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Let's Play: A Walkthrough of Quarter-Century-Old Copyright Precedent as Applied to Modern Video Games

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Cover Page Footnote

J.D., Duke University School of Law, 2017; M.S., Electrical & Computer Engineering, Georgia Institute of Technology, 2014; B.S., Electrical Engineering, Georgia Institute of Technology, 2012.

Let's Play: A Walkthrough of Quarter-Century-Old Copyright Precedent as Applied to Modern Video Games

Kyle Coogan*

Looking to the copyright protection over the audiovisual displays of video games, current precedent—created by extensive litigation in the 1980s over early arcade games—may be a round hole into which the square peg of today's highly complex video games would have difficulty fitting. This is an issue that has increasing importance as the market for the passive consumption of video game audiovisual displays through tournament streams, walk-throughs, etc., continues to balloon. If courts were to apply precedent from litigation in the 1980s to video games as they exist today, the idea that copyright protection automatically attaches to any and all audiovisual displays generated by a game may not hold true. It is uncertain to what extent the reasoning in early arcade game litigation regarding the issues of authorship, the idea/expression dichotomy, and fixation would yield similar holdings. Moreover, it appears similarly uncertain to what extent a retreat from earlier precedent may impact publishers' rights in downstream uses of audiovisual displays. Even if potential defendants prevailed under either an idea/expression dichotomy theory or a fixation theory—meaning the copyright does not attach to audiovisuals at the outset—later-fixed audiovisuals may still be protectable. The strongest argument potential defendants have, therefore, is that their interaction with the game precludes copyrightability for the audiovisual displays due to a lack of “original authorship” on the part of the publishers.

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INTRODUCTION

The application of copyright to software often reflects an attempt to “fit the proverbial square peg in a round hole.”¹ This observation holds true for the subset of software comprised of video games. The dual literal and nonliteral copyright protection that video games enjoy—for both the computer code and the audiovisual displays—invites discussion on two fronts over what elements are copyrightable. Looking only to the copyright in the audiovisual displays, current precedent—created by extensive litigation in the 1980s over early arcade games—may be a round hole into which the square peg of today’s highly complex video games would have difficulty fitting. This is an issue that has increasing importance as the market for the passive consumption of video game audiovisual displays² through tournament streams, walk-throughs, etc. continues to balloon—increasing beyond the over four billion dollar current market estimate.³ It is uncertain to what extent the reasoning in the early arcade game litigation regarding the issues of authorship, the idea/expression dichotomy, and fixation would yield similar holdings when applied to the complexities of present-day games. Moreover, it appears similarly uncertain to what extent a retreat from earlier precedent may impact publishers’ rights in these downstream uses of the video game audiovisual displays.

¹ Comput. Assocs. Int’l, Inc. v. Altai, Inc., 982 F.2d 693, 712 (2d Cir. 1992).

² Audiovisual displays refer to the combination of sights and sounds as produced by the video game software during an instance of gameplay. These displays are increasingly consumed as a passive medium. That is, video game fans passively view either live or recorded audiovisuals produced by others who are playing the game, much in the same way that traditional sports fans passively view sporting events without participation. This is distinct from the traditional consumption of the video game medium, which takes place interactively, as video game fans play the game themselves, thereby perceiving the audiovisuals of their own gameplay in real time. *See infra* notes 48–50.

³ *See infra* text accompanying notes 50–53.

I. BACKGROUND

A. *Legal History*

U.S. copyright law is governed by the 1976 Copyright Act, as codified in title 17 of the U.S. Code.⁴ Section 102(a) defines copyrightable subject matter as “original works of authorship” that are “fixed in any tangible medium of expression.”⁵ This definition is limited by section 102(b), which delineates the idea/expression dichotomy⁶ by stating that copyright shall not cover “any idea, procedure, process, system,” etc.⁷ That is, copyright extends to the original expression of ideas, not the ideas themselves.⁸ For works eligible for copyright under section 102, section 106 outlines the rights conferred to an owner of a valid copyright.⁹ This section provides that:

[T]he owner of [a] copyright . . . has the exclusive rights to do and to authorize any of the following: (1) to reproduce the copyrighted work; . . . (2) to prepare derivative works; . . . (3) to distribute copies . . . to the public by sale, . . . or by rental, [etc.]; . . . (4) to perform the . . . work publicly; . . . (5) to display the . . . work publicly; and (6) in the case of sound recordings, to perform the . . . work publicly by means of a digital audio transmission.¹⁰

These rights are subject to some limitations—most notably the “fair use” limitations outlined in section 107.¹¹ This section provides that “[n]otwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work . . . is not an infringement

⁴ Copyright Act of 1976, 17 U.S.C. §§ 101–810 (2012).

⁵ *See id.* § 102(a).

⁶ This phrase refers to the distinction between copyrightable subject matter—the expression created by the author—and uncopyrightable subject matter—the mere underlying idea that is being expressed. *See infra* note 8.

⁷ 17 U.S.C. § 102(b).

⁸ *See id.*; *see also* *Mazer v. Stein*, 347 U.S. 201, 217 (1954) (“Unlike a patent, a copyright gives no exclusive right to the art disclosed; protection is given only to the expression of the idea—not the idea itself.”).

⁹ *See* 17 U.S.C. § 106.

¹⁰ *Id.*

¹¹ *Id.* § 107.

of copyright.”¹² Section 107 further provides four factors that “shall” be considered when conducting a fair use analysis: “(1) the purpose and character of the use; . . . (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used . . . ; and (4) the effect of the use upon the potential market for or value of the copyrighted work.”¹³ Therefore, even when a valid copyright is found to exist, in certain circumstances uses of the copyrighted material may not amount to an infringement of that copyright. Ultimately, in looking both at the rights conferred upon copyright holders under section 106 of the Copyright Act, as well as the ways in which these rights are circumscribed by the fair use factors of section 107, the application of copyright law to new and changing technologies raises interesting and challenging questions—especially in the case of video games.

Video games have existed since at least the early 1950s, a product of early computer science research.¹⁴ It was not until their introduction into mainstream society a couple of decades later, however, that they would spawn extensive litigation over their copyrightability. Early cases focused on various aspects of copyright law as applied to video games, including: authorship,¹⁵ fixation,¹⁶ and the idea/expression dichotomy (i.e., games as systems).¹⁷ Two general premises were left once the dust on these

¹² *Id.*

¹³ *Id.* For further discussion on the specific elements of qualifying uses, see *infra* Section II.A.

¹⁴ Chris Bateman, *Meet Bertie the Brain, the World's First Arcade Game, Built in Toronto*, SPACING TORONTO (Aug. 13, 2014), <http://spacing.ca/toronto/2014/08/13/meet-bertie-brain-worlds-first-arcade-game-built-toronto/> [<https://perma.cc/NG2D-YFMC>].

¹⁵ Section 102 of the Copyright Act provides that copyrights extend to “original works of authorship.” 17 U.S.C. § 102(a). Therefore, some have attempted to argue that, due to the player participation, video games are not sufficiently “original works of authorship,” and would thereby not be eligible for copyright protection. See *infra* Section II.B.

¹⁶ Similarly, section 102 further provides that, to be eligible for copyright protection, such an original work of authorship, must be “fixed in a[] tangible medium of expression.” 17 U.S.C. § 102(a). Therefore, other arguments regarding the copyrightability of video games have focused on whether or not they are sufficiently fixed. See *infra* Section II.D.

¹⁷ Even where an original work of authorship is found to be sufficiently fixed in a tangible medium of expression, in no case shall a copyright protect “any idea, procedure, process, or system.” 17 U.S.C. § 102(b). Rather, a copyright will only extend to the

many cases finally settled. First, video games receive two different types of copyright protection—both as a literary work for the underlying computer code, and as an audiovisual work for the audiovisual content generated by this computer code.¹⁸ Second, the copyright on audiovisuals extends to any and all series of screens and sounds capable of being produced by the game.¹⁹

B. Current Downstream Control

The combination of these two premises—that video games receive protection both as literary works in the underlying code, as well as audiovisual works extending to any conceivable audiovisual output produced by that underlying code—enables publishers to exert a large amount of control²⁰ over emerging secondary markets²¹ for video games. This control stems primarily from the public performance rights for audiovisual works listed in section 106(4),²² which was recently confirmed to encompass

creative expression of such ideas, procedures, processes, or systems. *See infra* Section II.C.

¹⁸ *See, e.g.*, *M. Kramer Mfg. Co. v. Andrews*, 783 F.2d 421, 442 (4th Cir. 1986) (holding that “a copyright in the audiovisual display, which display is created by a computer program, protects not only the audiovisual from copying, but also the underlying computer program to the extent the program embodies the game’s expression”); *Stern Elecs., Inc. v. Kaufman*, 669 F.2d 852, 856 (2d Cir. 1982) (holding that the video game at issue received protection both for the “written work” as well as the audiovisual output of the game); *see also* John M. Neclerio & Matthew C. Mousley, *Copyright Law Implications in Video Games and Virtual Worlds*, in *COMPUTER GAMES AND VIRTUAL WORLDS: A NEW FRONTIER IN INTELLECTUAL PROPERTY LAW* 47, 50 (Ross A. Dannenberg et al. eds., 1st ed. 2010).

¹⁹ *See* *Midway Mfg. Co. v. Artic Int’l, Inc.*, 704 F.2d 1009, 1011 (7th Cir. 1983), *cert denied*, 464 U.S. 823 (1983) (construing the phrase “series of related images” in 17 U.S.C. § 101 (2012) to “any set of images displayed as some kind of unit”); *see also* U.S. COPYRIGHT OFFICE, *COPYRIGHT REGISTRATION OF COMPUTER PROGRAMS* 5 (2017) (“A registration for a computer program covers the copyrightable expression in the program code and any copyrightable screen displays it generates,” regardless of whether identifying material for the screens is deposited.)

²⁰ For an in-depth discussion of publisher control on downstream markets, *see* generally Jochen Harttung, *The Issue of “Deep Control” in Professional E-Sports – A Critical Analysis of Intellectual Property Structures in Electronic Gaming* (Nov. 2015) (unpublished L.L.M. thesis, University of Toronto) (on file with the University of Toronto’s TSpace research repository).

²¹ *See* discussion *infra* Section I.D.

²² *See, e.g.*, *Red Baron-Franklin Park, Inc. v. Taito Corp.*, 883 F.2d 275, 279 (4th Cir. 1989) (“We therefore conclude that the operation of a video game constitutes a

many types of internet streaming, regardless of the technology employed to deliver the performance.²³ This means publishers will have control over many of the consumptive uses of their games through the internet via streaming, which are distinct from the interactive use that is gameplay.²⁴ The extent of this control may somewhat contrast with the relatively more limited amount of downstream control available to rights holders in areas of gaming that take place outside the virtual world—such as board games²⁵ and athletic performances.²⁶ Whether or not this contrast exists, countervailing policy concerns may not necessarily disfavor rights holders' control in these consumptive, downstream uses of the audiovisual aspect of video games as they sometimes have in the cases of: (1) uses of audiovisual portions of more utilitarian

performance as that term is defined in [17 U.S.C.] § 101.”). As mentioned, the rights conferred by section 106 of the Copyright Act include, in the case of audiovisual displays, the right “to perform the copyrighted work publicly.” 17 U.S.C. § 106(4); *see also supra* text accompanying notes 9–10. This right is central to the video game copyright discussion because, assuming a valid copyright over all of a game’s audiovisual displays exists, the playing of the game in front of an audience directly violates the public performance rights of the copyright holder. *See Red Baron-Franklin Park, Inc.*, 883 F.2d at 279.

²³ *See, e.g.*, *Am. Broad. Cos. v. Aereo, Inc.*, 134 S. Ct. 2498, 2506 (2014); *see also* 17 U.S.C. § 101. The Transmit Clause defines the exclusive public performance right as including the right “to transmit or otherwise communicate a performance . . . to the public . . . whether the members of the public capable of receiving the performance . . . receive it in the same place or in separate places and at the same time or at different times.” *Id.*

²⁴ *See, e.g.*, *About the Nintendo Creators Program*, NINTENDO, <https://r.ncp.nintendo.net/guide/> [<https://perma.cc/U9MX-J5KP>] (last visited Mar. 3, 2017) (requiring content creators to be licensed by Nintendo before uploading content related to gameplay of Nintendo video games).

²⁵ *See Allen v. Acad. Games League of Am., Inc.*, 89 F.3d 614, 616 (9th Cir. 1996) (holding that tournament play of a copyrighted board game does not constitute a “performance” under 17 U.S.C. §§ 101, 106(4), and noting that the Ninth Circuit “will not place such an undue restraint on consumers” by holding otherwise). For further discussion, *see infra* Section II.C.

²⁶ *See, e.g.*, *Nat’l Basketball Ass’n v. Motorola, Inc.*, 105 F.3d 841, 853 (2d Cir. 1997) (allowing Motorola to capitalize on the secondary market for real-time game statistics). *But see* *Balt. Orioles, Inc. v. Major League Baseball Players Ass’n*, 805 F.2d 663, 674–75 (7th Cir. 1986) (holding that player performances fell within copyrightable subject matter and were therefore works made for hire, thereby preempting the players’ state law rights of publicity claims that might have enabled the players to share in and have some control over the telecast rebroadcast rights).

software;²⁷ or (2) uses of literary portions (i.e., the code) of video game software.²⁸

C. *Genres of Video Games*

Regardless of any policy arguments regarding the control of these downstream markets for video games, it is important to comprehend the current video game landscape to better understand how each genre fits within the broader copyright discussion. Along with the rest of semiconductor and computer-related technology, video games have progressed quite a long way from the arcade games at issue in much of the litigation of the 1980s.²⁹ This has led to increased complexity among the wide range of broad video game genres that differ in their style of gameplay. The genres that will be specifically discussed due to the varying ways in which copyright law may apply are: action role-playing games (“ARPGs”), massively multiplayer online role-playing games

²⁷ See *Lotus Dev. Corp. v. Borland Int’l, Inc.*, 49 F.3d 807, 820–22 (1st Cir. 1995) (Boudin, J., concurring) (noting that, because Borland copied the menu for the purpose of compatibility and avoiding lock-in effects, its use should be permitted), *aff’d by an equally divided court*, 516 U.S. 233 (1996). Lock-in effects refer to the concept that, where one becomes accustomed to a certain procedure or idea, if a monopoly were granted over that procedure or idea, then the users would be “locked in” to using the product produced by whomever had that monopoly. See *id.* at 821. The example provided by Judge Boudin in *Lotus* is that of the QWERTY keyboard, whereby those who have learned to type on the QWERTY scheme would be “captive of anyone who had a monopoly on the production of such a keyboard,” despite that the QWERTY scheme is really “nothing other than a menu of letters.” *Id.* at 820–21.

²⁸ See *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1514 (9th Cir. 1992) (holding that, “based on the public policies underlying the statute,” reverse engineering to create competing games playable on Sega consoles was a fair use, despite it obviating the need to pay licensing fees to Sega). For more discussion regarding these policy considerations, see *infra* Part IV.

²⁹ Compare *Midway Mfg. Co. v. Artic Int’l, Inc.*, 704 F.2d 1009, 1012 (7th Cir. 1983), *cert. denied*, 464 U.S. 823 (1983) (“[The player of a video game] cannot create any sequence he wants out of the images stored on the game’s circuit boards. The most he can do is choose one of the *limited* number of sequences the game allows him to choose.” (emphasis added)), with *Rift*, OCNUS, <https://www.oculus.com/rift/> [<https://perma.cc/23CV-JX5D>] (last visited Mar. 3, 2017) (describing a virtual reality gaming product that allows users to interact fully with their virtual environments).

(“MMORPGs”), real-time strategy games (“RTSs”), digital collectible card games (“CCGs”), and sandbox games.³⁰

ARPGs are single-player games that involve a player traversing a usually elaborate plot line, existing within a large “open world”³¹ universe. However, the crux of the gameplay centers on interacting with the environment and various characters along one or a few storylines within the game. Examples of ARPGs include *The Elder Scrolls V: Skyrim*³² and *Fallout 4*,³³ both created by Bethesda Game Studios.

MMORPGs are similar to ARPGs in that they both have an open universe style. They differ drastically, however, by eschewing the more defined plot line, with the gameplay centering on an open universe style and the existence of other real-life players. The interactions between players in the virtual world are elaborate and lead to the creation of virtual economies.³⁴ An example includes Blizzard Entertainment’s *World of Warcraft*.³⁵

RTSs are another form of gaming, but each virtual world consists of a battle arena and usually includes fewer players than MMORPGs, typically numbering in the single- or low double-

³⁰ Some may take slight issue with the characterizations of these genres in this Article. For example, RTSs, as described later in this section, may be interpreted as being more accurately labeled by the RTS sub-genre of “multiplayer online battle arena” games (“MOBAs”). However, the broader separation of genres set forth (e.g., RTSs/MOBAs as distinct from ARPGs) is what is important for this Article.

³¹ “Open world” is a term for video games where players can move freely throughout a virtual world and are given extensive freedom regarding how and when to approach particular objectives, as opposed to other video games that have a more linear structure to their gameplay. See, e.g., Jake Muncy, *Open-World Games Are Changing the Way We Play*, WIRED (Dec. 3, 2015), <https://www.wired.com/2015/12/open-world-games-2015/> [<https://perma.cc/4EXA-3PWJ>] (“Open-world games leave players to their own devices, free to explore what amounts to an enormous sandbox with no boundaries and few rules.”).

³² *The Elder Scrolls V: Skyrim*, BETHESDA.NET, <http://www.elderscrolls.bethesda.net/skyrim/> [<https://perma.cc/GX8N-WVWP>] (last visited Mar. 3, 2017).

³³ *FALLOUT 4*, <https://www.fallout4.com/> [<https://perma.cc/NL2K-UACG>] (last visited Mar. 3, 2017).

³⁴ See generally Edward Castranova, *Virtual Worlds: A First-Hand Account of Market and Society on the Cyberian Frontier* (Ctr. for Econ. Studies & Ifo Inst. for Econ. Research, CESifo Working Paper No. 618, 2001).

³⁵ *WORLD OF WARCRAFT*, <https://worldofwarcraft.com/en-us/> [<https://perma.cc/RQC6-H746>] (last visited Mar. 3, 2017).

digits. Teams compete to strategically outmaneuver each other and destroy the other's virtual assets. Examples are Blizzard's *Starcraft II*³⁶ and Riot Games' *League of Legends* ("LoL").³⁷

Digital CCGs relate to RTSs in that they involve a smaller number of players: matches typically involve turn-based play and only two players competing against each other. Further, CCGs closely mimic the feel of traditional tabletop games with added audiovisual components. Examples include Blizzard's *Hearthstone*³⁸ and Mojang's *Scrolls*.³⁹

Lastly, and in stark contrast to the more confined nature of the tabletop, card-game-like feel of digital CCGs, sandbox games are games in which users can traverse a large, open universe and interact with nearly every aspect of their surroundings. These have minimal limitations on what the player's character can do, allowing the player to not only explore the open world, but to change it as well.⁴⁰ One popular example is Majong's *Minecraft*,⁴¹ in which players have exceptional latitude to interact with the virtual world and build entire worlds out of blocks.

D. Tournament Play and the Passive Consumption of Video Games

Similar to the progress in video gaming itself—which led to the complexities of games in these genres—many developments in computing technology have also led to significant changes in the way video games are consumed. Most significantly, the pervasive nature of the internet and increasingly large bandwidth capabilities have led to significant consumption of video games via online

³⁶ *Starcraft II*, BLIZZARD ENT., <http://us.battle.net/sc2/en/> [<https://perma.cc/J5XS-MLU4>] (last visited Mar. 3, 2017).

³⁷ LEAGUE OF LEGENDS, <http://na.leagueoflegends.com> [<https://perma.cc/T269-SGRK>] (last visited Mar. 3, 2017).

³⁸ *HearthStone*, BLIZZARD ENT., <http://us.battle.net/hearthstone/en/> [<https://perma.cc/9J93-MTF2>] (last visited Mar. 3, 2017).

³⁹ SCROLLS, <https://scrolls.com> [<https://perma.cc/WZ26-Q7LS>] (last visited Mar. 3, 2017).

⁴⁰ See *Sandbox*, TECHOPEDIA, <https://www.techopedia.com/definition/3952/sandbox-gaming> [<https://perma.cc/JCP9-D4J8>] (last visited Mar. 3, 2017).

⁴¹ MINECRAFT, <https://minecraft.net/> [<https://perma.cc/6HFT-6FU5>] (last visited Mar. 3, 2017).

streaming platforms.⁴² This takes place in the form of “live streaming” live gameplay through popular sites such as Twitch.tv,⁴³ as well as traditional streaming of user-generated content (“video-on-demand”)—such as walk-throughs,⁴⁴ Let’s Plays,⁴⁵ video game reviews, or other gameplay—all of which are typically uploaded to sites such as YouTube.⁴⁶ Just as early video game technologies took passive consumers and turned them into interactive consumers,⁴⁷ these new streaming technologies have

⁴² See, e.g., Sarah Perez, *YouTube Gaming Expands to New Markets, Improves Its Browsing and Viewing Experience on Mobile*, TECHCRUNCH (Mar. 10, 2016), <http://techcrunch.com/2016/03/10/youtube-gaming-expands-to-new-markets-improves-its-browsing-and-viewing-experience-on-mobile/> [<https://perma.cc/PL6Z-UQ2C>].

⁴³ See, e.g., *ClgDoubleLift*, TWITCH, <https://www.twitch.tv/clgdoublelift> [<https://perma.cc/PV5J-MRH4>] (last visited Mar. 3, 2017) (providing a channel for a popular streamer for the game League of Legends).

⁴⁴ A walkthrough is an instructional video of how to go through a video game, such as how to succeed at certain challenging elements, or how to find certain hidden elements known as “easter eggs.” See, e.g., RabidRetrospectGames, *Destiny 2 Curse of Osiris Gameplay Walkthrough Part [One] Full Game (Full Expansion) – No Commentary*, YOUTUBE (Dec. 5, 2017), https://www.youtube.com/watch?v=88fDyRpv1_Q [<https://perma.cc/DJ44-Q9MR>]; see also Brandon Guerrie, *Complete [One-Hundred Percent] Guide to a Walkthrough*, VENTUREBEAT, (May 3, 2010, 5:14 PM) <https://venturebeat.com/community/2010/05/03/complete-100-guide-to-a-walkthrough/> [<https://perma.cc/6YDA-YQGQ>].

⁴⁵ A Let’s Play, or an “LP,” is a video of someone playing a videogame with audio commentary of the gameplay laid over it, and is edited to focus more on the entertainment value of the actual gameplay than it is on instructing. See, e.g., David Finnis, *What Is a “Let’s Play?”*, YAHOO VOICES (Nov. 18, 2009), <https://web.archive.org/web/20140729024203/http://voices.yahoo.com/what-lets-play-4901264.html> [<https://perma.cc/4DEL-AXA4>].

⁴⁶ See, e.g., theRedBrad, *Fallout 4 Walkthrough Gameplay Part [One] – The Apocalypse (PS4)*, YOUTUBE (Nov. 9, 2015), <https://www.youtube.com/watch?v=r9WsqRhbdF4>. While Twitch started as mostly a live streaming platform, and YouTube was originally for video-on-demand, both platforms have branched out and offer both services.

⁴⁷ Greg Lastowska, *Copyright Law and Video Games: A Brief History of an Interactive Medium*, in THE SAGE HANDBOOK OF INTELLECTUAL PROPERTY 495, 498 (Matthew David & Debra Halbert eds. 2015) (describing the initial difficulties that the advent of gaming brought about due to the fact that, instead of passively consuming media—as one does when they read a book or view a movie—gamers interactively consume the media and, in doing so, gamers have a part in controlling the game and participating in the experience ultimately consumed).

ironically shifted some video game consumption back toward a more passive medium—i.e., simply *viewing* streams.⁴⁸

Similarly, these new methods of passively consuming video games have created new markets by which games can be monetized. For one, there can be significant advertising revenue for both casual live streams⁴⁹ and video-on-demand of gameplay or walkthroughs. Second, by enabling live streaming of tournament play, these technologies have created a growing market for professional video game playing, called “e-sports.”⁵⁰ E-sports is seeing explosive growth, reaching nearly \$700 million in expenditures in 2016, a year-on-year growth of over forty percent.⁵¹ Combined, the entire streaming market for video

⁴⁸ See generally Nathan Edge, *Evolution of the Gaming Experience: Live Video Streaming and the Emergence of a New Web Community*, 4 ELON J. UNDERGRADUATE RES. COMM. 33 (2013) (discussing the growth of live stream spectatorship for video gaming).

⁴⁹ Referring to popular players who stream gameplay outside of the context of tournaments.

⁵⁰ E-sports refers to the organized, competitive playing of video games, often by professional gamers. These gamers are professional, insofar as they are either directly sponsored by certain entities within the gaming industry, or they have obtained large viewerships on certain streaming outlets with advertising, thereby monetizing their gaming. With the advent of online streaming services, the popularity of such competitions has increased dramatically; albeit, many competitions may also be attended in person. See, e.g., Paul Tassi, *2012: The Year of eSports*, FORBES (Dec. 20, 2012), <https://www.forbes.com/sites/insertcoin/2012/12/20/2012-the-year-of-esports/#3e9518837e11> [<https://perma.cc/7DGX-VEBB>].

⁵¹ The coming year will see the [e-]sports [e]conomy grow to \$696 million, a year-on-year growth of 41.3%. Brands are expected to spend \$517 million, broken down into \$155 million on advertising, \$266 million on sponsorship, and a further \$95 million on media rights. Consumer spending this year on merchandise and tickets will amount to \$64 million. The remaining \$116 million is the total investment that game publishers will make into e[-]sports, the share that is not directly recouped by any of the other revenue streams.

NEWZOO, 2017 GLOBAL ESPORTS MARKET REPORT 13 (2017), http://resources.newzoo.com/hubfs/Reports/Newzoo_Free_2017_Global_Esports_Market_Report.pdf?hsCtaTracking=5a96aa39-a810-47a6-834b-559c317775c3%7C6a2d5758-bab2-4d87-9fbe-f82dc9ba638a&__hstc=133451409.a9903ca3155abdc46b338f58161fd13f.1490112406280.1490112406280.1490112406280.1&__hssc=133451409.5.1490112406280&__hsfp=2869597247 [<https://perma.cc/B7Y4-L7RM>].

games—including both live streaming and video-on-demand—is estimated to be over four billion dollars.⁵²

E. The Potential for Litigation

Given these figures, there is no doubt that the issue of control over these downstream uses of video games is of high importance to the various entities involved: the players and teams that compete and broadcast their gameplay, the services that facilitate the streaming of these broadcasts, and the video game publishers who created the games. Further, as the global e-sports market alone expected to triple to nearly \$1.5 billion by 2020, the stakes are only continuing to rise.⁵³

The industry has already seen quite a bit of litigation around various aspects common to other areas of sports, such as player contractual disputes and the distribution of broadcasting revenue.⁵⁴ It follows that, while most publishers are generally supportive of content creation, these disputes might not be far from extending

⁵² See *Market Brief: Gaming Video Content*, SUPERDATA: GAMES & INTERACTIVE MEDIA INTELLIGENCE, <https://www.superdataresearch.com/market-data/gaming-video-content-2015/> [<https://perma.cc/XK37-KWZA>] (last visited Mar. 3, 2017); see also James Brightman, *Twitch Outranks YouTube in \$3.8bn Gaming Video Market – Superdata*, GAMESINDUSTRY.BIZ (July 9, 2015), <http://www.gamesindustry.biz/articles/2015-07-09-twitch-outranks-youtube-in-usd3-8bn-gaming-video-market-superdata> [<https://perma.cc/BF9B-GVLV>] (showcasing how, even in 2015, gaming video content was “worth about \$3.8 billion globally, with an audience of 486 million people watching live streams, trailers, walkthroughs and all sorts of gaming-related content made by fans”).

⁵³ NEWZOO, *supra* note 51, at 14.

⁵⁴ See, e.g., Nic Doucet, *Report: H2K, TSM to Enter in Legal Dispute Over Svenskeren*, THE SCORE ESPORTS (Nov. 10, 2015), <http://www.thescoreesports.com/news/4753> [<https://perma.cc/GUY2-F5MY>] (describing a potential suit brought by one e-sports team against another alleging, inter alia, tortious interference with the fulfillment of a popular gamer’s employment contract for the 2016 season). Given the parallels between e-sports and more traditional forms of competitive game play that is sports, it seems reasonable to predict that many of the same issues that are prevalent in the more familiar realm of sports and the law will come to light in the context of e-sports. See Andrew Nixon et al., *An Overview of eSports Explosion and Legal Issues Arising from It*, LAWINSPORT (Feb. 9, 2016), <http://www.lawinsport.com/features/item/an-overview-of-esports-explosion-and-legal-issues-arising-from-it> [<https://perma.cc/2AXS-MS8Q>]. Specifically, the realm of e-sports could see discussion of topics such as: players’ unions, salary caps and transparency, doping (i.e., cognitive enhancing drugs), some form of overarching governing or regulatory body to help with dispute resolution and rule-setting, etc. *Id.*

into the realm of copyright. In fact, one ordeal involving a popular *LoL* player highlights this rising tension.⁵⁵ In early 2015, a controversy emerged involving a Twitch user who was exploiting a feature in *LoL* that allowed any “solo queue game”⁵⁶ to be viewed through the *LoL* software by anyone with a *LoL* account.⁵⁷ The user created a channel called “SpectateFaker,” which automatically checked for and streamed any of these solo queue matches involving the professional e-sports player, Lee “Faker” Sang-hyeok.⁵⁸ Faker, however, had signed a contract with another streaming platform, Azubu, to exclusively stream on their service.⁵⁹ In response, Azubu attempted to issue a DMCA takedown to Twitch by claiming to be the rights holder, and therefore, purporting that they are entitled by the Copyright Act to require Twitch to remove the SpectateFaker channel.⁶⁰ However,

⁵⁵ See Marc Merrill, *SpectateFaker - What We Learned and What We'll Do*, <http://na.leagueoflegends.com/en/news/riot-games/announcements/spectatefaker-what-we-learned-and-what-well-do> [<https://perma.cc/FJ4W-9Q9D>] (last visited Mar. 3, 2017). The article is attributed to “Tryndamere,” an online handle referring to Marc “Tryndamere” Merrill, the Co-Founder and President of Riot Games. *Id.*

⁵⁶ A solo queue game is a type of gameplay, where the user enters into competitive team play individually, and the rest of the team members are populated by other random individuals. See *Solo Queue*, URB. DICTIONARY, <https://www.urbandictionary.com/define.php?term=Solo%20queue> [<https://perma.cc/S45V-LFA3>] (last visited Dec. 8, 2017).

⁵⁷ Samuel Lingle, *SpectateFaker Dares Riot Games to Shut Him Down*, DOT ESPORTS (Feb. 23, 2015, 2:58 AM), <https://dotesports.com/league-of-legends/news/spectatefaker-riot-games-dmca-dare-1458> [<https://perma.cc/Y2NF-HVWN>].

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ The Digital Millennium Copyright Act (DMCA), Pub. L. No. 105-304, 112 Stat. 2860 (1998), did many things, one of which was to heighten penalties for copyright infringement on the internet. See 17 U.S.C. § 506 (2012). At the same time, it also created a safe harbor for online service providers (“OSPs”), which are defined in the Act as “a provider of online services or network access, or the operator of facilities therefore.” *Id.* § 512(k)(1)(B). However, OSPs must comply with various requirements to be eligible for the section 512 safe harbors. See *id.* § 512(c)(1). One such requirement is that, when given proper notice of infringing material being posted on its network, the OSP must “respond[] expeditiously to remove, or disable access to, the material that is claimed to be infringing.” *Id.* § 512(c)(1)(C). The term ‘proper notice,’ as referred to in this subsection, is what is known as a DMCA takedown notice. Further, the Act enumerates a few necessary elements for such notice to be effective, including that the notice be made by the owner of the allegedly infringed right (i.e., the copyright holder), or someone authorized to act on their behalf. See *id.* § 512(c)(3)(A)(i). In this example, Twitch would fall within the definition of an OSP, and therefore would seek to comply

current precedent dictates that a publisher's copyright in a video game extends to all of the audiovisual displays produced by a game, notwithstanding player participation.⁶¹ This leads to the presumption that Riot Games, the maker of *LoL*, owns the copyright in the stream, and is thereby the only party capable of issuing a DMCA takedown request to Twitch.⁶² This is because not only do publishers own the entirety of the audiovisual displays produced by their games,⁶³ but the *LoL* terms of use further stipulate that downstream users contract away all control over any content produced through playing *LoL*.⁶⁴ Therefore, it took Riot Games, upon Faker's request, to issue a separate DMCA takedown to successfully shut down the SpectateFaker channel.⁶⁵ While this

with the section 512 safe harbor requirements to avoid copyright infringement liability. According to current precedent, the rights holder over the entirety of the video game audiovisuals is the video game publisher, Riot Games. See *infra* note 62 and accompanying text. Therefore, the only person able to issue or authorize the issuance of a DMCA takedown to Twitch, the OSP, is the rights holder, Riot Games. See 17 U.S.C. § 512(c)(3)(A)(i).

⁶¹ See, e.g., *Stern Elecs., Inc. v. Kaufman*, 669 F.2d 852, 855 (2d Cir. 1982); see also *Midway Mfg. Co. v. Artic Int'l, Inc.*, 704 F.2d 1009, 1011 (7th Cir. 1983), *cert. denied*, 464 U.S. 823 (1983) (holding that playing a video game lacked the requisite creativity "to make each performance of a video game the work of the player and not the game's inventor").

⁶² See Merrill, *supra* note 55 ("[T]he DMCA issued by Azubu did not have a legal standing as [Riot Games], not Azubu, own the gameplay content."); see also *supra* note 60.

⁶³ See *Midway Mfg. Co.*, 704 F.2d at 1011. If players were to assert a theory that vested part ownership in the streams with them, they would likely focus on some type of implied joint authorship theory or a derivative work theory. The latter would still require permission from the publisher, and would only be possible if a copyright in all of a game's audiovisual displays does not in fact attach at the outset, as precedent currently mandates. See *infra* Section III.B for more discussion. Further, the implied joint work theory likely lacks the intent necessary to yield a joint work in which the players would have rights. See Tyler T. Ochoa, *Who Owns an Avatar?: Copyright, Creativity, and Virtual Worlds*, 14 VAND. J. ENT. & TECH. L. 959, 979 (2012); see also *Williams Elecs., Inc. v. Artic Int'l, Inc.*, 685 F.2d 870, 874 (3d Cir. 1982) (holding that players are not co-authors of what appears on screen).

⁶⁴ *League of Legends Terms of Use*, LEAGUE OF LEGENDS, <http://na.leagueoflegends.com/en/legal/termsfuse> [<https://perma.cc/L482-3LKJ>] (last visited Mar. 3, 2017) ("We (and our licensors) own and reserve all rights and title in and to the Riot Services, and all data and content included therein, including . . . Game recordings and broadcasts You can't create any work of authorship based on the Game Content or Riot Services except as expressly permitted by us.").

⁶⁵ See Lingle, *supra* note 57.

anecdote may seem to encompass many legal issues—including rights of publicity and harassment⁶⁶—it is easy to see how these tensions surrounding the issue of copyright ownership in the underlying streams could spill over into the courts.⁶⁷ Such a result could lead to revisiting the early video game cases of the 1980s, thereby affecting the future of gaming.⁶⁸ This is of particular interest because, whereas the earlier cases were concerned with competing video games and associated free-rider concerns,⁶⁹ the present climate is about newly arising markets in which content creators are building upon the underlying content.⁷⁰

II. VIDEO GAMES' AUDIOVISUAL DISPLAYS REVISITED

The player contribution associated with interactive media particularly implicates issues of fair use when determining the true extent of publisher control in these downstream markets. Although,

⁶⁶ See, e.g., *id.*

⁶⁷ See, e.g., *id.* (quoting the channel owner saying “I’m doing this stream because I can legally and it’s allowed by *League of Legends*’ legal terms [This issue is] about a co-owner of Riot Games being completely out of touch with e[-]sports and the spectator mode. It’s about a company (Azubu) issuing a false DMCA claim for content they didn’t even own.”). Spectator mode is a feature within *LoL* that allows users within the *LoL* program to passively view games taking place in real-time without actually participating. See *Spectator Mode*, LEAGUE OF LEGENDS WIKI, http://leagueoflegends.wikia.com/wiki/Spectator_Mode [<https://perma.cc/9PH6-H8N5>] (last visited Oct. 26, 2017). By streaming a screen capture of this in-game feature on Twitch, the channel owner was able to create the SpectateFaker channel. See *id.*

⁶⁸ See, e.g., Lingle, *supra* note 57 (quoting Marc Merrill saying “These are issues that will affect the future of the game and the spectator mode [and a]ll of this needs to be debated for the future of [*LoL*] and e[-]sports.”).

⁶⁹ See, e.g., *Atari, Inc. v. N. Am. Philips Consumer Elecs. Corp.*, 672 F.2d 607, 619–20 (7th Cir. 1982), *superseded in part by statute*, FED. R. CIV. PR. 52(a), *as recognized in Design Basics, LLC v. Lexington Homes, Inc.*, 858 F.3d 1093, 1105 (7th Cir. 2017) (“Although not ‘virtually identical’ to PAC-MAN, K. C. Munchkin captures the ‘total concept and feel’ of and is substantially similar to PAC-MAN.” (citing *Midway Mfg. Co. v. Dirkschneider*, Civ. No. 81-0-243 (D. Neb. July 15, 1981)); *Stern Elecs., Inc. v. Kaufman*, 669 F.2d 852, 855 (2d Cir. 1982) (noting that, without copyright protection for video games’ audiovisual elements, “a determined competitor” could “manufactur[e] a ‘knock-off’” video game).

⁷⁰ An extreme example of this content creation is “Machinima,” which is a style of cinematic production that uses the audiovisual elements of a video game to create separate works. See MACHINIMA, <https://machinima.com> (last visited Mar. 3, 2017) (specializing in hosting videos and providing a platform to discuss machinima films).

one may also consider authorship and originality, the idea/expression dichotomy, and fixation, all of which are discussed in this Article later.

A. Fair Use and EULAs

As noted above, section 107 of the Copyright Act provides that “fair use of a copyrighted work . . . is not an infringement of copyright.”⁷¹ When “determining whether the use . . . is a fair use,” the statute requires that the following four factors be considered: “(1) the purpose and character of the use . . .; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used . . .; and (4) the effect of the use upon the potential market for . . . the copyrighted work.”⁷² Because the issue of fair use is determined via “a case-by-case analysis” in light of the unique facts of each case,⁷³ such an analysis may be applied individually to the varying uses of differing genres of copyrighted video games.⁷⁴ Fair use is a natural starting point for a discussion on the copyrights afforded to video game audiovisuals because, if content creators could assert strong fair use arguments for downstream uses of video games, it is unlikely that courts would revisit the precedent establishing the copyrightability of those games.

Under such an analysis, the second factor, the nature of the work, seems likely to heavily favor game publishers as it pertains to the audiovisual portions of their works, because these expressive video games are at the core of what copyright intends to protect.⁷⁵ The third factor, however—the amount and substantiality—raises

⁷¹ 17 U.S.C. § 107 (2012).

⁷² *Id.*

⁷³ *See* *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 577 (1994).

⁷⁴ Consider: (1) a stream of gameplay with added audiovisuals of the player inlayed on the screen, and real-time commentary on the specific strategies employed in an RTS for advertising revenue; versus (2) a stream of ARPG gameplay with no commentary or review, but done by an unknown player, thereby generating no revenue. One adds much more but generates profit, while the other adds virtually nothing but is essentially non-commercial.

⁷⁵ *See, e.g., Campbell*, 510 U.S. at 586 (“This factor calls for recognition that some works are closer to the core of intended copyright protection than others, with the consequence that fair use is more difficult to establish when the former works are copied.”).

an interesting question. If a copyright extends to all of the audiovisual displays capable of being generated, then what proportion of that work is incorporated by a single play of the game? Courts have acknowledged that, notwithstanding the fact that “[e]ach time a video game is played, a different sequence of images appears on the screen,” the “set of images” capable of being displayed receive copyright as an audiovisual work.⁷⁶ This concept suggests that a single instance of gameplay is therefore copying the entirety of the copyrighted audiovisual output of the game.⁷⁷ Others might argue, however, that one instance of play is really just a small proportion of the game and all of the possible permutations of moves.

The more interesting issues at hand are the interplay between the first factor—the purpose and character of the use—and the fourth factor—the effect on the potential market for the copyrighted work. Under *Sony Corp. of America v. Universal City Studios, Inc.*, a use deemed commercial under the first factor leads to a presumption of market harm in the fourth factor.⁷⁸ Importantly, a use that is “significantly transformative,” particularly in its benefit to the public, may negate this presumption.⁷⁹ Ultimately, it seems any of the content creators that are monetizing through ads, or content distributors, would face the shifted burden of *Sony*.⁸⁰

It may be possible for a defendant to rebut this presumption, however, given that streaming video is not likely to directly replace interactive gameplay. Publishers will likely contest this assertion by noting that, to the extent that games are played for their plotlines, watching games be played may replace their

⁷⁶ *Midway Mfg. Co. v. Artic Int’l, Inc.*, 704 F.2d 1009, 1011 (7th Cir. 1983).

⁷⁷ *See id.*

⁷⁸ *See* 464 U.S. 417, 449 (1984) (“If the Betamax were used to make copies for a commercial or profit-making purpose, such use would presumptively be unfair.”).

⁷⁹ *See, e.g., Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1165 (9th Cir. 2007) (holding that Google’s use of thumbnails to point to infringing websites was a fair use, and noting that “a search engine puts images ‘in a different context’ so that they are ‘transformed into a new creation,’” thereby negating the *Sony* presumption (quoting *Wall Data Inc. v. L.A. Cty. Sheriff’s Dep’t*, 447 F.3d 769, 778 (9th Cir. 2006))).

⁸⁰ *See Sony Corp. of Am.*, 464 U.S. at 449.

entertainment value.⁸¹ Potential defendants could also attempt to eliminate this presumption by showing a transformative use.⁸² It is possible that courts may consider the transformation of gameplay—originally serving an immersive and interactive function—into a consumptive medium—serving a more informative function—as a sufficiently transformative fair use, thereby favoring the defendants.⁸³ Alternatively, given the similarly consumptive and entertaining nature of both uses, courts may take the opposite approach and view the new use as insufficiently transformative.⁸⁴

Nonetheless, a more in-depth analysis of fair use is unnecessary because of the Terms of Service agreements (“ToSs”) currently distributed with video games. Software users are often bound by various covenants and conditions that may limit the ways in which they can use the software.⁸⁵ Failure to abide by these stipulations may enable publishers to pursue breach of contract or copyright infringement claims, depending on the nature of the restriction.⁸⁶ It is well established that users of software can be mere licensees, rather than owners.⁸⁷ Moreover, parties are free to

⁸¹ While this could be an argument for one type of passive consumption, many uses involve avid, regular players of a game viewing tournaments, or ARPG players looking up instructional walk-throughs to help guide them through the game.

⁸² See, e.g., *Perfect 10, Inc.*, 508 F.3d at 1164 (“A work is ‘transformative’ when the new work does not ‘merely supersede the objects of the original creation’ but rather ‘adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message.’” (quoting *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994))).

⁸³ See *id.* at 1165 (“Although an image may have been created originally to serve an entertainment, aesthetic, or informative function, a search engine transforms the image into a pointer directing a user to a source of information.”).

⁸⁴ See *id.*

⁸⁵ See *MDY Indus., LLC v. Blizzard Entm’t, Inc.*, 629 F.3d 928, 939 (9th Cir. 2010) (“We refer to contractual terms that limit a license’s scope as ‘conditions,’ the breach of which constitute copyright infringement. We refer to all other license terms as ‘covenants,’ the breach of which is actionable only under contract law.” (citation omitted)).

⁸⁶ See *id.*

⁸⁷ See, e.g., *Vernor v. Autodesk, Inc.*, 621 F.3d 1102, 1111 (9th Cir. 2010), *cert. denied*, 132 S. Ct. 105 (2011) (“We hold today that a software user is a licensee rather than an owner of a copy where the copyright owner (1) specifies that the user is granted a license; (2) significantly restricts the user’s ability to transfer the software; and (3) imposes notable use restrictions.”).

contract away their ability to make fair uses of a work via these ToSs without being preempted by federal copyright law, even where such agreements may be viewed as contracts of adhesion.⁸⁸ Currently, many publishers include clauses in their ToSs that effectively limit a user's potentially fair use of the gameplay.⁸⁹ Therefore, while fair use would still allow one to avoid a copyright infringement suit, publishers would still have remedies under contract law.⁹⁰ Consequently, given the current validity of such clauses in relation to federal copyright law, fair use defenses—even if otherwise viable on their merits—would likely still fail to avoid publisher control of these markets.

B. Authorship and Originality

In addition to fair use, defendants may resort to other familiar arguments to avoid publisher control. One area of debate in early case law centered on the interactive element of video game consumption—namely, that video game players, through their active participation, are partly responsible for the audiovisual content ultimately perceived.⁹¹ “To qualify for copyright protection, a work must be original to the author.”⁹² Further, “[o]riginal . . . means only that the work was independently created by the author (as opposed to copied from other works), and that it possesses at least some minimal degree of creativity.”⁹³ Consequently, in the early video game disputes, courts had to determine to what extent the player's involvement impacts the

⁸⁸ See, e.g., *Davidson & Assocs. v. Jung*, 422 F.3d 630, 639 (8th Cir. 2005) (noting that, in a suit brought by Blizzard against a reverse engineer, “a state can permit parties to contract away a fair use defense or to agree not to engage in uses of copyrighted material that are permitted by the copyright law [sic] if the contract is freely negotiated” (quoting *Bowers v. Baystate Techs., Inc.*, 320 F.3d 1317, 1337 (Fed. Cir. 2003) (Dyk, J., dissenting))).

⁸⁹ See, e.g., *League of Legends Terms of Use*, *supra* note 64.

⁹⁰ See *MDY Indus., LLC*, 629 F.3d at 939 (distinguishing between covenants and license conditions, with a violation of the latter giving rise to copyright remedies and the former giving rise to contract remedies).

⁹¹ See, e.g., *Stern Elecs., Inc. v. Kaufman*, 669 F.2d 852, 856 (2d Cir. 1982).

⁹² *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991).

⁹³ *Id.* at 345.

status of a game's dynamic audiovisuals as an "original work[] of authorship" under the Copyright Act.⁹⁴

The U.S. Court of Appeals for the Seventh Circuit did just that in *Midway Manufacturing v. Artic International, Inc.*, in which they considered "whether the creative effort in playing a video game is enough like writing or painting to make each performance of a video game the work of the player and not the game's inventor."⁹⁵ The game at issue was *Pac-Man*, and the court determined that "[p]laying a video game is more like changing channels on a television" than like writing or painting because—being unable to "create any sequence he wants out of the images stored [in] the game[]"—the player lacks "control over the sequence of images that appears on the video game screen."⁹⁶ Consequently, the court held that the audiovisual displays were eligible for copyright protection as original works of authorship despite player interaction.⁹⁷

The U.S. Court of Appeals for the Third Circuit similarly refuted a defendant's argument in determining whether the player's participation in the game *Defender*⁹⁸ "withdraws the game's audiovisual work from copyright eligibility because . . . the player becomes a co-author of what appears on the screen."⁹⁹ The court found the defendant's argument unconvincing, notwithstanding the fact that the player's participation causes "the audiovisual presentation to change in some respects from one game to the next," as "there is always a repetitive sequence of a *substantial portion* of the sights and sounds of the game."¹⁰⁰ Further, "many

⁹⁴ See, e.g., *Stern Elecs.*, 669 F.2d at 853; *Williams Elecs., Inc. v. Artic Int'l, Inc.*, 685 F.2d 870, 874 (3d Cir. 1982).

⁹⁵ 704 F.2d 1009, 1011 (7th Cir. 1983), *cert. denied*, 464 U.S. 823 (1983).

⁹⁶ *Id.* at 1012.

⁹⁷ *Id.*

⁹⁸ For more information on the gameplay of this game, see *Defender: A [Thirty-Eight]-Year-Old Arcade Video Game PCB by Williams Electronics, Inc.*, GAMINGHISTORY, <https://www.arcade-history.com/?n=defender&page=detail&id=614> [http://perma.cc/UAD9-T768] (last visited Oct. 14, 2017).

⁹⁹ *Williams Elecs., Inc.*, 685 F.2d at 874.

¹⁰⁰ *Id.* (emphasis added).

aspects of the display remain constant from game to game regardless of how the player operates the controls.”¹⁰¹

If courts were to revisit this argument today, it seems possible that real-time gameplay would fall short of being a protectable audiovisual work. According to precedent, it is possible that courts would consider the enhanced ability to interact in modern gaming to be a fully “original work of authorship.” On one end of the spectrum, some games—namely, digital CCGs—still seem to fit squarely within these definitions.¹⁰² Conversely, other games—such as sandbox games or MMORPGs—are much more like painting a portrait than they are like “changing channels on a television.”¹⁰³ For example, *Minecraft* is a game about “staying alive in *your own* fantastic world,” and is “a creative space to build *almost anything you can imagine!*”¹⁰⁴ Likewise, *World of Warcraft* is “an online world of . . . *limitless* adventure.”¹⁰⁵ These types of open-world games allow a vast array of possibilities for user interaction. This makes it nearly impossible to produce an entirely similar sequence of audiovisuals from game-to-game, inviting the question: To what extent does player contribution change the game enough to preclude audiovisual copyrightability as an original work of authorship?¹⁰⁶

More vexing are ARPGs and RTSs, as the former has a more scripted plotline,¹⁰⁷ and the latter has a very confined world with “substantially similar gameplay” from game-to-game.¹⁰⁸ The way

¹⁰¹ *Id.*

¹⁰² See *supra* notes 38–39 and accompanying text (describing the traditional, tabletop feel of turn-based CCGs).

¹⁰³ See *Midway Mfg. Co. v. Artic Int’l, Inc.*, 704 F.2d 1009, 1012 (7th Cir. 1983), *cert. denied*, 464 U.S. 823 (1983).

¹⁰⁴ Tom Stone, *How to Minecraft*, MINECRAFT (Feb. 23, 2017), <https://minecraft.net/en-us/article/how-minecraft> [<https://perma.cc/Q3E4-PQ22>] (emphasis added).

¹⁰⁵ *World of Warcraft Digital Download*, BLIZZARD ENT., <https://us.battle.net/shop/en/product/world-of-warcraft> [<https://perma.cc/ADX5-3YEA>] (last visited Mar. 3, 2017) (emphasis added).

¹⁰⁶ See *Williams Elecs., Inc.*, 685 F.2d at 874. While these types of games represent the most eligible candidates for success under this theory, they are still vulnerable to the discussion *infra* notes 112–18 and accompanying text.

¹⁰⁷ See *supra* notes 32–33.

¹⁰⁸ See, e.g., *League of Legends, What is League of Legends*, YOUTUBE (Oct. 13, 2015), <https://www.youtube.com/watch?v=BGtROJeMPeE> [<https://perma.cc/38ZZ-FSNJ>]

in which players interact with other characters in ARPGs, through the limited sets of responses and the similarity in plotline trajectory across plays, lends itself toward analogizing these games to “changing channels on a television.”¹⁰⁹ Similarly, RTSs like *LoL*—with a standard three-lane arena, and a strategy surrounding the more predictable way that hazards¹¹⁰ interact with characters—present a stronger argument that “many aspects of the display remain constant . . . regardless of how the player operates the controls.”¹¹¹

Some may consider these arguments as viewing the more broadly expressive elements of the game—such as the plot and setting—as constituting the audiovisuals, rather than the more discrete “series of related images,”¹¹² that make up the “set of images displayed as some kind of unit,”¹¹³ which are ultimately live streamed or uploaded. Specifically, the U.S. Court of Appeals for the D.C. Circuit held that the point of inquiry for originality of authorship—as it pertains to copyrightability of the audiovisual displays—is “the total sequence of images displayed *as the game is*

(describing the layout of the arena and the recurring way in which various hazards in the arena interact with the player character).

¹⁰⁹ See *Midway Mfg. Co. v. Artic Int'l, Inc.*, 704 F.2d 1009, 1012 (7th Cir. 1983), *cert. denied*, 464 U.S. 823 (1983).

¹¹⁰ The term “hazards” refers to the various aspects of a map that are not controlled by any player (i.e., they are controlled by artificial intelligence programmed into the game), and that may inflict damage on the players. See, e.g., *Summoner's Rift*, LEAGUE OF LEGENDS WIKI, http://leagueoflegends.wikia.com/wiki/Summoner%27s_Rift [https://perma.cc/2BHY-FFM9] (last visited Oct. 2, 2017) (describing the various monsters and turrets positioned throughout a map to inflict damage on each team); see also *supra* note 109.

¹¹¹ *Williams Elecs., Inc.*, 685 F.2d at 874.

[M]any aspects of the sights and the sequence of their appearance remain constant during each play of the game. These include the appearance (shape, color, and size) of the player's spaceship, the enemy craft, the ground missile bases and fuel depots, and the terrain over which (and beneath which) the player's ship flies, as well as the sequence in which the missile bases, fuel depots, and terrain appears.

Stern Elecs., Inc. v. Kaufman, 669 F.2d 852, 856 (2d Cir. 1982).

¹¹² 17 U.S.C. § 101 (2012).

¹¹³ *Midway Mfg. Co.*, 704 F.2d at 1011 (suggesting a broader interpretation of the phrase “series of related images”).

played.”¹¹⁴ Courts may look to the real-time gameplay of an RTS such as *LoL*, and determine that the skill and strategy involved “is more like . . . painting a picture,”¹¹⁵ regardless of the more limited confines of a *LoL* arena.¹¹⁶ Certainly, the viewers contributing to the nearly half-billion dollar e-sports industry might agree.¹¹⁷

Ultimately, the protection afforded to live or recorded gameplay will likely come down to how courts interpret the “substantiality” of similarities between different instances of live gameplay¹¹⁸—i.e., does the contribution of the publishers meet the standards for copyrightability? Even in games with more freedom, players today are still confined to the original creative efforts of, for example, Minecraft’s creators. Further, even in games that require more skill, such as *LoL*, players can only interact with the arena and the hazards within them in ways conceived by developers such as Riot Games. Consequently, some courts may construe precedent broadly enough to encompass today’s games. Each play of a game exists within the same original world created by the publisher. A player’s repertoire of “moves,” while exceptionally more complex, may still be akin to changing channels, as every user interaction changes the audiovisual display only in a way pre-scripted by the programmer-author.¹¹⁹ Thus, courts may view the similarities between each instance of gameplay as similar enough to warrant protection as original works of authorship.

This potential reasoning hinges on the argument that, regardless of how complex video games have become, the publishers ultimately author any possible audiovisual sequence,

¹¹⁴ Atari Games Corp. v. Oman, 888 F.2d 878, 883 (D.C. Cir. 1989) (Ginsburg, J.) (emphasis added) (holding that the single-player game *BREAKOUT* was sufficiently original in its real-time gameplay—as opposed to its constituent elements—to be a copyrightable audiovisual work).

¹¹⁵ *Midway Mfg. Co.*, 704 F.2d at 1012.

¹¹⁶ The gameplay of RTSs such as *LoL* focus on a more limited map with a recurring way in which various hazards in the arena interact with the player character, such that one can use strategy in interacting and traversing with the map as part of their method to defeat the other team. See *supra* note 108.

¹¹⁷ See generally NEWZOO, *supra* note 51.

¹¹⁸ See, e.g., *Williams Elecs., Inc. v. Artic Int’l, Inc.*, 685 F.2d 870, 874 (3d Cir. 1982).

¹¹⁹ See *Midway Mfg. Co.*, 704 F.2d at 1012.

notwithstanding any player interaction. This logic rests upon the fact that regardless of their complexity, video games still remain—at their core—elaborate state machines.¹²⁰

C. Games as Systems

This understanding of video games as state machines, on the other hand, may also give rise to the argument that video games' audiovisual gameplay is uncopyrightable subject matter.¹²¹ It is well established that copyright extends only to the expression contained in a work, and not to the underlying ideas.¹²² In codifying this concept, the Copyright Act is explicit that a copyright over an original work of authorship “[i]n no case” extends to any “system” or “method of operation.”¹²³ The argument, therefore, is that gameplay, when viewed as a state machine or a mere system of rules, falls within the scope of section 102(b) and thereby represents uncopyrightable subject matter.¹²⁴ Importantly, these arguments acknowledge that, just as with board games, the underlying expressive elements of video games—such as characters, maps, and other creative elements—may be copyrightable.¹²⁵ The real-time combination of these elements is what constitutes gameplay, and because their combination takes place within a “system”—i.e., the state machine that is a video game—any instance of gameplay falls within section 102(b).¹²⁶

A key case that seems to support a similar argument is *Allen v. Academic Games League of America, Inc.*, in which the U.S. Court

¹²⁰ See Bruce E. Boyden, *Games and Other Uncopyrightable Systems*, 18 GEO. MASON L. REV. 439, 441–42 (defining a state machine in the context of video games as “a means for correlating a range of permitted inputs (i.e., game moves) to a determinate set of outputs (i.e., changes in the game state)”).

¹²¹ See generally *id.*

¹²² See, e.g., *Mazer v. Stein*, 347 U.S. 201, 217 (1954) (“Unlike a patent, a copyright gives no exclusive right to the art disclosed; protection is given only to the expression of the idea—not the idea itself.”).

¹²³ 17 U.S.C. § 102(b) (2012) (“In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.”).

¹²⁴ See generally Boyden, *supra* note 120.

¹²⁵ See Lastowka, *supra* note 47, at 504–05.

¹²⁶ See *id.*

of Appeals for the Ninth Circuit held that tournament play of a board game did not constitute an infringing public performance.¹²⁷ In doing so, the court noted that extending the term “play”¹²⁸ to include “the playing of games” would place an “undue restraint on consumers,” as it would allow board game publishers to essentially “control when and where purchasers of games may play the games.”¹²⁹ Further, the court noted “[t]his doctrine of merger is particularly applicable with respect to games ‘since they consist of abstract rules and play ideas.’”¹³⁰ Ultimately, the court examined the statutory definition of “perform”—as used in section 106(4)¹³¹ and originally defined in section 101¹³²—and determined, in a somewhat conclusory manner, that “games are meant to be ‘played.’”¹³³ Consequently, the court held that tournament play of a board game did not fall within the meaning of a “public performance” as defined by the Copyright Act.¹³⁴

¹²⁷ 89 F.3d 614, 616 (9th Cir. 1996).

¹²⁸ As used in the section 101 definition of “perform” to determine what constitutes a “public performance” under section 106(4) of the Copyright Act. *See* 17 U.S.C. §§ 101, 106(4).

¹²⁹ *Allen*, 89 F.3d at 616.

The term ‘play’ has not been extended to the playing of games. To do so would mean interpreting the Copyright Act in a manner that would allow the owner of a copyright in a game to control when and where purchasers of games may play the games and this court will not place such an undue restraint on consumers.

Id.

¹³⁰ *Id.* at 617 (quoting *Midway Mfg. Co. v. Bandai-Am., Inc.*, 546 F. Supp. 125, 148 (D.N.J. 1982)).

¹³¹ 17 U.S.C. § 106(4) (providing that under the fourth prong of section 106 of the Copyright Act, the owner of the copyright over an audiovisual work has the exclusive right “to *perform* the copyrighted work publicly.” (emphasis added)).

¹³² *Id.* § 101 (providing that to “perform” means “to recite, render, *play*, dance, or act” a work (emphasis added)).

¹³³ *See Allen*, 89 F.3d at 616.

¹³⁴ *See id.* (“In applying these statutory definitions [of ‘publicly’ and ‘perform’], we conclude that the playing of a game is not a ‘performance’ within the meaning of the Copyright Act.”). Note, however, that one court explicitly held that merely playing an arcade game constitutes a public performance. *See Red Baron-Franklin Park, Inc. v. Taito Corp.*, 883 F.2d 275, 279 (4th Cir. 1989). Nonetheless, that decision has come under intense scrutiny. *See, e.g.*, 2 NIMMER ON COPYRIGHT § 8.15[I] (2017) (“[T]he Fourth Circuit’s reasoning in *Red Baron* is itself sufficiently deficient that the case’s reasoning should be rejected on its own merits.”); Boyden, *supra* note 120, at 473, n.199.

This conclusory holding, however, does not explicitly overshadow early debates about the idea-expression dichotomy and the issue of merger in the murkier realm of video gameplay. One such debate took place in *M. Kramer Manufacturing Co., Inc. v. Andrews*,¹³⁵ in which the U.S. Court of Appeals for the Fourth Circuit overturned the lower court's decision that the video game at issue "was not copyrightable because it was a 'system or manner of playing a game,'" falling within the exceptions of section 102(b).¹³⁶ The Fourth Circuit looked first to the legislative history, noting that it reflected an intent for section 102(b) to merely codify precedent, and not to "enlarge[] or contract[] the scope of copyright protection under the present law."¹³⁷ The ultimate intent of section 102(b) was to make clear that the expressive elements in a computer program—as distinct from the processes or methods—are copyrightable,¹³⁸ "whether represented in a video game or otherwise."¹³⁹ As the Fourth Circuit noted, this holding comported with notable earlier cases upholding the copyrightability of operating systems, notwithstanding arguments that they were uncopyrightable processes or methods of operation.¹⁴⁰

These earlier cases seem to focus more generally on whether computer programs were per se uncopyrightable as systems.¹⁴¹ The Fourth Circuit then expanded the umbrella of computer programs to include video games, noting that the copyright thereby extends to the audiovisual elements of a video game, which are an extension of the expression of the programmer-author.¹⁴²

¹³⁵ 783 F.2d 421 (4th Cir. 1986).

¹³⁶ *Id.* at 434.

¹³⁷ *Id.* Boyden argues this is too narrow of an interpretation, as the precedent construes each of the words delineated in section 102(b)—e.g., idea, process, system, etc.—to mean "idea" as distinct from "expression," meaning that all of the examples but "idea" in this section are superfluous verbiage. Boyden, *supra* note 120, at 460.

¹³⁸ *See M. Kramer Mfg. Co.*, 783 F.2d at 434.

¹³⁹ *Id.* at 435.

¹⁴⁰ *See id.*

¹⁴¹ *See id.* ("[R]ecent cases . . . have held that computer programs[] are not to be denied copyrightability as a 'process,' or 'system,' precluded from registration under section 102(b).") (footnote omitted).

¹⁴² *See id.* (noting that "*all* computer programs [whether in a video game or other work] . . . are designed to operate a machine in such a way as to ultimately produce some useful communication . . . i.e., *to express*" (emphasis in original) (quoting Apple

Importantly, the court makes little of the distinction between the nonliteral and clearly copyrightable elements as they exist statically (e.g., characters and maps), versus the dynamic, nonliteral elements¹⁴³ (i.e., the real-time interaction between these static elements) that comprise an instance of gameplay.¹⁴⁴ The court merely noted that the idea of the game is not protected, but the “shapes, sizes, colors, sequences, arrangements and sounds [that] provide[] something new or additional over the idea are protected.”¹⁴⁵ Consequently, courts today might be willing delve deeper into whether this conclusion necessarily means that an instance of real-time gameplay is copyrightable.

The question, therefore, is to what extent does the application of a state machine (i.e., a system) to a set of discrete, static, copyrightable elements yield a copyrightable audiovisual output? The answer depends on the extent to which courts view the real-time audiovisual output of the underlying state machine as comprising some new or additional expression over the uncopyrightable elements of the system.¹⁴⁶ For instance, a court may apply the Second Circuit’s abstraction-filtration-comparison test to determine which aspects of real-time audiovisual gameplay are actually protected.¹⁴⁷ This test proposes that, in order to determine which elements of a computer program are copyrightable, one should: (1) “break down the . . . program into its constituent structural parts” (i.e., abstraction); (2) examine each part for uncopyrightable ideas, “expression that is necessarily incidental to those ideas,” or “elements that are taken from the public domain” (i.e., filtration); and then (3) compare the

Comput., Inc. v. Formula Int’l, Inc. 775, 780 (C.D. Cal. 1983), *aff’d*, 725 F.2d 521 (9th Cir. 1984)).

¹⁴³ See MDY Indus., LLC v. Blizzard Entm’t, Inc., 629 F.3d 928, 942–43 (9th Cir. 2010) (describing, as it pertains to *WoW*, the “real-time experience of traveling through different worlds, hearing their sounds, viewing their structures, encountering their inhabitants and monsters, and encountering other players” as “[the game’s] *dynamic non-literal elements*” (emphasis added)).

¹⁴⁴ See *M. Kramer Mfg. Co.*, 783 F.2d at 435.

¹⁴⁵ See *id.* (alteration in original) (internal quotation marks omitted) (quoting Atari, Inc. v. N. Am. Phillips Consumer Elecs., Corp., 672 F.2d 607, 617 (7th Cir. 1982)).

¹⁴⁶ See, e.g., *id.* at 435–36.

¹⁴⁷ See, e.g., Comput. Assocs. Int’l, Inc. v. Altai, Inc., 982 F.2d 693, 706 (2d Cir. 1992).

expression that remains with “the allegedly infringing program” (i.e., comparison).¹⁴⁸ Particularly, this inquiry focuses on which expressive elements survive the filtration step.¹⁴⁹ Specifically, courts should look to see if using a system—which merely dictates responses to inputs—to produce audiovisual displays comprised of these responses is expressive, in sum, when such responses are carried out by discrete, expressive elements. For example, consider a sand-box game that comprises: an expressive, surreal world; an expressive, alien-like character; and the application of impeccably realistic, earth-like physics. Looking at each independently, the first two are obviously copyrightable, while the latter is not.¹⁵⁰ But what about the real-time interactions of the first two, as dictated by the latter—the earth-like physics? Currently, courts seem reluctant to preclude particular expressions in the presentation of even more functional¹⁵¹ software from copyrightability.¹⁵² Therefore, it seems likely that courts will continue to maintain that the audiovisual output of a video game system is simply a “particular expression of [the] system,” allowing real-time gameplay to continue to qualify as copyrightable expression.¹⁵³ However, this analysis may grow more complicated, as even the elements of video games that may be perceived as expression—such as maps and environments—are increasingly created using elaborate systems of rules to enable unfathomably large universes.¹⁵⁴

¹⁴⁸ *See id.*

¹⁴⁹ *See id.*

¹⁵⁰ The underlying portions of the code might be, but in a non-literal sense it is not.

¹⁵¹ To distinguish from the more recreational software that are video games.

¹⁵² *See Am. Dental Ass'n v. Delta Dental Plans Ass'n*, 126 F.3d 977, 980 (7th Cir. 1997) (“A dictionary cannot be called a ‘system’ just because new novels are written using words, all of which appear in the dictionary. Nor is word-processing software a ‘system’ just because it has a command structure for producing paragraphs.”).

¹⁵³ *See Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1366 (Fed. Cir. 2014) (citing *Toro Co. v. R & R Prods. Co.*, 787 F.2d 1208, 1212 (8th Cir. 1986)).

¹⁵⁴ *See* Simon Parkin, *No Man's Sky: The Game Where You Can Explore [Eighteen] Quintillion Planets*, *GUARDIAN* (July 12, 2015), <https://www.theguardian.com/technology/2015/jul/12/no-mans-sky-18-quintillion-planets-hello-games> [<https://perma.cc/Z7FR-ZT24>] (describing a game featuring “a universe created by mathematical rules rather than an artist’s eye and imagination”). It is true this game suffered issues at launch associated with claims that the number of planetary variations was wildly overstated. *See* Sam Machkovech, *No Man’s Sky Creator Describes Issues with Launch, Crashes, Money*, *ARSTECHNICA* (Mar. 2, 2017), <https://arstechnica.com/>

D. Fixation

The question of whether these particular expressions are sufficiently fixed still remains.¹⁵⁵ Copyright extends only to those works “fixed in [a] tangible medium of expression.”¹⁵⁶ A common argument in the early arcade cases closely tracked the arguments involving authorship and originality: contending that the player interactivity and the differing sequences of audiovisuals essentially demonstrated that there was no “fixed” audiovisual work eligible for protection.¹⁵⁷ Specifically, the alleged infringers argued that because “there is no set or fixed performance” and “the video game generates or creates ‘new’ images each time,” the game is “transient, and cannot be ‘fixed.’”¹⁵⁸ However, courts did not agree with this reasoning.¹⁵⁹ For example, the Second Circuit noted that, while “some of [a video game’s] sights and sounds will not be seen and heard during each play of the game[,] . . . the images remain fixed, *capable* of being seen and heard each time.”¹⁶⁰ Consequently, courts generally agreed that a video game constitutes an “audiovisual work [that] is permanently embodied in

gaming/2017/03/sean-murray-unveils-hello-labs-will-incubate-more-procedural-tech-games/ [https://perma.cc/M7AY-NGZR]. Nonetheless, it illustrates the underlying idea that games may be increasingly relying on mathematical content-generation systems.

¹⁵⁵ As defined by the Copyright Act:

A work is “fixed” in a tangible medium of expression when its embodiment in a copy or phonorecord, by or under the authority of the author, is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration. A work consisting of sounds, images, or both, that are being transmitted, is “fixed” for purposes of this title if a fixation of the work is being made simultaneously with its transmission.

17 U.S.C. § 101 (2012).

¹⁵⁶ *Id.* § 102(a).

¹⁵⁷ *See, e.g., Williams Elecs., Inc. v. Artic Int’l, Inc.*, 685 F.2d 870, 874 (3d Cir. 1982); *Stern Elecs., Inc. v. Kaufman*, 669 F.2d 852, 855–56 (2d Cir. 1982).

¹⁵⁸ *Williams Elecs., Inc.*, 685 F.2d at 874.

¹⁵⁹ *See, e.g., id.*; *Stern Elecs., Inc.*, 669 F.2d at 856; *Midway Mfg. Co. v. Dirkschneider*, 543 F. Supp. 466, 480 (D. Neb. 1981) (“[I]t is clear that the plaintiff’s audiovisual works are fixed in the printed circuit boards. The printed circuit boards are tangible objects from which the audiovisual works may be perceived for a period of time more than transitory.”).

¹⁶⁰ *Stern Elecs., Inc.*, 669 F.2d at 856 (emphasis added).

a material object, the memory devices, from which it can be perceived with the aid of the other components of the game.”¹⁶¹

As with the discussions surrounding the authorship argument, the courts seemed to focus on the “[t]he repetitive sequence of a substantial portion of the sights and sounds” that allowed video game audiovisuals to qualify for copyright protection.¹⁶² Therefore, as with authorship, the increased complexity of newer video games¹⁶³ may cause courts to reconsider their previous logic that a “substantial” portion of the audiovisuals recur with each play, allowing a game to be sufficiently fixed.¹⁶⁴ Nevertheless, there is a more technical issue unique to fixation that may supplement this discussion. Previously, “memory devices,”¹⁶⁵ which enabled the audiovisual displays to be sufficiently fixed, were a part of printed circuit boards that were the pervasive method of distributing arcade games.¹⁶⁶ In early arcade games, the game was physically designed into the hardware, and, as the technology matured, was later coded into read-only memory present on the program boards.¹⁶⁷ Today, most video games are played on devices with volatile, random-access memory (“RAM”).

¹⁶¹ See, e.g., *Williams Elecs., Inc.*, 685 F.2d at 874 (quoting *Stern Elecs., Inc.*, 669 F.2d at 856) (internal quotation marks omitted); *Dirkschneider*, 543 F. Supp. at 480 (“The printed circuit boards are tangible objects from which the audiovisual works may be perceived for a period of time more than transitory. The fact that the audiovisual works cannot be viewed without a machine does not mean the works are not fixed.”).

¹⁶² *Stern Elecs., Inc.*, 669 F.2d at 856 (“Nevertheless, many aspects of the sights and the sequence of their appearance remain constant during each play of the game.”).

¹⁶³ Compare Klaus Scholz, *Arcade - Scramble 1981 (HD)*, YOUTUBE (Oct. 28, 2010), <https://www.youtube.com/watch?v=m-PDf1Su6gA> [https://perma.cc/2Q3E-9CZN] (showing the specific game at issue in *Stern Elecs., Inc.*, which is an arguably simplistic, two-dimensional space shooter), with KingofCasual, *World of Warcraft Gameplay 2014 - Better Quality | Level 90 Boost*, YOUTUBE (Mar. 17, 2014), https://www.youtube.com/watch?v=_uCG5bkprOc [https://perma.cc/RA9D-THYW] (showing three-dimensional gameplay with intricate graphics and greater player interaction in a large, open-world format).

¹⁶⁴ See *supra* discussion in Section II.B.

¹⁶⁵ See *Stern Elecs., Inc.*, 669 F.2d at 856.

¹⁶⁶ See, e.g., ATARI, *ASTERIODS: OPERATION MAINTENANCE AND SERVICE MANUAL* 24, fig. 16 (1979), <https://www.mikesarcade.com/arcade/manuals.html> [https://perma.cc/3TFG-QYP6] (portraying the printed circuit board (PCB) schematic of the video game, *Asteroids*, as it was permanently printed onto the hardware that was distributed inside the arcade console).

¹⁶⁷ See *id.*

Moreover, many video games involve extensive use of servers to enable multiplayer capability, adding further complexity to the question of fixation.¹⁶⁸ This latter fact adds a level of complexity for a copyright analysis, specifically as it pertains to multiplayer games such as RTSs or MMORPGs.

It is true that, with any game, all of the possible discrete sights and sounds are stored in some manner in a fixed form on a disc or hard drive. Still, with a MMORPG such as *WoW*, potential defendants may argue that the perceived audiovisual work exists merely in RAM and across various servers, as the players' movements and interactions are communicated to a server and vice versa. The Ninth Circuit approached the complexity of RAM in *MAI Systems Corp. v. Peak Computer, Inc.*, finding that a temporary copy of a program existing in RAM was sufficiently fixed to constitute infringement.¹⁶⁹ However, this had to do with whether a copy in RAM was sufficiently fixed to infringe a work that was already fixed and copyrighted—meaning the literal copy in RAM was an entire duplicate of the fixed, literal work, and would persist ad infinitum until the program was closed.¹⁷⁰ Here, the question is whether the dynamic, non-literal elements of real-time video game play are sufficiently fixed to be eligible for copyright.

It is possible that courts may not view new games any differently than precedent, noting that, as before, all of the potential sights and sounds that form a sequence of images making up an audiovisual work are stored within the fixed medium through which the game is distributed, and the experience is substantially similar from play to play.¹⁷¹ Moreover, in the age of the internet,

¹⁶⁸ See, e.g., *Cartoon Network LP v. CSC Holdings, Inc.*, 536 F.3d 121, 125, 129–30 (2d Cir. 2008) (noting how the fact that the technology at issue involves “a complex system requiring numerous computers, processes, networks of cables” complicates the fixation analysis (quoting *Twentieth Century Fox Film Corp. v. Cablevision Sys. Corp.*, 478 F. Supp. 2d 607, 612 (S.D.N.Y. 2007))).

¹⁶⁹ See *MAI Sys. Corp. v. Peak Comput., Inc.*, 991 F.2d 511, 518 (9th Cir. 1993) (holding that a representation of a computer program “created in the RAM is ‘sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration’”).

¹⁷⁰ See *id.*

¹⁷¹ See, e.g., *Stern Elecs., Inc., v. Kaufman*, 669 F.2d 852, 856 (2d Cir. 1982).

courts may still find that all parts of the work are sufficiently fixed—whether locally on the gaming device or remotely on servers—such that the work in total is eligible for protection.¹⁷²

Undoubtedly, today's games are significantly more complex, particularly in light of the fact that much of the interactive experience hinges upon the performances of competing players. Therefore, “many aspects of the sights [of a game] and the sequence of their appearance” may no longer be viewed as “remain[ing] constant during each play.”¹⁷³ Rather, the ever-changing interactions between the multiple players prevent these games from containing such “repetitive sequence[s] of . . . sights and sounds.”¹⁷⁴ The U.S. Court of Appeals for Second Circuit, in *Stern Electronics, Inc. v. Kaufman*, referred to audiovisual displays that were “capable of being seen and heard”—specifically, portions of the game that you could eventually experience if you made it that far into the level.¹⁷⁵ Today, there is a virtually limitless series of sights and sounds capable of being portrayed, depending on the countless interactions with the large quantity of other player characters. In light of this, one could argue that the sets of sights and sounds ultimately experienced merely exist in a buffer on the RAM, and are thereby ineligible for copyright.¹⁷⁶ This would mean that these massively multiplayer online (“MMO”) games are not necessarily fixed at the outset, with the actual gameplay being quite fleeting—in stark contrast with gameplay that was fixed in an arcade machine's printed circuit board.

¹⁷² See *id.* at 855 n.4 (“Whether located in the PROM prepared for this particular game or elsewhere in the total assembly, all portions of the program, once stored in memory devices anywhere in the game, are fixed in a tangible medium within the meaning of the Act.”).

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ See *id.* at 856 (emphasis added) (“[T]he images remain fixed, capable of being seen and heard each time a player succeeds in keeping his spaceship aloft long enough to permit the appearances of all the images and sounds of a complete play of the game.”).

¹⁷⁶ See *Cartoon Network LP v. CSC Holdings, Inc.*, 536 F.3d 121, 129–30 (2d Cir. 2008) (declining to extend *MAI*, and holding that a video stream *buffer* existed on a computer for too transitory of a period to qualify as a directly infringing copy).

III. POTENTIAL CONSEQUENCES

A. *Copyright Registration*

Notwithstanding this fixation argument, a particular instance of gameplay becomes fixed once uploaded or, possibly, transmitted via a live stream.¹⁷⁷ Similarly, even if the system is treated such that copyright cannot attach at the outset to the entirety of the audiovisuals capable of being produced, a discrete instance of gameplay recorded as a single audiovisual may be eligible for copyright protection.¹⁷⁸ However, there remains the issue of copyright registration for these fixed streams, and the benefits conferred to registered works—such as the ability to sue for infringement¹⁷⁹ or, more significantly, the ability to issue a DMCA takedown request.¹⁸⁰ Even if the publishers held copyrights in audiovisual works deemed fixed by the content creators, registering every single stream a publisher wished to monetize or take down could incur large transaction costs. Consequently, as a practical matter, they would have far less ability to control their dissemination.

¹⁷⁷ See 17 U.S.C. § 101 (2012). Therefore, if publishers began to, in concert with hosting the game, permanently store data relating to player movements and gameplay (such that the audiovisuals could be reproduced) for a particular instance of play, they could argue that they were effectively simultaneously fixing all instances of gameplay. Alternatively, they could physically store the audiovisual displays, but this would require a lot of storage.

¹⁷⁸ Assuming the player contribution does not amount to authorship, the rights could vest in the publisher under the theory that the publisher-author is implicitly authorizing the fixation of the gameplay. See *id.* (providing that a work must be sufficiently fixed “by or under the authority of the author” for the fixation to qualify the work for copyright eligibility (emphasis added)).

¹⁷⁹ See *id.* § 411(a) (“[N]o civil action for infringement of the copyright in any [U.S.] work shall be instituted until preregistration or registration of the copyright claim has been made in accordance with this title.”).

¹⁸⁰ See, e.g., *Schneck v. Orosz*, No. 3:13-CV-0294, 2013 WL 5963557, at *10 (M.D. Tenn. Nov. 7, 2013) (“Under the circumstances presented, and in the absence of a persuasive alternative construction of the DMCA and [section] 411(a), the court finds that the DMCA does not displace [section] 411(a)’s registration requirement or the registration approach.”).

B. *Derivative Works*

While fixation is ultimately resolved when the content creator uploads a stream, what if publishers failed to maintain copyrightability under the other two theories—i.e., authorship or idea/expression dichotomy? In that case, publishers would likely still seek to continue control of these markets by arguing that these streams constitute derivative works.¹⁸¹ In narrowing the “overbroad” language of the statute, the Ninth Circuit held that “in order to qualify as a derivative work,” a work “must exist in a ‘concrete or permanent form,’” and “must substantially incorporate protected material from the preexisting work.”¹⁸² There is disagreement over whether this requirement is actually necessary,¹⁸³ but the Ninth Circuit’s analysis is the more stringent one, and is therefore, important for publishers to consider when looking to maintain control under a derivative work theory. While the streams contain none of the literal, copyrighted code underlying the game, they are still made up mostly of the discrete copyrightable audiovisual elements.¹⁸⁴ Because it is likely these

¹⁸¹ According to the Copyright Act:

A “derivative work” is a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted. A work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship, is a “derivative work.”

17 U.S.C. § 101. Further, under section 106(2), the right to prepare derivative works is one of the exclusive rights enjoyed by a copyright holder. *See id.* § 106(2). Such an argument, however, similarly presents the issues addressed in Section III.A regarding registration. Nonetheless, if the theory is that the gameplay is a derivative work of the underlying, registered code, then there is no registration issue. Alternatively, publishers could still selectively register and enforce the copyrights of the derivative works.

¹⁸² *Micro Star v. FormGen Inc.*, 154 F.3d 1107, 1110 (9th Cir. 1998) (quoting *Lewis Galoob Toys, Inc. v. Nintendo of Am., Inc.*, 964 F.2d 965, 967 (9th Cir. 1992)).

¹⁸³ *See, e.g., The Family Movie Act of 2004: Hearing on H.R. 4586 Before the Subcomm. on Courts, the Internet, and Intellectual Prop. of the H. Comm. on the Judiciary*, 108th Cong. 14 (statement of Marybeth Peters, Register of Copyrights, U.S. Copyright Office) (“I believe that fixation should not be required in order to infringe the derivative work right in cases where there is a derivative public performance.”).

¹⁸⁴ *See, e.g., jackfrags, BATTLEFIELD 1 ASSAULT GAMEPLAY - Insane Graphics!*, YOUTUBE (June 13, 2016), <https://www.youtube.com/watch?v=X8UB9LVhh6A>

streams substantially incorporate protected material from the preexisting work, the question of permanence of the derivative work is the more interesting one.

Lewis Galoob Toys, Inc. v. Nintendo of America, Inc. originally articulated this question of permanence. The Ninth Circuit found that the augmented audiovisual displays arising from a hardware kit that sped up a video game system’s gameplay were not sufficiently concrete or permanent to qualify as a derivative work.¹⁸⁵ In contrast, uploaded video streams of gameplay are more clearly concrete and permanent. Less clear, however, is how concrete and permanent courts would view a live stream.¹⁸⁶

If courts were to look to the fixation element of section 102(a)¹⁸⁷ to determine the permanence of a potentially infringing derivative work—as the Ninth Circuit has when applying a fixation element to directly infringing copies¹⁸⁸—a transmission with simultaneous fixation would certainly be concrete and permanent enough to qualify as a derivative work, assuming it substantially incorporates protected material.¹⁸⁹ Without simultaneous fixation of the transmission, live streaming may be too “transitory” in nature to incorporate the original work in enough of a “concrete or permanent” form to qualify as a derivative work if it only exists in a series of computer buffers.¹⁹⁰ Because public performance and derivative works are separate rights within section 106, it is not entirely clear if this unfixated public performance derived from the original work would be infringing.¹⁹¹ Due to the explicit lack of a “fixation” requirement for derivative works, it is likely that courts would be unwilling to extend the judicially created “concrete or permanent form” requirement so far as to permit unauthorized

(displaying the artfully created map as well as other, discrete, expressive elements that comprise an instance of gameplay).

¹⁸⁵ *Lewis Galoob Toys, Inc. v. Nintendo of Am., Inc.*, 964 F.2d 965, 969 (9th Cir. 1992).

¹⁸⁶ *See supra* note 178 and accompanying text.

¹⁸⁷ *See* 17 U.S.C. § 102(a) (2012).

¹⁸⁸ *See, e.g.*, *MAI Sys. Corp. v. Peak Comput., Inc.*, 991 F.2d 511, 518 (9th Cir. 1993).

¹⁸⁹ *See supra* note 161 and accompanying text.

¹⁹⁰ *See Cartoon Network LP v. CSC Holdings, Inc.*, 536 F.3d 121, 129–30 (2d Cir. 2008).

¹⁹¹ *See* 17 U.S.C. § 106.

public performances of a work that, while unfixed, substantially incorporates protected material.¹⁹² Moreover, any argument attempting to argue that these derivative works are implicitly authorized is easily rendered moot by noting the ToSs often explicitly preclude the content creators from having any control over uses of the output of the game.¹⁹³

IV. POLICY CONSIDERATIONS

One driving factor behind the Ninth Circuit's holding in *Galoob* was that "technology often advances by improvement rather than replacement," noting that the alleged derivative work does not supplant demand for the preexisting work.¹⁹⁴ Much debate in copyright law, as with all areas of intellectual property, centers on the competing utilitarian concerns of promoting creativity, while at the same time not unduly impinging the ability of others to build upon this creativity. Such considerations will likely be at the center of any discussions involving the downstream rights of video game audiovisual displays. Specifically, policy implications may be important because, while there is a concern of under-incentivizing creativity by precluding publishers' rights in unforeseen or downstream uses of their works, it does not necessarily follow that the mere existence of these markets automatically allows rights to vest in the publisher.¹⁹⁵

It becomes necessary, therefore, to weigh these competing concerns. On one hand, publisher control over these downstream uses of video games may not just benefit the game creators, but may also have positive externalities for the end-users as well. For example, perhaps in part due to the ability for publishers to control

¹⁹² See generally Tyler T. Ochoa, *Copyright, Derivative Works and Fixation: Is Galoob a Mirage, or Does the Form (GEN) of the Alleged Derivative Work Matter?*, 20 SANTA CLARA COMPUTER & HIGH TECH L.J. 991 (2004) (discussing contradictions inherent in the question of whether derivative works must be fixed to be infringing).

¹⁹³ See *League of Legends Terms of Use*, *supra* note 64.

¹⁹⁴ *Lewis Galoob Toys, Inc. v. Nintendo of Am., Inc.*, 964 F.2d 965, 969 (9th Cir. 1992).

¹⁹⁵ See *Int'l News Serv. v. Associated Press*, 248 U.S. 215, 246 (1918) (Holmes, J., dissenting) ("Property, a creation of law, does not arise from value, although exchangeable—a matter of fact.").

their ecosystems and profit from a game after the initial sale, a tremendous rise in free-to-play games has emerged.¹⁹⁶ Many popular games such as *Dota 2*, *LoL*, and *Hearthstone*, are distributed free of charge,¹⁹⁷ which is probably a utility that would not exist if publishers were unable to capitalize on these downstream uses. This is likely why publishers and gamers enjoy a symbiotic relationship—at least with regards to many of the games discussed in this Article. Moreover, with video games and uploaded gameplay, there is less concern over lock-in effects than there is with the audiovisuals of more utilitarian software—such as the user interface of a word processor.¹⁹⁸

Conversely, the primary impetus for copyright law in the first place is to promote creativity and progress.¹⁹⁹ Overprotection of audiovisual displays may run afoul of these utilitarian purposes. Further buttressing this concern, there is a related policy argument that could be instrumental in shaping the landscape of video game streaming. The pervasive use of contracts of adhesion to contract away fair use—to the extent that these clauses will not be preempted by federal copyright law—could lead to an impingement of uses that are fair yet still violate a clause in a contract of adhesion.²⁰⁰ Therefore, greater concerns regarding preempting the contracting away of fair uses generally, not just in the context of video games, may lead to a shift favoring content creators.

CONCLUSION

Given the recent developments in video game consumption, copyright law, as applied to video game audiovisual displays, is ripe for revisiting. If courts were to apply precedent from litigation in the 1980s to video games as they exist today, the idea that

¹⁹⁶ See Eva-Maria Scholz, *Business Models for Digital Goods: Video Games (Free-to-Play Games)*, IPDIGIT (Mar. 18, 2015), <http://www.ipdigit.eu/2015/03/business-models-for-digital-goods-video-games-free-to-play-games/> [https://perma.cc/REQ2-X365].

¹⁹⁷ See *id.*

¹⁹⁸ See *supra* note 27 and accompanying text.

¹⁹⁹ See U.S. CONST. art. I, § 8, cl. 8.

²⁰⁰ See *supra* Section II.A.

copyright protection automatically attaches to any and all audiovisual displays generated by a game may not hold true. The strongest argument potential defendants have is that their interaction with the game precludes copyrightability for the audiovisual displays due to a lack of “original authorship” on the part of the publishers. Moreover, defendants could also argue that games are uncopyrightable systems. However, it is likely that the audiovisuals created by publishers constitute enough expression beyond the underlying system to defeat this argument. Nonetheless, potential defendants would further note that, given their complexity today and their dispersed nature in light of the internet, video games are not sufficiently fixed to allow for copyright. This argument appears similarly ineffective because, notwithstanding registration issues, the individual instances of gameplay are sufficiently fixed in video-on-demand, and could be simultaneously fixed with regard to live streaming.²⁰¹

If either of the latter two theories work in favor of potential defendants—meaning the copyright does not attach to audiovisuals at the outset—then there is additionally the issue of registration for those later-fixed audiovisual displays, which is necessary for the use of DMCA takedowns. Nonetheless, publishers could still have considerable control through a derivative work theory. Ultimately, because potential defendants in this case often contract away their fair use rights, publishers will likely retain a significant amount of control over most types of games under current precedent. The authorship/originality argument is the most capable, at the moment, of disrupting this status quo.

²⁰¹ See *supra* note 178 and accompanying text.