorporated support for finding and playing mods to Valve's popular Team Fortress 2 game. In 2012, the Steam Workshop was opened, providing full support for finding and playing mods directly within the Steam interface for games that chose to take advantage of the feature.<sup>62</sup> As of June of 2018, the Steam Workshop for a single game, such as Portal 2, lists well over half a million mods.<sup>63</sup>

In 2015, the Steam platform went further by allowing mod creators to charge for their mods for games other than Valve products,<sup>64</sup> as I had suggested in my article a decade earlier. Valve already had been allowing creators of mods for its games to charge since 2011, and in those four years had disbursed some \$57 million to mod creators.<sup>65</sup> The first non-Valve game to allow mod-makers to charge "The Elder Scrolls V: Skyrim," had already seen 170 million downloads of mods through its section of the Steam Workshop.<sup>66</sup> However, only a few days later, Valve removed the feature

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<sup>61</sup> Plunkett, *supra* note 60; Cliff Edwards, *Valve Lines Up Console Partners in Challenge to Microsoft, Sony*, BLOOMBERG (Nov. 4, 2013), <https://www.bloomberg.com/news/articles/2013-11-04/valve-lines-up-console-partners-in-challenge-to-microsoft-sony>.

<sup>62</sup> Jessica Conditt, *Skyrim's PC Fans Are Modding the Crap out of It with Steam Workshop*, ENGADGET (Feb. 14, 2012), <https://www.engadget.com/2012/02/14/skyrims-pc-fans-are-modding-the-crap-out-of-it-with-steam-works/>.

<sup>63</sup> *Portal 2*, STEAM WORKSHOP, <https://steamcommunity.com/app/620/workshop> (last visited Aug. 3, 2018).

<sup>64</sup> Press Release, Valve, Inc., *Steam Adds More Ways for Workshop Creators to Earn Money* (Apr. 23, 2015), <https://store.steampowered.com/news/16509/>.

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

<sup>66</sup> Emanuel Maiberg, *Whoa, Valve Just Monetized Mods*, MOTHERBOARD (Apr. 23, 2015, 3:36 PM), [https://motherboard.vice.com/en\\_us/article/jp5n4p/whoa-valve-just-monetized-mods](https://motherboard.vice.com/en_us/article/jp5n4p/whoa-valve-just-monetized-mods).

to pay for mods – not under pressure from the game’s producer, which had approved the move, but instead under pressure from fans, who disapproved of being asked to pay for mods that had previously been given away for free.<sup>67</sup> In recent years there would be a number of other attempts at setting up a paid ecosystem for mods.<sup>68</sup> However, with the failure of paid mods on Steam, the market has generally disfavored paid mods.<sup>69</sup>

It is striking that the obstacle I saw—content owners—ended up being illusory.<sup>70</sup> Game developers and publishers are eager to allow mod-makers to sell their products, for obvious reasons—if a mod takes off then the game may find a new audience and continue active sales well beyond its usual obsolescence—all with the owner of the game expending almost no effort and taking a cut of all sales. Instead, it’s the gaming public that has resisted paid mods, and in the end, game owners would rather avoid inflaming sentiment, especially since mod-makers largely seem happy to work for free, with their only compensation being the

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<sup>67</sup> Shaun Prescott, *Valve Has Removed Paid Mods Functionality from Steam Workshop*, PC GAMER (Apr. 27, 2015), <https://www.pcgamer.com/valve-has-removed-paid-mods-functionality-from-steam-workshop/>.

<sup>68</sup> See, e.g., Alice O’Connor, *Following Paid Mods Fiasco, Bethesda Launches Fallout 4 Creation Club*, ROCK PAPER SHOTGUN (Aug. 29, 2017), <https://www.rockpapershotgun.com/2017/08/29/fallout-4-creation-club-launched-not-paid-mods/>; Jeffrey Matulef, *Steam Launches Official Developer-run Item Stores*, EUROGAMER (May 11, 2015), <https://www.eurogamer.net/articles/2015-11-04-steam-launches-official-item-stores>.

<sup>69</sup> Emanuel Maiberg, *The Internet Hate Machine Killed Valve’s Paid Mods*, MOTHERBOARD (Apr. 28, 2015, 11:50 AM), [https://motherboard.vice.com/en\\_us/article/nze5ag/valves-paid-mods-are-the-latest-victim-of-the-internet-hate-machine](https://motherboard.vice.com/en_us/article/nze5ag/valves-paid-mods-are-the-latest-victim-of-the-internet-hate-machine).

<sup>70</sup> This matches the experience in the world as a whole – the rise of license agreements has not led to a concomitant rise in harsh enforcement of those licenses. See Rub, *Copyright Survives*, *supra* note 51.



ability to use the mod as a professional calling card for game designer positions.<sup>71</sup>

In fact, the main obstacle to modmaking on the PC has been the use of third-party licenses, such as adapting a game like ARMA 3 to feature elements from Star Wars.<sup>72</sup> This sort of pouring of one world into another has long been popular with modmakers, but has always been legally problematic, and in the above situation the developers of the mod elected not to proceed with the project out of concern that their hard work would be kept from the world by the owners of the Star Wars copyrights – not the owners of the copyrights in ARMA 3.<sup>73</sup> However, in that case, it was the fear of receiving a letter from the Star Wars copyright holder, not even actual receipt of one, which spurred the developers to cease development.<sup>74</sup> Much like in the realm of fanfiction, mods featuring existing universes based on copyrighted content are typically openly tolerated.<sup>75</sup>

Mods were not really a factor regarding consoles when I wrote my article, and in fact in the console world “mod” actually means something different, referring to physically modifying the console to perform outside the manufacturer’s specifications (for instance, as Mr. Reichert went to prison for, modifying a console to play pirated

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<sup>71</sup> Olli Sotamaa, *When the Game Is Not Enough: Motivations and Practices Among Computer Game Modding Culture*, 5 GAMES & CULTURE 239 (2010) (“[M]odders are proud of the non-profit basis of their endeavours.”).

<sup>72</sup> See *Arma III*, BOHEMIA INTERACTIVE, <https://arma3.com/> (last visited Aug. 3, 2018) (describing itself as an “open-world, realism-based, military tactical shooter”).

<sup>73</sup> Skitchie, *The Star Wars: Imperial Assault Mod Has Been Cancelled*, REDDIT (Jan. 25, 2016), [https://www.reddit.com/r/arma/comments/42n0z9/the\\_star\\_wars\\_imperial\\_assault\\_mod\\_has\\_been/](https://www.reddit.com/r/arma/comments/42n0z9/the_star_wars_imperial_assault_mod_has_been/).

<sup>74</sup> *Id.*

<sup>75</sup> See, e.g., Christopher Livingston et al., *The Best Star Wars Mods*, PC GAMER (Dec. 15, 2017), <https://www.pcgamer.com/best-star-wars-mods/>.

games).<sup>76</sup> In 2016 Sony began a limited program to allow mods for the PS4 versions of *Skyrim*, which as mentioned is hugely popular among modders in its PC incarnation.<sup>77</sup> However, consoles have largely remained proprietary and have not allowed for third-party mods for most games.<sup>78</sup>

### **B. Unforeseen Consequences (of Mods)**

Although I'm satisfied with the topics covered in the original piece, I regret focusing too much on more traditional forms of mods like new levels and total conversions. Mods have been used to create abstract art,<sup>79</sup> to create animation sometimes called "machinima,"<sup>80</sup> and to expand the gender diversity of game characters, including protagonists.<sup>81</sup> Likewise, I failed to foresee an entire market segment—that there was serious interest in watching other people play games—effectively producing a form of mod based on capturing user input instead of modifying game code. The

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<sup>76</sup> *Reichert*, 747 F.3d at 448.

<sup>77</sup> Erik Kain, 'Skyrim' And 'Fallout 4' Will Get Mods on PS4 After All, But There's a Catch, *FORBES* (Oct. 7, 2016), <https://www.forbes.com/sites/erikkain/2016/10/07/skyrim-and-fallout-will-get-mods-on-ps4-after-all-but-theres-a-catch/>.

<sup>78</sup> Jon Gregory, *All Mod Consoles: What Console Mods Means for the Fallout Modding Community*, *PASTE* (Nov. 11, 2015, 2:45 PM) <https://www.pastemagazine.com/articles/2015/11/all-mod-consoles-what-console-mods-means-for-the-f.html>.

<sup>79</sup> *Video Game Art*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Video\\_game\\_art](https://en.wikipedia.org/wiki/Video_game_art) (last visited Aug. 3, 2018).

<sup>80</sup> One popular tool for creating machinima is Garry's Mod, initially offered as a free mod itself to *Half-Life 2* before going on sale, and eventually selling ten million copies. See *Garry's Mod*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Garry%27s\\_Mod](https://en.wikipedia.org/wiki/Garry%27s_Mod) (last visited Aug. 3, 2018); *Machinima*, WIKIPEDIA, <https://en.wikipedia.org/wiki/Machinima> (last visited Aug. 3, 2018).

<sup>81</sup> Matt Sayer, *The Modders Making Games More Gender-diverse*, *ROCK PAPER SHOTGUN* (Apr. 7th, 2017, 7:00 PM), <https://www.rockpapershotgun.com/2017/04/07/the-modders-making-games-more-gender-diverse/>.

website “Twitch” went live in 2011 and focuses on live stream video gaming.<sup>82</sup> By February 2014, they were the fourth largest website in terms of peak Internet traffic, using more bandwidth than Hulu, Facebook, Amazon, and others.<sup>83</sup> Later that year, Amazon purchased Twitch for close to a billion dollars,<sup>84</sup> giving a bit of a shock to many, including myself, who wondered out loud why people would spend time watching other people play video games. In February 2018, Twitch estimated 2 million streams were produced monthly,<sup>85</sup> and they are not the only major player in the market. YouTube Gaming, Google’s competitor to Twitch, grew by 343% in 2017.<sup>86</sup>

Video game streaming involves unique considerations that my article did not consider. These streaming services are a straightforward public performance of a copyrighted game, making them clearly infringing unless they are fair use.<sup>87</sup> The key question seems to be whether streaming gameplay is a transformative use,<sup>88</sup> resting in part on questions of the degree to which it supplants the market value of the original game, and then

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<sup>82</sup> *Twitch.tv*, WIKIPEDIA, <https://en.wikipedia.org/wiki/Twitch.tv> (last visited Aug. 3, 2018).

<sup>83</sup> Matthew DiPietro, *Twitch is 4th in Peak US Internet Traffic*, TWITCH BLOG (Feb. 4, 2014), <https://blog.twitch.tv/twitch-is-4th-in-peak-us-internet-traffic-90b1295af358>.

<sup>84</sup> Eugene Kim, *Amazon Buys Twitch For \$970 Million in Cash*, BUSINESS INSIDER (Aug. 25, 2014), <http://www.businessinsider.com/amazon-buys-twitch-2014-8>.

<sup>85</sup> Sarah Perez, *Twitch Now Has 27k+ Partners and 150K+ Affiliates Making Money from Their Videos*, TECHCRUNCH (Feb. 6, 2018), <https://techcrunch.com/2018/02/06/twitch-now-has-27k-partners-and-150k-affiliates-making-money-from-their-videos/>.

<sup>86</sup> Sarah Perez, *YouTube Gaming Grew Its Streamer Base by 343% in 2017, Twitch by 197%*, TECHCRUNCH (Jan. 25, 2018), <https://techcrunch.com/2018/01/25/youtube-gaming-grew-its-streamer-base-by-343-in-2017-twitch-by-197/>

<sup>87</sup> 17 U.S.C. 106(4), 107 (2012).

<sup>88</sup> *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569 (1994).

whether the other factors of the fair use analysis do not sufficiently point away from fair use. For now, though, game makers seem to largely tolerate or even encourage streaming, except for certain outliers.<sup>89</sup> Although one can argue for fair use in the new media of gaming streams, the owners of copyrights in the games seem happy to have their games used for streaming anyway.<sup>90</sup> Thus far copyright issues regarding Twitch have involved streamers using unlicensed music to accompany their streams, not from the game companies.<sup>91</sup> This seems likely to continue, as “pretty much everybody on Twitch uses music,” and it’s presumably rarely licensed properly.<sup>92</sup>

It seems likely that game companies would fight any effort to argue that streams are fair use relatively strenuously, because they use their copyrights to remove streams that are, in the worlds of Bethesda Softworks, “include ‘wildly inappropriate content,’” violate an NDA or any other video that they “deem need to be removed – because, let’s be honest, people come up with stuff that hasn’t even occurred to us yet.”<sup>93</sup> Given that the game

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<sup>89</sup> Alissa McAloon, *Nintendo Bars Creators Program Members from Streaming Its Games*, GAMASUTRA (Sept. 29, 2017), [https://www.gamasutra.com/view/news/306804/Nintendo\\_bars\\_Creators\\_Program\\_members\\_from\\_streaming\\_its\\_games.php](https://www.gamasutra.com/view/news/306804/Nintendo_bars_Creators_Program_members_from_streaming_its_games.php).

<sup>90</sup> Ars Staff, *The (Still) Uncertain State of Video Game Streaming Online*, ARS TECHNICA (Jan. 28, 2018), <https://arstechnica.com/gaming/2018/01/to-stream-or-not-to-stream-how-online-streaming-game-videos-exist-in-an-ip-world/?amp=1>.

<sup>91</sup> Nathan Grayson, *Popular Twitch Streamers Temporarily Banned For Playing Copyrighted Music*, KOTAKU (June 22, 2018), <https://kotaku.com/popular-twitch-streamers-temporarily-banned-for-streami-1827066551>.

<sup>92</sup> *Id.*

<sup>93</sup> Aaron Swerdlow, *The Emerging Legal Battle Over Video Game Streaming Rights*, PC GAMING (May 27, 2017), <https://venturebeat.com/2017/05/27/the-emerging-legal-battle-over-video-game-streaming-rights/>.

streaming sector brought in \$1.6 billion in 2016,<sup>94</sup> it seems likely that more formal licensing deals that provide for profit sharing will become widespread between game companies and game streamers.<sup>95</sup>

Another industry to explode in significance since I wrote my article is esports (competitive electronic gaming), which are expected to hit close to a billion dollars in 2018, and projected to hit 1.6 billion dollars in 2021.<sup>96</sup> Perhaps unsurprisingly, many of the most popular games played on the esports circuit were borne directly out of mods.<sup>97</sup> Indeed, major gaming studios have tried and largely failed to develop games which would become mainstays of the esports world, while the bottom-up development process for mods has led to games more in line with what is happening in the esports community.<sup>98</sup> To a company that released a commercial game a decade ago, finding that game once again popular due to a mod and being actively used in esports is gift they never expected.

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<sup>94</sup> *Id.*

<sup>95</sup> Brianna Howard et al., *To Avoid Copyright Disaster, the Future of Game Streaming Is Licensing*, VENTUREBEAT (Aug. 23, 2017), <https://venturebeat.com/2017/08/23/to-avoid-copyright-disaster-the-future-of-game-streaming-is-licensing/>.

<sup>96</sup> Matt Perez, *Report: Esports to Grow Substantially and Near Billion-Dollar Revenues in 2018*, FORBES (Feb 21, 2018), <https://www.forbes.com/sites/mattperez/2018/02/21/report-esports-to-grow-substantially-and-near-a-billion-dollar-revenues-in-2018/#50cd58e72b01>.

<sup>97</sup> Joab Gilroy, *The War on Mods - How Esports and Mods Are Linked*, RED BULL (June 21, 2017) <https://www.redbull.com/au-en/the-war-on-mods-how-esports-and-mods-are-linked>. Red Bull Has substantially invested in esports, as can be seen on their esports page. at *eSports*, RED BULL, <https://www.redbull.com/us-en/tags/esports>. (last visited Sep. 24, 2018).

<sup>98</sup> Admin, *The Mods Have It - or Why Developing for Esports Fails*, GREAT GAMERS (Jan., 2018) <http://gamers.online/news/industry/the-mods-have-it-or-why-developing-for-esports-fai/5/>.

### C. *Embracing Mods*

For companies that have been willing to embrace mods, the benefits are not just customer goodwill, but potential profits as well.<sup>99</sup> I mentioned earlier that Valve’s first title, 1998’s *Half-Life*, has sold over nine million copies. However, in the intervening two decades, its graphics became outdated and stale, and elements of its gameplay felt stodgy and old-fashioned. A group of fans decided to essentially remake the game as a mod of *Half-Life 2*, using Valve’s newer 3D engine, the “Source” engine, and to call the game *Black Mesa: Source*.<sup>100</sup> Understanding that their mod infringed just about every form of IP owned by Valve, the mod makers got in touch with Valve, and were asked to remove Valve’s trademark “Source” from the title, but were not asked to change the game.<sup>101</sup> This relationship continued, and eventually the modmakers, organized as “Crowbar Collective,” made a more formal deal with Valve, where their creation is sold on Steam, with Valve and Crowbar Collective sharing the profits.<sup>102</sup> The game typically sells for \$19.99, although it has been discounted, and has sold between half a million and a million copies.<sup>103</sup> Even with profit-sharing,<sup>104</sup> Valve grossed millions of

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<sup>99</sup> See *supra* Section IV(A).

<sup>100</sup> *Black Mesa (mod)*, HALF-LIFE WIKI, [http://half-life.wikia.com/wiki/Black\\_Mesa\\_\(game\)](http://half-life.wikia.com/wiki/Black_Mesa_(game)) (last visited Jun. 18, 2018).

<sup>101</sup> *Id.*

<sup>102</sup> *Black Mesa*, STEAM, [https://store.steampowered.com/app/362890/Black\\_Mesa/](https://store.steampowered.com/app/362890/Black_Mesa/) (last visited Jun. 18, 2018).

<sup>103</sup> *Black Mesa*, STEAMSPY, <https://steampspy.com/app/362890> (last visited Jun. 18, 2018).

<sup>104</sup> Valve reportedly keeps 30% of sales on its Steam platform, but the percentage may well be higher for *Black Mesa*, where they also own the rights in the original game. *Valve (company): What Percentage Does Steam Keep from Sales?*, QUORA, <https://www.quora.com/Valve-company-What-percentage-does-Steam-keep-from-sales> (last visited Jun. 18, 2018).

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dollars, all by being willing to work with third-party modmakers. I expect that this trend will continue, allowing both modmakers and content owners to profit from their creativity.

