

PAY TO PLAY: VIDEO GAME MONETIZATION PATENTS AND THE DOCTRINE OF MORAL UTILITY

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CITE AS: 5 GEO. L. TECH. REV. 72 (2021)

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I. INTRODUCTION

Video games are now more complex and realistic than they ever have been—but making those games is not cheap. Video game development and marketing costs are sky high.¹ To help recoup these costs, game developers and publishers have begun inventing increasingly clever ways to encourage users to spend more money on video games—and they are pursuing patents for those inventions. One recently granted patent seeks to drive in-game purchases by making multiplayer matches difficult for a player, encouraging that player to buy an item and, once that item is purchased and used, subtly rewarding the spending by making multiplayer matches easier.² Another recently granted patent targets players more likely to spend money in-game by presenting them with exclusive spending opportunities, maximizing value

* Shareholder, Banner Witcoff. Thanks to Ross A. Dannenberg, Scott M. Kelly, and Carlos Goldie for their invaluable input and assistance with this Article.

¹ See *infra* Part II.

² See U.S. Patent No. 9,789,406 (filed Oct. 17, 2017) [hereinafter Marr].

from users inclined to spend.³ Despite their ingenuity, such video game monetization techniques remain controversial: according to some psychologists, video game monetization techniques are predatory and may lead to addictive behavior akin to gambling.⁴

This raises the question: should the U.S. Patent and Trademark Office (USPTO) deny patents to video game monetization-related inventions on the grounds they might deceive users or harm their psychological well-being? In particular, should the USPTO revive the now dead “moral utility” doctrine, pursuant to which inventions were once considered patent ineligible if found to be “immoral”?⁵ A growing number of commentators have argued in favor of such a revival, albeit outside the context of video games. For example, one commentator has argued in favor of revitalizing the moral utility doctrine to prevent “deceptive patents,” such as those disclosing so-called “point-of-sale deception,” in order to “promote true innovation, prevent dead-weight loss, and ensure that ‘the stream of commercial information flow[s] cleanly as well as freely.’”⁶ Another commentator has argued that inventions with the potential to harm the health of the user (e.g., inventions directed to “products and processes that contain an excessive amount of unhealthy ingredients or components such as salt, fat, and sugar”) should be considered patent ineligible.⁷

Clearly, this Article does not seek to proffer an opinion regarding whether video games are addictive, reinforce gambling habits, or are otherwise psychologically problematic—though it is clear that some psychologists have raised serious negative allegations regarding video game monetization strategies. Rather, this Article centers on whether the USPTO should allow patents for these monetization strategies to be issued.

This Article explores the growing trend of patents directed to video game monetization methods, surveys criticisms of that trend, and argues that re-introduction of the moral utility doctrine in patent law to curtail such monetization is inappropriate. Part II presents a brief summary of strategies that video game companies have developed to recoup development and marketing costs. Part III examines various recent—and potentially

³ See U.S. Patent No. 9,623,335 (filed Apr. 18, 2017) [hereinafter Kim].

⁴ See Daniel L. King & Paul H. Delfabbro, *Predatory Monetization Schemes in Video Games (e.g. ‘Loot Boxes’) and Internet Gaming Disorder*, 113 ADDICTION 1967–1969 (2018), <https://onlinelibrary.wiley.com/doi/epdf/10.1111/add.14286> [<https://perma.cc/5C4S-DQD6>].

⁵ See *infra* Part V.

⁶ Paul Spiel, *Deceptive Patents: Deconstructing Juicy Whip*, 2017 BYU L. REV. 743, 776–77 (2018) (quoting *Va. State Bd. of Pharm. v. Va. Citizens Consumer Council, Inc.*, 425 U.S. 748, 772 (1976)).

⁷ Enrico Bonadio, *The Case For Incentivizing Healthy Food By Using Patents*, 20 MARQ. INTELL. PROP. L. REV. 241, 250–53 (2016).

controversial—video game monetization scheme patents. Part IV discusses video game addiction as depicted by some psychologists and its potential relationship to patented monetization strategies. Part V traces the history of the moral utility doctrine, which once provided that so-called “immoral” inventions were patent ineligible. Part VI argues that revival of the moral utility doctrine, while tempting, is inapt to remedy the concerns presented by video game monetization strategies.

II. THE GROWING COST OF VIDEO GAMES

Modern video games are significantly more expensive to produce than their predecessors. In an article for *VentureBeat*, game designer Ralph Koster examined the development cost of video games over time, observing that the slope of a line representing the average development cost of triple-A⁸ console and PC releases, adjusted for inflation, “goes up tenfold every 10 years and has since at least 1995 or so, and possibly earlier.”⁹ As Koster notes, this figure is even larger when marketing costs are taken into account, as a triple-A title’s marketing budget represents an additional cost that can easily reach 75% to 100% of that same title’s development cost.¹⁰

It is not hard to imagine why these costs have ballooned over time: as graphical fidelity and game complexity increase, so does the time and skill required for development.¹¹ But, as early as 2011, venerated video game developer Mark Cerny warned game developers and publishers that there was “no intrinsic value to a \$50 million game,” emphasizing the need to “learn what is important to spend money on, and what isn’t.”¹² Cerny’s comments reflect the practical reality that high-budget triple-A titles compete in the same market as significantly cheaper games. After all, in 2016, the \$15 farming game *Stardew Valley*—a game made by a single person¹³—out-earned many

⁸ The term “triple-A” or “AAA” game generally “represents that the game was published/is to be published by a major publisher . . . and [also] usually indicates that it has a considerable development and marketing budget.” Samuel Stewart, *What Is A Triple-A Game (AAA)?*, GAMINGSCAN (Nov. 11, 2020), <https://www.gamingscan.com/what-is-a-triple-a-game/> [https://perma.cc/9265-ZFSW].

⁹ Ralph Koster, *The Cost of Games*, VENTUREBEAT (Jan. 23, 2018, 5:10 PM), <https://venturebeat.com/2018/01/23/the-cost-of-games/> [https://perma.cc/P2QE-AHSY].

¹⁰ *Id.*

¹¹ *See id.*

¹² Kshosfy, *As Mobile Games Rise, Studios Fear for Blockbusters’ Future*, WIRED (Feb. 15, 2011, 4:52 PM), <https://www.wired.com/2011/02/dice-blockbuster-games/> [https://perma.cc/HQT7-KGRD].

¹³ Jonathan Leack, *Stardew Valley’s Single Developer Has Made Over \$30 Million, and It’s Well Deserved*, GAMEREVOLUTION (Jan. 5, 2017),

far more expensive titles that year, including *Deus Ex: Mankind Divided*, *Watch_Dogs 2*, and *Mafia 3*.¹⁴

Despite the allure of sophisticated video games, their increased development and marketing costs have forced developers to look beyond game sales to turn a profit. As Colin Moriarty at IGN has noted, video games are cheaper for consumers than they have been in the past, which has a significant impact on the ability of developers and publishers to recoup their costs through game sales alone:

An NES game in 1990 cost, on average, about \$50. That's \$89 in 2013 money. Your \$70 N64 cartridges in 1998 would require the equivalent of \$100 today. Heck, the \$50 PlayStation 2 game you bought in 2005 is worth \$60, the exact price of a typical retail game in 2013. This isn't to say that salaries (or hourly pay) have kept up with inflation and the cost-of-living—it decidedly hasn't—but it is to say that, dollar-to-dollar over the past 35 years, gaming hardware and software is generally cheaper than ever.¹⁵

Today, even high-budget triple-A titles retail for around \$60,¹⁶ which some argue is far too low to allow the companies developing and publishing those titles to recoup their costs. Consoles seemingly fare no better: for example, the launch cost of the Nintendo Entertainment System (\$175 in 1982) would be over \$470 today, and yet the Nintendo Switch launched in 2017 for just \$299.¹⁷

<https://www.gamerevolution.com/features/13384-stardew-valleys-single-developer-has-made-over-30-million> [<https://perma.cc/7WKQ-W8LN>].

¹⁴ *Top 100 Best Sellers of 2016*, STEAM,

https://store.steampowered.com/sale/2016_top_sellers/ (last visited Dec. 9, 2020) [<https://perma.cc/TW7D-LL9S>].

¹⁵ Colin Moriarty, *The Real Cost of Gaming: Inflation, Time, and Purchasing Power*, IGN (Oct. 15, 2013, 4:56 PM), <https://www.ign.com/articles/2013/10/15/the-real-cost-of-gaming-inflation-time-and-purchasing-power> [<https://perma.cc/W64F-U5ZV>].

¹⁶ Ben Kuchera, *An Inconvenient Truth: Game Prices Have Come Down with Time*, ARS TECHNICA (Oct. 5, 2010, 8:45 PM), <https://arstechnica.com/gaming/2010/10/an-inconvenient-truth-game-prices-have-come-down-with-time/> [<https://perma.cc/WR6N-VCYG>]; Kyle Orland, *The Return of the \$70 Video Game Has Been a Long Time Coming*, ARS TECHNICA (July 9, 2020, 12:05 PM), <https://arstechnica.com/gaming/2020/07/the-return-of-the-70-video-game-has-been-a-long-time-coming/> [<https://perma.cc/79TF-WRYJ>].

¹⁷ Jonathon Dornbush & Jordan Sirani, *Update: Comparing the Price of Every Game Console, with Inflation*, IGN, <https://www.ign.com/articles/2016/10/04/comparing-the-price-of-every-game-console-with-inflation> (last updated Sept. 18, 2020) [<https://perma.cc/3V7V-BEMX>]; *Value of \$175 in 1982*, SAVING.ORG, <https://www.saving.org/inflation/inflation.php?amount=175&year=1982> (last visited Dec. 9, 2020) [<https://perma.cc/B9EE-LULL>].

In fact, console makers often sell their consoles at a loss, hoping to recoup their losses through subsequent game sales.¹⁸

Recognizing that the expected profit margin of a retail video game is often too low to recoup development costs, game developers and publishers have explored several other monetization strategies with varying degrees of success. Some companies, for example, offer pricier “deluxe” editions of games, which can include bonus figurines, game soundtracks, art books, and the like.¹⁹ These “special editions” can sometimes serve a dual purpose: recapturing development costs while also functioning as a marketing tool for the game itself. As one amusing example, the “Super Dangerous Wad Wad Edition” of *Saints Row IV*, which cost \$1 million, included seven nights at a hotel in Dubai, a week for two in Washington, D.C., a Lamborghini Gallardo, a new Toyota Prius, plastic surgery, a Virgin Galactic space flight, and more.²⁰ Some game developers sell physical toys (e.g., action figures, such as Nintendo’s amiibo toys²¹) which correspond with in-game benefits—an approach that created its own video game genre, the so-called “toys-to-life” genre.²² Although the strategy was popular for a period of time in the 2010s,

¹⁸ See, e.g., Don Reisinger, *PlayStation 4 to Sell at a Loss, but Sony Expects Profit*, CNET (Sept. 20, 2013, 9:32 AM), <https://www.cnet.com/news/playstation-4-to-sell-at-a-loss-but-sony-expects-profit/> [https://perma.cc/99VD-STEU]; see also James Batchelor, *Xbox One X Selling at a Loss*, GAMESINDUSTRY.BIZ (June 15, 2017), <https://www.gamesindustry.biz/articles/2017-06-15-xbox-one-x-selling-at-a-loss> [https://perma.cc/82WM-ZZBV].

¹⁹ Tyler Wilde, *How Much Should Games Cost?*, PC GAMER (Jan. 11, 2017), <https://www.pcgamer.com/how-much-should-games-cost/> [https://perma.cc/97JS-RXH5]; Emanuel Flores, *Why Video Game Collector’s Editions are Expensive*, WAYPOINT (June 28, 2018), <https://waypoint.la/collectibles/why-video-game-collectors-editions-are-so-expensive/> [https://perma.cc/V2JA-7DU6]; Leonard Perez, *Are Video Games Underpriced?*, GAMASUTRA (Jan. 25, 2018, 9:43 AM), https://www.gamasutra.com/blogs/LeonardPerez/20180125/313388/Are_video_games_underpriced.php [https://perma.cc/X9DP-ZCPL].

²⁰ Nathan Ingraham, *Ludicrous \$1 Million ‘Saints Row IV’ Special Edition Includes Lamborghini, Plastic Surgery, and Trip to Space*, THE VERGE (Aug. 10, 2013, 1:42 PM), <https://www.theverge.com/2013/8/10/4608848/ludicrous-1-million-saints-row-iv-special-edition-includes> [https://perma.cc/GTB4-EGXH]; see also Kyle Orland, *Do Not Buy the \$1,000,000 Saints Row IV Bundle*, ARS TECHNICA (Aug. 9, 2013, 11:41 AM), <https://arstechnica.com/gaming/2013/08/do-not-buy-the-1000000-saints-row-iv-bundle/> (noting that the bundle was a bad idea because the total value of all items was “only \$629,974.69”) [https://perma.cc/SQA8-JSNU].

²¹ *What is an Amiibo Figure?*, NINTENDO, <https://www.nintendo.com/amiibo/what-is-amiibo/> (last visited Dec. 9, 2020) [https://perma.cc/8EQV-Q9H3].

²² Matt Peckham, *Skylanders SuperChargers Versus Disney Infinity Versus Nintendo Amiibo Versus LEGO Dimensions*, TIME (Dec. 18, 2015, 11:38 AM), <https://time.com/4152325/toys-to-life-buyers-guide/> [https://perma.cc/C5BC-8HQ3]; Ian

many companies, including Disney, have since abandoned the “toys-to-life” market.²³

Post-purchase monetization strategies, such as microtransactions, in-game downloadable content (DLC), and similar forms of in-game purchases have been embraced by an industry concerned about its bottom line.²⁴ Strategically placed in-game purchases create new revenue streams by inviting gamers to spend money on a game they already own. In return, gamers gain access to customized content, such as “skins” (cosmetic modifications of in-game content), additional game features (e.g., new maps, characters, and stories), and other game enhancements.²⁵ As a result, these monetization strategies can “balloon the cost of an underpriced \$60 game closer to the inflation-adjusted \$100 it should be at.”²⁶ Indeed, these strategies have been quite successful for some companies: for Activision Blizzard, for example, more than half of the company’s revenue in 2017 came from in-game purchases.²⁷ Recognizing that not all gamers are likely to pay for DLC, some developers and publishers now offer “season passes” to games’ DLC.²⁸ A “season pass” allows consumers to purchase a right to current and future DLC, often at a discount.²⁹ Such season passes thus arguably benefit players as well as video game developers and publishers: season passes typically provide

Sherr, *From Skylanders to Amiibo: Video Games Embrace the Toy*, CNET (June 11, 2014, 4:00 AM), <https://www.cnet.com/news/from-skylanders-to-amiibo-video-games-embrace-the-toy/> [<https://perma.cc/TP9G-WYH5>].

²³ Dan Pearson, *The Death of Toys-to-Life?*, GAMESINDUSTRY.BIZ (May 11, 2016), <https://www.gamesindustry.biz/articles/2016-05-11-the-death-of-toys-to-life> [<https://perma.cc/W6MF-V8W4>]; Allegra Frank, *Skylanders Put on Hiatus for First Time in Six Years*, POLYGON (Feb. 9, 2017, 5:25 PM), <https://www.polygon.com/2017/2/9/14568518/new-skylanders-game-2017> [<https://perma.cc/MWC5-LWR6>].

²⁴ Erik Kain, *Video Games Should be More Expensive*, FORBES (Apr. 24, 2015, 8:00 AM), <https://www.forbes.com/sites/erikkain/2015/04/24/video-games-should-be-more-expensive/> [<https://perma.cc/D5ET-V252>]; Marc Berman, *The Price People are Willing to Pay for CS:GO Virtual Pixels*, PROGRAMMING INSIDER (Nov. 2, 2020, 8:58 AM), <https://programminginsider.com/the-price-people-are-willing-to-pay-for-csgo-virtual-pixels/> [<https://perma.cc/9ZC8-FPY4>].

²⁵ *Id.*

²⁶ *Id.*

²⁷ Dustin Bailey, *Over Half of Activision Blizzard’s Revenue in 2017 Came From In-Game Purchases*, PC GAMESN (Feb. 8, 2018), <https://www.pcgamesn.com/activision-blizzard-profits-2017> [<https://perma.cc/JSR3-HB4F>].

²⁸ Wilde, *supra* note 19; *DLC Season Pass*, GIANT BOMB, <https://www.giantbomb.com/dlc-season-pass/3015-7186/> (last visited Apr. 5, 2020) [<https://perma.cc/5AYZ-Q4FT>].

²⁹ *Season Pass (Video Games)*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Season_pass_\(video_games\)](https://en.wikipedia.org/wiki/Season_pass_(video_games)) (last visited Nov. 29, 2020) [<https://perma.cc/P96M-EKKZ>].

gamers a deal on desirable DLC while allowing companies to collect revenue when content is still in development.³⁰

Needless to say, some players dislike the monetization strategies used by modern video game companies. Aside from complaints about cost,³¹ some players criticize DLC and microtransactions as effectuating “a dramatically different gameplay experience” for those willing to pay, particularly in multiplayer contexts where they can provide players who purchase them with “an unfair advantage over players who do not purchase them.”³² In fact, a variety of different editions of the same game might be sold, with each providing a different set of in-game content. For instance, gaming website Kotaku once created a chart to show the “insane” number of differences among editions of *Watch Dogs*, concluding that, “if you wanted to own every single piece of exclusive launch DLC, and all of the collectable junk, you’ll need to buy *Watch Dogs* *three* times.”³³ Another particularly controversial aspect of DLC is so-called “on-disc” DLC—that is, content developed before a game’s release but accessed later in the game for additional payment.³⁴ Some argue “on-disc” DLC deprives players of enjoying the full extent of their purchase: a supposedly complete game.³⁵

“Whales” (that is, video game players that spend significant amounts of money buying content in a video game) drive the vast majority of in-game spending, whether via DLC, microtransactions, or otherwise.³⁶ A 2014 industry report indicated that a whopping 50% of mobile game purchases came from 0.15% of players—that is, the so-called “whales.”³⁷ But whales rarely

³⁰ *See id.*

³¹ *See, e.g.,* Mike Bitter, *Why Is DLC So Expensive? Should They Charge Us \$100 a Game?*, GSTYLE MAG. (May 11, 2015), <https://gstylemag.com/2015/05/11/why-are-dlc-so-expensive-should-they-charge-us-100-a-game/> [<https://perma.cc/AZM8-TRFZ>].

³² Matt Fernandez, *‘Star Wars’ Video Game Microtransactions Ignite Controversy*, VARIETY (Nov. 23, 2017, 10:00 AM), <https://variety.com/2017/digital/news/star-wars-video-game-controversy-microtransaction-loot-box-1202621913/> [<https://perma.cc/S4FN-5FZF>].

³³ Mark Serrels, *The Graph That Proves Video Games Have Crossed the Line*, KOTAKU AU (May 13, 2014, 10:00 AM), <https://www.kotaku.com.au/2014/05/this-is-the-graph-that-proves-video-game-retail-has-crossed-the-line/> [<https://perma.cc/F5J6-Y4G9>].

³⁴ *See* Joel Hruska, *EA Executive Calls On-Disc DLC Complaints ‘Nonsense,’ but the Truth is More Complex*, EXTREME TECH (Aug. 14, 2015, 2:54 PM), <https://www.extremetech.com/gaming/212245-ea-executive-calls-on-disc-dlc-complaints-nonsense-but-the-truth-is-more-complex> [<https://perma.cc/HS3G-ZZCM>].

³⁵ *See id.*

³⁶ *See* Paul Tassi, *Why It’s Scary When 0.15% Mobile Gamers Bring in 50% of the Revenue*, FORBES (Mar. 1, 2014, 4:28 PM), <https://www.forbes.com/sites/insertcoin/2014/03/01/why-its-scary-when-0-15-mobile-gamers-bring-in-50-of-the-revenue/> [<https://perma.cc/KP5C-3DVA>].

³⁷ *Id.*

set out to spend significant sums: generally, whales “spend modest amounts over time that can add up to significant sums.”³⁸ For example, Yodo1, the developers of the mobile game *Transformers: Earth Wars*, reported that a single player had spent over \$150,000 USD in the game.³⁹ Yodo1’s CEO later allegedly revealed that Yodo1 had been actively seeking out whales to spend such hefty sums: the game “fed two-and-a-half years of detailed behavior and monetization data collected from players” to a machine learning model to identify and “pick[] potential whales” with an accuracy of “about 87%.”⁴⁰ At the conference Game Connect Asia Pacific, the CEO of Yodo1, Henry Fong, emphasized the strategic value of microtransactions to monetize:

The funny thing is, I always used to think that if you monetize your audience too hard, they’ll leave the game. But it’s actually the other way around. Our retention rates for paid users in this game [*Transformers: Earth Wars*]*—*30-day retention for paid users*—*is 85%. So once they start spending, they don’t leave. They want to stay in the game [longer] and preserve their investment, and when they stay in the game, they spend more.⁴¹

Some games appear to rely almost entirely on whales to make a profit. For example, *Candy Crush Saga*, a free game, only generated revenue from 2.3% of its players from in-game purchases, but these players collectively spent \$1.33 billion on in-app purchases.⁴²

Critics of the video game industry’s propensity for “chasing the whale” claim it ventures into an ethical gray area.⁴³ Numerous stories have been written about players who have lost significant sums as a result of their

³⁸ Isaac Roseboom, *What You Need to Know About How Whales Spend*, DELTADNA (Apr. 13, 2016), <https://deltadna.com/blog/how-whales-spend/> [https://perma.cc/AF7N-KUUP].

³⁹ Alex Walker, *Someone Spent Over \$220,000 in Microtransactions on a Transformers Game*, Kotaku AU (Oct. 11, 2019, 9:00 AM), <https://www.kotaku.com.au/2019/10/someone-spent-over-220000-in-microtransactions-on-a-transformers-game/> [https://perma.cc/P2W9-EPCA].

⁴⁰ Matthew Handrahan, *Yodo1’s AI-Driven Whale Hunt is a Bad Look for the Games Industry*, GAMESINDUSTRY.BIZ (Oct. 21, 2019), <https://www.gamesindustry.biz/articles/2019-10-21-yodo1s-ai-driven-whale-hunt-is-a-bad-look-for-the-games-industry-opinion> [https://perma.cc/K9GW-V8CX].

⁴¹ *Id.*

⁴² Stuart Dredge, *Candy Crush Saga Players Spent £865m on the Game in 2014 Alone*, THE GUARDIAN (Feb. 13, 2015), <https://www.theguardian.com/technology/2015/feb/13/candy-crush-saga-players-855m-2014> [https://perma.cc/B9B6-NJ65].

⁴³ See, e.g., Mike Rose, *Chasing the Whale: Examining the Ethics of Free-to-Play Games*, GAMASUTRA (July 9, 2013), https://www.gamasutra.com/view/feature/195806/chasing_the_whale_examining_the_.php?print=1 [https://perma.cc/QV8Y-7W2L].

addiction to in-game purchases.⁴⁴ After all, most whales aren't "millionaire or billionaire fat cats," as their spending might otherwise suggest—they're "normal people with addictive personalities."⁴⁵

Some organizations also express particular concern with games that allegedly target underage players. The Center for Investigative Reporting alleged that Facebook "made money off children" by "bamboozling children who racked up hundreds, and sometimes even thousands, of dollars in game charges" without providing "an effective way for unsuspecting parents to dispute the massive charges."⁴⁶ A similar charge was levied against Apple—in what was referred to by some journalists as the "Smurfberry Affair"—when a young girl purchased \$1,400 in virtual "Smurfberries" without knowing that the purchases were made with her parents' real money.⁴⁷ In response to Federal Trade Commission enforcement actions, both Apple and Google settled with the FTC in 2014 to refund many millions of dollars of unauthorized charges made by children.⁴⁸

In summary, there exists an uncomfortable tension in the video game industry: modern video games are expensive to make, and game developers must carefully toe the line between recouping their costs and allegedly

⁴⁴ See, e.g., *id.*; Vic Hood, *Interview with the Video Game Whale*, EUROGAMER (Oct. 25, 2017), <https://www.eurogamer.net/articles/2017-10-20-interview-with-the-whale> [<https://perma.cc/54T9-AGKB>]; Sasha Erfanian Dow, *Confessions of a Mobile Gaming Whale*, ESCAPIST MAGAZINE (Oct. 12, 2018), <https://www.escapistmagazine.com/v2/confessions-of-a-mobile-gaming-whale/> [<https://perma.cc/3KDV-E9TB>].

⁴⁵ Paul Tassi, *Why It's Scary When 0.15% Mobile Gamers Bring In 50% of the Revenue*, FORBES (Mar. 1, 2014), <https://www.forbes.com/sites/insertcoin/2014/03/01/why-its-scary-when-0-15-mobile-gamers-bring-in-50-of-the-revenue/?sh=1ae6bcdf4065> [<https://perma.cc/RK56-LVPH>].

⁴⁶ Nathan Halverson, *Judge Unseals Trove of Internal Facebook Documents Following our Legal Action*, REVEAL (Jan. 17, 2019), <https://www.revealnews.org/blog/a-judge-unsealed-a-trove-of-internal-facebook-documents-following-our-legal-action/> [<https://perma.cc/3EM7-6U2Z>].

⁴⁷ Dave Greenbaum, *In-App Purchases and The Smurfberry Affair*, GIGAOM (Feb. 21, 2011), <https://gigaom.com/2011/02/21/in-app-purchases-and-the-smurfberry-affair/> [<https://perma.cc/Y79Q-NJH8>]; see also Cecilia Kang, *In-app Purchases in iPad, iPhone, iPod Dids' Games Touch Off Parental Firestorm*, THE WASH. POST (Feb. 8, 2011 12:34 PM), <https://www.washingtonpost.com/wp-dyn/content/article/2011/02/07/AR2011020706073.html> [<https://perma.cc/3PPV-28KF>].

⁴⁸ Diane Bartz, *Google to Refund \$19 Million in Dids' In-App Purchase Case: U.S.*, REUTERS (Sept. 4, 2014), <https://www.reuters.com/article/us-usa-google-ftc-idUSKBN0GZ25520140904> [<https://perma.cc/LN8T-CK4Q>]; see also *Apple Inc. Will Provide Full Consumer Refunds of At Least \$32.5 Million to Settle FTC Complaint It Charged for Kids' In-App Purchases Without Parental Consent*, FTC.GOV (Jan. 15, 2014), <https://www.ftc.gov/news-events/press-releases/2014/01/apple-inc-will-provide-full-consumer-refunds-least-325-million> [<https://perma.cc/58M6-N834>].

extorting gamers. As will be explained in the next Part, this has led studios to explore new monetization strategies through the patent process.

III. CONTROVERSIAL VIDEO GAME PATENTS ON DLC AND MICROTRANSACTIONS

The need for innovative video game monetization has driven inventors to file patents on game features that notify users about opportunities to spend money in-game. U.S. Patent Number (U.S. Patent No.) 8,360,866 to Luchene (hereinafter “Luchene”) describes an invention that nudges users to make in-game purchases when they face a difficult scenario.⁴⁹ In doing so, Luchene’s “video game can provide an offer to a player of the video game at a time when the player has, for example, encountered a difficulty, perhaps repeatedly encountered a difficulty” in a task such as “kill[ing] a particular monster, NPC[,] or player character.”⁵⁰ Such an offer “can be, for example, for an item that is useful in overcoming the difficulty the player has encountered.”⁵¹ That offer, referred to by Luchene as an “upsell message,” encourages the user to pay for in-game success using “in-game currency,” “virtual items,” or “real currency.”⁵² Luchene also describes allowing users to “establish that certain offers” are “to be accepted without further action” during, for example, a time period.⁵³ For example, “a credit card account of the player can be charged automatically” under certain circumstances.⁵⁴

U.S. Patent No. 10,099,140 to Lynch and Kanouse (hereinafter “Lynch”), is similar: Lynch describes a “customized messaging campaign for [a game] player.”⁵⁵ Lynch’s messages “may be customized for a gamer based on his or her behavioral data,” such as their “level of interest or satisfaction with a game.” Triggers for such messages may include “a player winning or losing a predetermined number of games in a row.”⁵⁶ Such messages may include “promotions relating to microtransactions or downloadable content (e.g., offers, discounts, etc.).”⁵⁷

Luchene and Lynch arguably describe what is tantamount to “smart” marketing – that is, marketing messages specifically tailored to the player of a particular video game. One might argue that Luchene and Lynch are little

⁴⁹ U.S. Patent No. 8,360,866 (filed Jan. 29, 2013).

⁵⁰ *Id.* at col. 16 l. 50-55, col. 20 l. 62-63.

⁵¹ ‘866 Patent col. 16 l. 53-55.

⁵² *Id.* at col. 17 l. 19-47.

⁵³ *Id.* at col. 28 l. 1-10.

⁵⁴ *Id.* at col. 30 l. 35-46.

⁵⁵ U.S. Patent No. 10,099,140 col. 2 l. 57 (filed Oct. 16, 2018) .

⁵⁶ *Id.* at col. 2 l. 62 – col. 3 l. 12, col. 3 l. 38-45.

⁵⁷ *Id.* col. 6 l. 53 – col. 10 l. 4.

different than Facebook, which permits advertisers to select their audience using a variety of different targeting options such as age, interests, behaviors, and types of devices.⁵⁸ Some have even argued that targeted marketing benefits both advertisers as well as target consumers. Proponents of targeted marketing argue it reduces waste by avoiding the imposition of advertisements on individuals who are unlikely to be receptive to the marketing.⁵⁹

Beyond patents on targeted marketing techniques, some other patents in the video game world appear more likely to generate controversy. There is a growing trend in patents that describe methods for exploiting the information asymmetry between players and video game creators.⁶⁰ Some patents describe methods which modify gameplay—in a manner largely imperceptible to the player—to push the player to spend money. For example, U.S. Patent No. 9,789,406 to Marr, Kaplan, and Lewis (hereinafter “Marr”), modifies the difficulty of multiplayer matches to encourage microtransaction purchases. Marr describes a process for “influencing in-game purchases through targeted matchmaking.”⁶¹ Specifically, Marr identifies “an in-game item that may be relevant for (e.g., of interest to) a first player,” then locates “a second user that has acquired (e.g., purchased), used, or otherwise possesses the in-game item.”⁶² Matchmaking variables are then tuned such that the first player and the second user are matched in a gameplay session.⁶³ After that matchmaking process, Marr’s system determines whether the first player purchased the in-game item owned by the second player.⁶⁴ If the first player did purchase the in-game item, the first player is later matched into a different gameplay session where “the in-game item is suitable to be used.”⁶⁵ In this case, “suitable to be used” can include where a purchased item (e.g., a weapon) is “highly effective.”⁶⁶ Stated simply, Marr promotes in-game purchases by making multiplayer matches difficult for a player, encouraging that player to buy an item, then rewarding the player’s spending by making multiplayer matches

⁵⁸ See Kim Doefler, *Facebook Targeting Options Reference*, DOEFLER.COM, <https://doefler.com/blog/facebook-targeting-options/> (last updated Mar. 30, 2019) [<https://perma.cc/SRA8-BCQN>].

⁵⁹ Ganesh Iyer, David Soberman & J. Miguel Villas-Boas, *The Targeting of Advertising*, 24 *MARKETING SCI.* 461, 462 (Aug. 1, 2005), <https://pubsonline.informs.org/doi/10.1287/mksc.1050.0117> [<https://perma.cc/A7KE-VV59>].

⁶⁰ See King & Delfabbro, *supra* note 4, at 1967.

⁶¹ Marr, *supra* note 2, at fig. 8.

⁶² *Id.* at col. 30 l. 16-25.

⁶³ *Id.* at col. 30 l. 26-35.

⁶⁴ *Id.* at col. 30 l. 36-40.

⁶⁵ *Id.* at col. 30 l. 41-61.

⁶⁶ *Id.*

easier when the purchased item is used.⁶⁷ Though this system is likely a *de minimis* part of a huge matchmaking algorithm, it is easy to see how Marr may be ill-received by players, who may perceive Marr as a system that prioritizes profit over competitive matchmaking.

Another controversial category of patents treats so-called whales⁶⁸ differently by introducing more opportunities for them to spend money. For example, U.S. Patent No. 9,623,335 to Kim, Henrick, and Morris (hereinafter “Kim”), utilizes a “user spend parameter value” to “determine which users should be provided with access to an exclusive virtual section of the online game.”⁶⁹ Such a virtual exclusive section may include a shop interface with exclusive offers, such as the “presentation of high-end, or expensive virtual items to users that have demonstrated an appetite for making purchases at a higher level.”⁷⁰ Kim notes that “[r]estricting such offers may enhance the in-game experience for users that do not see these offers, as they may keep such users from feeling frustrated and/or overwhelmed by the amount of money that other users are spending in the game.”⁷¹ Kim explains that this approach also prevents the game from losing the opportunity “to extract additional value from users inclined to spend relatively more money.”⁷² Kim further recognizes “when the users that are less inclined to spend money are made aware of the ability of other users to spend more to get ahead in the game, the users that spend less may be discouraged and thus driven out of the game.”⁷³ Kim thus acts like a savvy car salesman: while more thrifty customers might be directed towards a base model of a vehicle, higher spending customers are directed to purchase various add-on packages for the same vehicle.

Other patents relating to whales are more direct, recognizing that whales can be charged higher prices than their relatively frugal counterparts. Like Kim, U.S. Patent No. 9,138,639 to Ernst (hereinafter “Ernst”), describes a system which modifies the “pricing of in-game virtual items associated with [players’] experience and their progress in the game.”⁷⁴ In this way, “while all players may receive a message for a particular item, the cost for each player may be more or less than other players based on the individual’s in-game statistics.”⁷⁵ Rather than present an item solely to whales, video game creators

⁶⁷ See *id.* col. 30 l. 16-61.

⁶⁸ See Stephanie Carmichael, *What It Means to Be a ‘Whale’ - And Why Social Gamers are Just Gamers*, VENTUREBEAT (Mar. 14, 2013), <https://venturebeat.com/2013/03/14/whales-and-why-social-gamers-are-just-gamers/> [<https://perma.cc/RF8X-H4VF>].

⁶⁹ Kim, *supra* note 3, at col. 1 l. 36-58.

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.* at col. 1 l. 21-32.

⁷³ *Id.*

⁷⁴ U.S. Patent No. 9,138,639 col. 2 l. 57 (filed Sept. 22, 2015).

⁷⁵ *Id.* at col. 8 l. 56-59.

can tap into both whale and non-whale markets by presenting both groups with an identical item, albeit at a different cost based on their predicted willingness to pay for that item. As such, Ernst is arguably describing a video game-implemented form of price discrimination by “charg[ing] customers different prices for the same product or service . . . based on what the seller thinks they can get the customer to agree to.”⁷⁶ Of course, such a tactic requires an information deficit on the part of the player, and it is unlikely that whales would be happy to learn that the game charges them a premium while charging less to other players.

A different tactic targets all players by capitalizing on a player’s tendency to commit to a purchase after investing significant time into the video game. For example, U.S. Patent No. 8,702,523 to David and Canessa (hereinafter “David”) describes “steps associated with utilizing achievements to drive download and purchase behaviors.”⁷⁷ In short, a user is made “aware of an opportunity to add an achievement to their collection by downloading and playing a demo or trial version of a particular game.”⁷⁸ But this notification comes with a caveat: “[i]nstead of recording the achievement” upon completion, David “initiates a notification to the user . . . that the achievement will not be recorded unless they purchase the full version of the game at that time.”⁷⁹ Stated differently, David allows users to earn rewards from a game they demo, but makes those rewards unavailable unless they follow through and purchase the game.

Other patents recognize that players might be willing to spend money to overcome difficulty in-game. U.S. Patent No. 9,795,886 to Smalley and Schultz (hereinafter “Smalley”), describes a system which allows newer users to purchase in-game support more cheaply than experienced users. In particular, Smalley’s system determines “prices for a protection extension in an online game” based on “the user’s power and/or strength in a game”⁸⁰ Though not explicitly stated, Smalley suggests that the prices are in real-world currency (rather than, for example, in free in-game currency).⁸¹ This allows a less experienced player to “build up their strength in a game, thus promoting further player engagement.”⁸² By intelligently pricing in-game protection

⁷⁶ Alexandra Twin, *Price Discrimination*, INVESTOPEDIA, https://www.investopedia.com/terms/p/price_discrimination.asp (last updated Feb. 3, 2020) [<https://perma.cc/EW4T-C9BX>].

⁷⁷ U.S. Patent No. 8,702,523 col. 8 l. 55-63 (filed Apr. 22, 2014).

⁷⁸ *Id.*

⁷⁹ *Id.* at col. 10 l. 14-29.

⁸⁰ U.S. Patent No. 9,795,886 col. 2 l. 57 (filed Oct. 24, 2017).

⁸¹ *See id.* at col. 2 l. 3-9 (considering “real currency”).

⁸² *Id.* at col. 1 l. 22-36.

based on the lack of experience of the player, Smalley increases the likelihood that a player will purchase that protection.

Other patents describe encouraging players to make purchases outside of a video game to receive in-game benefits. U.S. Patent No. 10,252,170 to Judkins, Linker, Han, Pale, and Kullgren (hereinafter “Judkins”) describes “[g]aming systems and methods for integrated computer-related and physical game play interactions between a game player, a physical game piece, and an electronic device.”⁸³ One aspect of Judkins pushes players to be physically active outside of the video game by instructing them to engage in “timed physical play” while wearing a physical device, such as a wristband.⁸⁴ These real-world devices record information which correlates to “charg[ing] an avatar’s energy” within the video game.⁸⁵ But Judkins elaborates that the number of points a player may earn—currency for virtual upgrades—can be tied to the retail price of the toy,⁸⁶ such that, for example, a user might earn in-game points for scanning in codes that come with separately purchased physical toys.⁸⁷ Similarly, Judkins appears to contemplate that in-game points might be earned when users provide personal information to merchants (which, presumably, would be used by the merchants for marketing purposes).⁸⁸ As such, Judkins provides a slight twist on the “toys-to-life” genre, by offering in-game benefits for consumption activity outside of the game, even if that consumption activity is not directly related to the gameplay itself.

Judkins is far from the only patent that recognizes that video games might be used to encourage players to consume out-of-game content. U.S. Patent No. 10,569,171 to Peterson, Robillard, and Harper (hereinafter “Peterson”) describes “a gaming device having a video game application that is associated with media content, such as a television show broadcast by a television network and displayed on a television.”⁸⁹ Peterson’s gaming device “captures, e.g., from a microphone of the gaming device, an audio signal from the media content being played concurrently with the video game application” and “uses content recognition techniques to identify the media content from the capture audio signal and, based on the recognized media content, unlocks ‘premium’ in-game content that augment gameplay of the video game application.”⁹⁰ In other words, Peterson provides in-game benefits based on

⁸³ U.S. Patent No. 10,252,170 col. 2 l. 57 (filed Oct. 9, 2017) .

⁸⁴ *Id.* at col. 7 l. 33-43.

⁸⁵ *Id.*

⁸⁶ *Id.* col. 8 l. 30-50.

⁸⁷ *Id.* col. 3 l. 65 – col. 4 l. 1.

⁸⁸ *Id.* col. 4 l. 20-27.

⁸⁹ U.S. Patent No. 10,569,171 col. 3 l. 1-12 (filed Jul. 2, 2012) .

⁹⁰ *Id.*

other media consumed by a player.⁹¹ This helps increase the “viewership and audience ratings of the associated media content.”⁹² Such a concept would likely benefit companies with wide-ranging media empires: even if they might not be able to reliably recoup a game’s development and marketing costs through sales alone, they might recoup costs by driving consumption of other content (e.g., ad-supported television or purchased movies).

IV. THE CONTROVERSY BEHIND THE PSYCHOLOGY OF DLC AND MICROTRANSACTIONS

The monetization mechanisms described in patents reflect clever strategies that can help video game developers generate sufficient revenue to recoup production costs. That said, some in the psychology world assert that these concepts have much darker implications, arguing that these monetization strategies amplify the already addictive aspects of video games.⁹³

The idea that one can become addicted to video games is far from new.⁹⁴ Both Internet addiction and video game addiction are considered by psychologists to perhaps be the “most widely recognized negative psychosocial terms associated with gaming,” and psychologists consider both to be similar to pathological gambling.⁹⁵ Indeed, some studies have shown that “long-term internet game playing affected brain regions responsible for reward, impulse control and sensory-motor coordination,” and video game “playing was associated with dopamine release similar in magnitude to those of drugs of abuse.”⁹⁶ One reason that video games may be so addictive is that they provide players rewards “on concurrent variable-ratio and fixed-interval

⁹¹ *See id.*

⁹² *Id.* at col. 3 l. 19-21.

⁹³ *See generally* King & Delfabbro, *supra* note 4.

⁹⁴ *See generally* MOHAMED K. KHAN, COUNCIL OF SCIENCE AND PUBLIC HEALTH, CSAPH REPORT 12-A-07, *Emotional and Behavioral Effects, Including Addictive Potential, of Video Games* 4, <https://www.ama-assn.org/sites/ama-assn.org/files/corp/media-browser/public/about-ama/councils/Council%20Reports/council-on-science-public-health/a07-csaph-effects-video-games-internet.pdf> <https://perma.cc/QL9Q-3PJ8> (surveying scientific literature from 1985 to 2007).

⁹⁵ *Id.*; *see also* Daniel King, Paul Delfabbro & Mark Griffiths, *The Role of Structural Characteristics in Problem Video Game Playing: A Review*, 4(1) J. PSYCHOSOCIAL RES. ON CYBERSPACE (2010), <https://cyberpsychology.eu/article/view/4229/3272> [<https://perma.cc/NRQ3-B9H6>].

⁹⁶ Aviv Weinstein & Michel Lejoyeux, *New Developments on the Neurobiological and Pharmaco-Genetic Mechanisms Underlying Internet and Videogame Addictions*, 24(2) AM. J. ADDICTIONS 117, 117 (2015), <https://onlinelibrary.wiley.com/doi/abs/10.1111/ajad.12110> [<https://perma.cc/37CK-MUES>].

schedules that lead the player to respond rapidly and with few post-reinforcement pauses.”⁹⁷ Compared to gambling, video games do seem to provide more than just a chance at rewards. Indeed, according to some psychologists, the most addictive form of video game is generally the Massively Multiplayer Online Role Playing Game (MMORPG), in part because MMORPGs allow individuals who are “somewhat marginalized socially, perhaps experiencing high levels of emotional loneliness and/or difficulty with real life social interactions” to “achieve more control . . . and more success in social relationships in the virtual reality realm than in real relationships.”⁹⁸ In 2019, the World Health Organization voted to adopt the latest edition of its International Classification of Diseases to include an entry on “gaming disorder,”⁹⁹ defined as “a pattern of gaming behavior . . . characterized by impaired control over gaming, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and continuation or escalation of gaming despite the occurrence of negative consequences.”¹⁰⁰

Though video game addiction and pathological gambling are different, some believe that video games may be a “gateway to problem gambling.”¹⁰¹ Of particular concern are loot boxes, a commonly used form of microtransactions which permit players to use real money to purchase a chance for in-game content in a manner similar to buying a lottery ticket for a chance at a cash prize.¹⁰² Some studies have found that loot boxes “either cause problem gambling among older adolescents, allow game companies to profit

⁹⁷ See King et al., *supra* note 95.

⁹⁸ Khan, *supra* note 94, at 4; see also King et al., *supra* note 95.

⁹⁹ *Addictive behaviours: Gaming disorder*, WORLD HEALTH ORGANIZATION (Sept. 14, 2018), <https://www.who.int/news-room/q-a-detail/addictive-behaviours-gaming-disorder> [<https://perma.cc/WC68-GV5G>].

¹⁰⁰ See generally Anya Kamenetz, *Is ‘Gaming Disorder’ An Illness? WHO Says Yes, Adding It To Its List of Diseases*, NPR (May 28, 2019, 5:48 PM), <https://www.npr.org/2019/05/28/727585904/is-gaming-disorder-an-illness-the-who-says-yes-adding-it-to-its-list-of-diseases> [<https://perma.cc/ZME6-X3VU>]. Note, however, that this classification is controversial. See Antonius J. van Rooij et al., *A Weak Scientific Basis for Gaming Disorder: Let Us Err on the Side of Caution*, 7(1) J. BEHAVIORAL ADDICTIONS 1 (2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6035022/> [<https://perma.cc/BWM4-6L2X>].

¹⁰¹ Ted Knutson, *Video Games Can Be A Gateway to Problem Gambling, FTC Warned*, FORBES (Aug. 8, 2019, 12:43 PM), <https://www.forbes.com/sites/tedknutson/2019/08/08/video-games-can-be-a-gateway-to-problem-gambling-ftc-warned/> [<https://perma.cc/5CYJ-2XMB>].

¹⁰² *Id.*

from adolescents with gambling problems for massive monetary rewards, or both.”¹⁰³

The increasingly complex methods video games employ to entice player spending raise concerns for psychologists. In an editorial in the journal *Addiction*, psychologists Daniel L. King and Paul H. Delfabbro explicitly cite Marr, Kim, and Ernst as examples of “predatory monetization schemes” which they liken to entrapment; that is, “the belief that one has invested too much to quit.”¹⁰⁴ King and Delfabbro characterize such schemes quite negatively:

Predatory monetization schemes typically involve in-game purchasing systems that disguise or withhold the true long-term cost of the activity until players are already financially and psychologically committed. Such schemes are designed to encourage repeated player spending using tactics or elements that may involve, either singularly or in combination, limited disclosure of the product; intrusive and unavoidable solicitations; and systems that manipulate reward outcomes to reinforce purchasing behaviors over skillful or strategic play. Such strategies may exploit inequalities in information between purchaser and provider, such as when the industry uses knowledge of the player’s game-related preferences, available funds and/or playing and spending habits, to present offers predetermined to maximize the likelihood of eliciting player spending.¹⁰⁵

King and Delfabbro also criticize the “collection and use of individual player data to manipulate the nature and presentation of purchasing offers in ways that maximize the likelihood of the player spending money.” In particular, they argue that those strategies exploit “an information asymmetry”—that is, the game system knows more about the player than the player can know about the

¹⁰³ David Zendle, Rachel Meyer & Harriet Over, *Adolescents and Loot Boxes: Links with Problem Gambling and Motivations for Purchase*, R. SOC. OPEN SCI. (2019) 1, <https://royalsocietypublishing.org/doi/10.1098/rsos.190049#d3e2905> [<https://perma.cc/9B5D-49CM>]; see also Aaron Drummond & James D. Sauer, *Video Game Loot Boxes are Psychologically Akin to Gambling*, 2 NATURE HUMAN BEHAVIOUR 530 (2018), <https://www.nature.com/articles/s41562-018-0360-1> [<https://perma.cc/7V5Y-5RN7>]; Wen Li, Devin Mills & Lia Nower, *The Relationship of Loot Box Purchases to Problem Video Gaming and Problem Gambling*, 97 ADDICTIVE BEHAVIORS 27 (2019), <https://www.sciencedirect.com/science/article/abs/pii/S0306460319301091> [<https://perma.cc/44YM-A2EZ>].

¹⁰⁴ King & Delfabbro, *supra* note 4, at 1967.

¹⁰⁵ *Id.*

game—and use “pressuring tactics” which can lead to overspending or using credit cards by some players.¹⁰⁶

That said, other experts are concerned that the concept of video game and Internet addiction is misplaced or overly specific. Chris Ferguson, a professor of psychology at Stetson University, has argued that video games are no different than many other pleasurable activities: after all, “[s]troking a cat tends to release dopamine,” “cats have mechanisms to try to keep you petting them,” and people hoard cats, and yet “[w]e do not talk about cat addiction.”¹⁰⁷ Even the inclusion of gaming disorder in the International Classification of Diseases was quite controversial. Among many other criticisms of the inclusion, critics argued that the concept of a gaming disorder was ill-defined and there was no evidentiary basis for defining video game addiction, but not addiction to other well-documented addictions, like food, sex, exercise, shopping, or tanning.¹⁰⁸

To its credit, the video game industry has taken steps to respond to concerns regarding video game addiction. For example, Sony, Microsoft, and Nintendo all agreed in an FTC workshop that publishers of upcoming PlayStation, Xbox, and Switch games must reveal the chances of earning rare items, taking some of the uncertainty out of loot boxes.¹⁰⁹ Moreover, resources have been developed to help gamers identify and address game addiction, such as the website Game Quitters.¹¹⁰

Because these monetization methods are controversial, critics argue that issuing patents for these strategies grant patentholders a state-sanctioned monopoly over problematic and deceptive practices. Once granted, patent assignees have the right to exclusively use those monetization strategies and to license them to others. A question thus arises from these concerns: should the USPTO issue these patents at all?

V. A BRIEF HISTORY OF PATENTS AND “MORAL UTILITY”

Historically, the idea that “immoral” inventions were unpatentable was a tenet of U.S. patent law. The rationale for such a rule originated from the

¹⁰⁶ *Id.* at 1967-98.

¹⁰⁷ Tara Haele, *Don't Hate the Player: Controversy Over Gaming as Mental Disorder Levels Up*, PSYCHIATRY ADVISOR (Feb. 1, 2019), <https://www.psychiatryadvisor.com/home/topics/general-psychiatry/dont-hate-the-player-controversy-over-gaming-as-mental-disorder-levels-up/> [<https://perma.cc/F6HE-C6CH>].

¹⁰⁸ van Rooij et al., *supra* note 100, at 2-5.

¹⁰⁹ Kris Holt, *Sony, Microsoft and Nintendo Agree to Disclose Loot Box Odds*, ENGADGET (Aug. 7, 2019), <https://www.engadget.com/2019-08-07-sony-microsoft-nintendo-loot-box-odds.html> [<https://perma.cc/H6Z9-F956>].

¹¹⁰ GAMEQUITTERS.COM, <https://gamequitters.com/> (last visited Dec. 9, 2020) [<https://perma.cc/N9H9-2XAK>].

idea that immoral inventions were not “useful” as required by 35 U.S.C. § 101. For example, in *Bedford v. Hunt*, Justice Story argued that an invention is not “useful” unless it “may be applied to some beneficial use in society, in contradistinction to an invention[] which is injurious to the morals, the health, or the good order of society.”¹¹¹ Taking this idea to heart, the USPTO and courts once rejected the idea that gambling devices were patent eligible, despite the clear utility of such devices (e.g., financially benefiting the owner by causing players to lose money).¹¹² For example, in *Schultze v. Holtz*, the court rejected the patentability of a coin-operated device because of its intended use for gambling purposes in saloons, barrooms, and other drinking places.¹¹³

One of the more interesting cases implementing this so-called “moral utility” doctrine was *Rickard v. Du Bon*.¹¹⁴ *Rickard* involved U.S. Patent No. 604,338 to Rickard and Long (the ’338 Patent), which was directed to the “art of treating tobacco-leaves.”¹¹⁵ The lower court in *Rickard* found that the patent lacked any utility “except to deceive,” noting that the ’338 Patent was the result of experiments to “produce an imitation” of high-quality Sumatra tobacco by spraying a leaf with an alkali in a solution.¹¹⁶ The Second Circuit agreed, finding that “[i]n authorizing patents to the authors of new and useful discoveries and inventions, [C]ongress did not intend to extend protection to those which confer no other benefit upon the public than the opportunity of profiting by deception and fraud.”¹¹⁷

The holding in another case, *Scott & Williams, Inc. v. Aristo Hosiery Co.*, was similarly premised on the idea of a “moral utility” doctrine.¹¹⁸ *Aristo Hosiery* related U.S. Patent No. 1,233,714 to Scott (the ’714 Patent), which was directed to a “seamless stocking.”¹¹⁹ The ’714 Patent described a seamless stocking with an imitation seam, leveraging the fact that buyers associated seams in stockings with higher-quality stockings and were thus more likely to buy a seamless stocking with an imitation seam than one without an imitation

¹¹¹ *Bedford v. Hunt*, 3 F. Cas. 37 (C.C.D. Mass. 1817); see also *Lowell v. Lewis*, 15 F. Cas. 1018, 1019 (C.C.D. Mass. 1817) (finding that inventions “injurious to the well-being, good policy, or sound morals of society” are unpatentable).

¹¹² For a collection of cases, see, e.g., F. Scott Kieff et al., *PRINCIPLES OF PATENT LAW* 706 (5th ed. Foundation Press 2011).

¹¹³ *Schultze v. Holtz*, 82 F. 448, 449 (C.C.N.D. Cal. 1897).

¹¹⁴ *Rickard v. Du Bon*, 97 F. 96 (C.C.D. Conn. 1899), *aff’d Rickard v. Du Bon*, 103 F. 868 (2d Cir. 1900).

¹¹⁵ *Rickard*, 97 F. at 97 (1899).

¹¹⁶ *Id.* at 96-97.

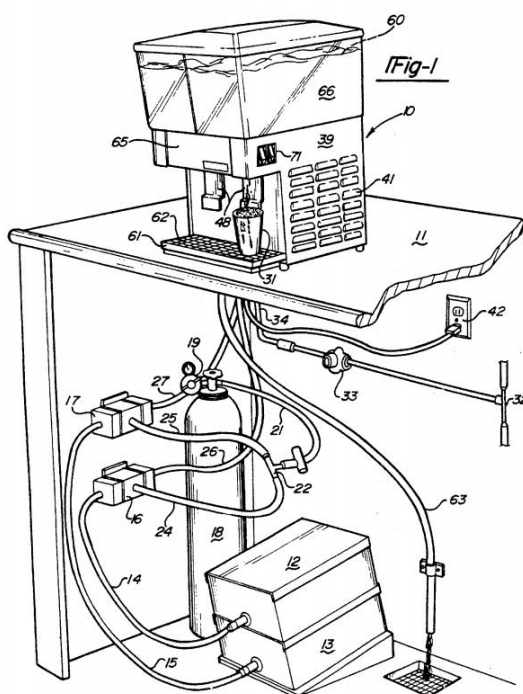
¹¹⁷ *Rickard*, 103 F. at 873 (1900).

¹¹⁸ *Scott Williams, Inc. v. Aristo Hosiery Co.*, 7 F.2d 1003 (2d Cir. 1925).

¹¹⁹ *Id.* at 1003.

seam.¹²⁰ The Second Circuit found that the '714 Patent lacked moral utility, specifically finding that the '714 Patent “does not create a new useful discovery or invention, and it was not the intention of Congress to grant protection to those who confer no other benefit to the public than an opportunity for making the article more salable.”¹²¹

But the “moral utility” doctrine of *Rickard* and *Aristo Hosiery* is long dead: controversial (and arguably “immoral”) inventions are very much patent-eligible today. *Juicy Whip, Inc. v. Orange Bang, Inc.*¹²² arguably killed moral utility.¹²³ The patent at issue in *Juicy Whip*, U.S. Patent No. 5,575,405 to Stratton and Stratton (the '405 Patent), related to a beverage dispenser “with an associated simulated visual display of beverage.”¹²⁴ Specifically, the invention of the '405 Patent comprised a display bowl filled with “a permanent sterile and stable fluid simulating the color and texture of a beverage to be dispensed,” but actually dispensed beverages from hidden tanks of “pressurized water and concentrate.”¹²⁵ Fig. 1 of the '405 Patent, reproduced below, depicts this arrangement.



¹²⁰ *Id.*

¹²¹ *Id.* at 1004.

¹²² *Juicy Whip, Inc. v. Orange Bang, Inc.*, 185 F.3d 1364 (Fed. Cir. 1999).

¹²³ Margo Bagley, *Patent First, Ask Questions Later: Morality and Biotechnology in Patent Law*, 45 WM. & MARY L. REV. 469, 492 (2003).

¹²⁴ U.S. Patent No. 5,575,405 (filed Apr. 18, 1996).

¹²⁵ *Id.* at col. 2 l. 57.

The '405 Patent explained that this display bowl acted as a “powerful merchandising tool for stimulating impulse buying,” and that the hidden tanks avoided issues with actually putting a beverage in the display bowl, such as the display bowl requiring “frequent cleaning” and having a “small dispensing capacity that require[s] frequent manual filling.”¹²⁶ Defendants Orange Bang, Inc. and Unique Beverage Dispensers, Inc., argued that the '405 Patent was invalid because the '405 Patent described an immoral invention that lacked utility.¹²⁷ The Federal Circuit disagreed, finding that “[t]he requirement of ‘utility’ in patent law is not a directive to the Patent and Trademark Office or the courts to serve as arbiters of deceptive trade practices.”¹²⁸ After all, the Federal Circuit held that “Congress never intended that the patent laws should displace the police powers of the States, meaning by that term those powers by which the health, good order, peace and general welfare of the community are promoted.”¹²⁹ In this ruling, the Federal Circuit explicitly declined to follow *Rickard* and *Aristo Hosiery*, asserting that those cases did not “represent[] the correct view of the doctrine of utility under the Patent Act of 1952.”¹³⁰

It should be emphasized that the Federal Circuit’s ruling in *Juicy Whip* was not a cavalier rejection of the concept of morality, but rather a particular understanding of the meaning of “useful” under the 1952 Patent Act.¹³¹ According to the Federal Circuit, the “fact that one product can be altered to make it look like another is in itself a specific benefit sufficient to satisfy the statutory requirement of utility.”¹³² Indeed, one can also envision uses for the inventions in question in *Rickard* and *Aristo Hosiery* as well. For example, the inventions in *Rickard* and *Aristo Hosiery* could provide consumers with products having an aesthetic appearance mimicking a more expensive product at a cheaper cost. Considering that some women in World War II resorted to painting false stocking creases on the back of their legs to imitate the crease of real stockings,¹³³ it is plausible that some customers wanted to purchase cheaper stockings that merely looked expensive, and the invention in *Aristo Hosiery* provided such a product. Similarly, the invention in *Juicy Whip* has a clear benefit. Beyond the aesthetic benefits recognized by the Federal Circuit, using a storage tank allows a greater volume of liquid to be dispensed while

¹²⁶ *Id.* at col. 1 l. 45-53.

¹²⁷ *Juicy Whip*, 185 F.3d at 1366.

¹²⁸ *Id.* at 1368.

¹²⁹ *Id.* (citing *Webber v. Virginia*, 103 U.S. 344, 347-48 (1880)).

¹³⁰ *Id.* at 1367.

¹³¹ 35 U.S.C. § 101 (2012); *Juicy Whip*, 185 F.3d at 1367.

¹³² *Juicy Whip*, 185 F.3d at 1367.

¹³³ Amanda Uren, *1940s: Improvising Stockings*, MASHABLE (May 18, 2015), <https://mashable.com/2015/05/18/nylon-stockings-shortage/> [https://perma.cc/QDC7-2CF6]; *Juicy Whip*, 185 F.3d at 1367.

avoiding possible sanitation issues associated with having a display bowl near a customer.¹³⁴

There are very appealing reasons for keeping the concept of utility quite broad. The Supreme Court has openly characterized the word “useful” as “pregnant with ambiguity when applied to the facts of life.”¹³⁵ Recognizing this ambiguity, the USPTO has seemingly taken a quite permissive view of what is and is not useful. After all, granting a patent covering a useless invention is unlikely to be of much harm to society, whereas denying a patent to an ultimately useful invention might significantly harm the inventors’ ability to realize the value of their invention. According to the Manual of Patent Examining Procedure, an invention need only have a specific utility (i.e., “a well-defined and particular benefit to the public”) and a substantial utility (i.e., a “significant and presently available benefit to the public”) to be patentable.¹³⁶ As such, the USPTO defines what is *not* useful quite narrowly, such as circumstances where the claimed invention is outright inoperative or outright unbelievable.¹³⁷

In fact, a cursory review of issued patents suggests that, even before the ruling in *Juicy Whip*, the USPTO has long since dispensed with the concept of moral utility and has granted patents on inventions that aim to confuse consumers.¹³⁸ For example, the company Alcantara S.p.A. is famous for producing patented faux leather products which might be assumed to be leather when present in luxury vehicles.¹³⁹ Also, slot machine-related inventions, such as those described in U.S. Pat. No. 5,113,990, were patented long before the *Juicy Whip* decision.¹⁴⁰ Other controversial patents, such as those potentially directed to human cloning, also appear on the table; U.S. Pat. No. 6,211,429 (the ’429 Patent) recites, in claim 19, a “method for producing a cloned mammalian embryo,” which includes human embryos.¹⁴¹ Criticizing the ’429 Patent, Patent Watch Executive Director Andrew Kimbrell asserted

¹³⁴ ‘405 Patent, *supra* note 124, at col. 1 l. 45-53.

¹³⁵ *Brenner v. Manson*, 383 U.S. 519, 529 (1966).

¹³⁶ USPTO, MANUAL OF PATENT EXAMINING PROCEDURE § 2107.01 (2020) (citing *In re Fisher*, 421 F.3d 1365, 1371 (Fed. Cir. 2005)), <https://www.uspto.gov/web/offices/pac/mpep/mpep-2100.pdf> [<https://perma.cc/M3ZW-XW24>].

¹³⁷ *Id.*

¹³⁸ *See, e.g.*, U.S. Patent No. 6,890,602 (filed Apr. 10, 2003).

¹³⁹ *See* Jason Torchinski, *What the Hell is Alcantara, Anyway?*, JALOPNIK (July 14, 2014, 3:31 PM), <https://jalopnik.com/what-the-hell-is-alcantara-anyway-1604799947> [<https://perma.cc/FA98-ZWGC>].

¹⁴⁰ *See* U.S. Patent No. 5,113,990 (filed Aug. 15, 1989).

¹⁴¹ U.S. Patent No. 6,211,429 (filed June 18, 1998); *see also* Kristen Philipkoski, *Why Does School Own Clone Patent?*, WIRED (May 16, 2002, 5:26 PM), <https://www.wired.com/2002/05/why-does-school-own-clone-patent/> [<https://perma.cc/D2PT-FSPU>].

that the USPTO “has become a ghoulish human body shop allowing researchers and corporations to patent and own human body parts, cloning processes and even human life forms.”¹⁴²

VI. WHY MORAL UTILITY SHOULD NOT BE REVIVED FOR VIDEO GAMES

Perhaps needless to say, U.S. patent laws are unlikely to change just because some patents describe innovative methods to monetize in-game spending. This is probably for the better, and the USPTO should not revive the moral utility doctrine, particularly as it pertains to video game monetization.

First, consumers of video games are well positioned to avoid the monetization strategies outlined above. Video games are a discretionary hobby where players elect to play a particular game as a harmless diversion. Moreover, players are often connected to gaming news and information in a variety of ways (e.g., forums, news websites, podcasts, live streaming) which are all readily available through their video game console or device of choice. These information sources provide players with a (perhaps limited) opportunity to learn about and react to developments in the gaming industry. In this regard, gamers are empowered to vote with their wallets. If they dislike how a particular game is structured or monetized, they can refuse to purchase or play the game. This is precisely what happened with the game *Star Wars Battlefront II*. Players rejected what many perceived as “an overly aggressive use of loot boxes and microtransactions, tied to a progression system that incentivized spending real money.”¹⁴³ In fact, leveraging some players’ vocal distaste for these monetization strategies, the absence of common monetization strategies has become a selling point for some games. For example, some publications maintain lists of games with no microtransactions,¹⁴⁴ and some yet-to-be-released games emphasize their lack of microtransactions as a selling point.¹⁴⁵

¹⁴² Philipkoski, *supra* note 141.

¹⁴³ Andrew Webster, *EA Says It’s Learned From Star Wars Battlefront Controversy, Vows to ‘Be Better’*, THE VERGE (Apr. 13, 2018, 8:59 AM), <https://www.theverge.com/2018/4/13/17230874/ea-star-wars-battlefront-2-loot-box-patrick-soderlund-interview> [<https://perma.cc/HK98-XEMX>].

¹⁴⁴ See, e.g., Will Greenwald, *10 Awesome AAA Games with No Loot Boxes*, PCMAG.COM (Dec. 15, 2017), <https://www.pcmag.com/news/10-awesome-aaa-games-with-no-loot-boxes> [<https://perma.cc/WH5D-94MG>].

¹⁴⁵ See, e.g., Derek Strickland, *Torchlight III Revealed, Buy to Play with No Microtransactions*, TWEAKTOWN (Jan. 27, 2020, 11:59 AM), <https://www.tweaktown.com/news/70211/torchlight-iii-revealed-buy-play-microtransactions/index.html> [<https://perma.cc/426T-U8V8>].

Second, there are other ways in which the U.S. government might address the potential negative impact of deceptiveness in video game monetization. Consumer protection laws, rather than patent laws, are better suited to address perceived deceptiveness. The Federal Trade Commission (“FTC”) recently held a workshop investigating loot boxes,¹⁴⁶ which suggests that video game monetization has captured the FTC’s attention. Moreover, Congress seems increasingly interested in the issue. For example, Sen. Josh Hawley (R-MO) proposed a bill that would ban loot boxes and other forms of microtransactions.¹⁴⁷ That said, as of the writing of this article, the bill has not progressed,¹⁴⁸ and some pundits predict it has little chance of passing.¹⁴⁹ Another possible option, referenced in *Juicy Whip*,¹⁵⁰ is that Congress could modify 35 U.S.C. 101 to render video game monetization *per se* unpatentable, but this type of legislation seems rather unlikely.

Regardless, it seems unlikely that reviving the moral utility doctrine would have any effect on the monetization strategies used by video games. Although some companies might file for patents to reward employees’ inventive effort or shore up a defensive patent portfolio, patents probably do not matter much to this particular aspect of the video game industry. As described above, video game developers need new ways to make money on the video games they develop,¹⁵¹ and thus those companies will likely implement new monetization strategies whether or not those strategies are patentable. In other words, if video game monetization-directed inventions were made *per se* unpatentable, it seems unlikely that companies would stop employing or developing strategies to encourage players to spend money. In any event, if gaming companies were still concerned that their competitors

¹⁴⁶ Lesley Fair, *FTC Workshop Looks Into Loot Boxes*, FTC.GOV (Apr. 8, 2019, 11:14 AM), <https://www.ftc.gov/news-events/blogs/business-blog/2019/04/ftc-workshop-looks-loot-boxes> [https://perma.cc/ZPJ7-Z89E].

¹⁴⁷ See, e.g., Charlie Hall, *Anti-Loot Box Bill Could Radically Change How Video Games are Sold*, POLYGON (May 23, 2019, 5:27 PM), <https://www.polygon.com/2019/5/23/18637556/anti-loot-box-bill-microtransaction-ban-legal-analysis-esa> [https://perma.cc/VG7X-RMS9].

¹⁴⁸ A bill to regulate certain pay-to-win microtransactions and sales of loot boxes in interactive digital entertainment products, and for other purposes, S.1629, 116th Cong. (2019), <https://www.congress.gov/bill/116th-congress/senate-bill/1629/text> (last visited Feb. 20, 2020) [https://perma.cc/Y7D9-HCTJ].

¹⁴⁹ Giancarlo Valdes, *‘Zero’ Chance it Passes: Game Analysts Break Down Senator’s Anti-Loot Box Bill*, VENTUREBEAT (May 13, 2019), <https://venturebeat.com/2019/05/13/zero-chance-it-passes-game-analysts-break-down-senators-anti-loot-box-bill/> [https://perma.cc/N7LP-JJB6].

¹⁵⁰ *Juicy Whip*, 185 F.3d at 1368.

¹⁵¹ See discussion *supra* Part I.

might pilfer their monetization strategies, all they would need to do is maintain those strategies as trade secrets.¹⁵²

Moreover, there is a significant advantage to allowing controversial inventions to be patented, in that the underlying “tricks of the trade” are disclosed to the public in the patents. Patents have strict written description requirements, as such requirements “promote[] the progress of the useful arts by ensuring that patentees adequately describe their inventions in their patent specifications in exchange for the right to exclude others from practicing the invention for the duration of the patent’s term.”¹⁵³ In other words, patents benefit society by forcing inventors to disclose their inventions to the public in exchange for providing those inventors with limited-duration monopoly rights.¹⁵⁴ In a similar fashion, the public benefits when game companies disclose how they monetize their games, as such disclosures can form the basis for critical analysis and informed player decision-making.¹⁵⁵ For example, players of a particular video game might be encouraged to openly discuss in-game prices once armed with the knowledge that the video game might, using the methods described in Ernst,¹⁵⁶ modify in-game item prices based on their likelihood to buy those items.

From a broader patent law policy perspective, reversing the *Juicy Whip* decision and allowing the USPTO to become an arbiter of the morality of inventions may have undesirable consequences. For example, is a “[c]onsumer profiling and advertisement selection system” patent inherently immoral because it “provides targeting of appropriate audience[s] based on psychographic or behavioral profiles of end users”?¹⁵⁷ An ardent opponent of advertisements might argue that the answer is yes—but, admittedly, many valuable websites (e.g., underfunded news websites) might rely on such targeted advertising to raise the funds necessary to operate. What about a patent on an “[a]pparatus for mounting and locking a folding stock on a rifle”?¹⁵⁸ One might object to a folding stock being used to conceal a rifle for criminal activity, but might not mind the folding stock being used by police or hunters. The USPTO already struggles to define patent-eligible subject matter

¹⁵² See generally *What is a Trade Secret?*, WORLD INTELL. PROP. ORG., <https://www.wipo.int/tradesecrets/en/> (last visited Mar. 3, 2020) [<https://perma.cc/X3NN-MX5M>].

¹⁵³ USPTO, MANUAL OF PATENT EXAMINING PROCEDURE § 2163 (2020).

¹⁵⁴ See *id.*

¹⁵⁵ Video game patents are the subject of discussion in online gaming forums. See, e.g., r/Playstation, REDDIT, https://www.reddit.com/r/playstation/search?q=patent&restrict_sr=on (last visited April. 7, 2021) [<https://perma.cc/CZ2G-EMRH>].

¹⁵⁶ See discussion *supra* Part II.

¹⁵⁷ *Id.*

¹⁵⁸ U.S. Patent No. 3,369,316 (filed Apr. 29, 1966).

across the multitude of cases it handles every year.¹⁵⁹ Introducing a new, even more nebulous, concept of morality into the examination process would scarcely help matters, particularly where the concept of morality might require examiners to make assumptions about the likely consumers of an invention.

That said, video game developers should exercise caution when patenting inventions directed to video game monetization, as the detail included in those patents could quickly become a public relations nightmare. As an example, Sony filed a patent application in 2009, now granted as U.S. Pat. No. 8,246,454 to Zalewski (“Zalewski”), for a system designed to “convert[] television commercials into interactive network video games,” which prompted users to play an interactive game as part of an advertisement.¹⁶⁰ Journalists were quick to condemn Zalewski as “hilarious” but “terrifying”¹⁶¹ because, when describing various ways in which users might interact with an advertisement, Zalewski refers to a user being prompted to “Say ‘McDonalds’ to end commercial.”¹⁶² Although likely intended to be little more than an example of how voice commands might be used in interactive games, this concept nonetheless led journalists to assert that “[l]ife has become *Idiocracy*” (a comedic movie lampooning, among other things, American politics and marketing), and that Sony’s patent would read on, for example, a circumstance where “an ad for *The Apprentice* may require you to pick up a motion-detecting controller and comb Donald Trump’s hair with one hand while taking his wallet with Melania’s other hand.”¹⁶³ Needless to say, in the 11 years since Zalewski was filed, such a parade of horrors never occurred, but the reputational damage was done. One can easily see similar articles being written about many of the patents described above.¹⁶⁴

Setting aside the question whether a particular invention is patent-eligible, patentees should not forget how certain disclosures might be misread. Take, for example, the invention in *Juicy Whip*. If the specification of that

¹⁵⁹ See Kate Gaudry & Samuel Hayim, *Update on 101 Rejections at the USPTO: Prospects for Computer-Related Applications Continue to Improve Post-Guidance*, IPWATCHDOG.COM (Aug. 13, 2019), <https://www.ipwatchdog.com/2019/08/13/update-101-rejections-uspto-prospects-computer-related-applications-continue-improve-post-guidance/id=112132/> [<https://perma.cc/T9PV-GGS2>].

¹⁶⁰ U.S. Patent No. 8,246,454 col. 9 l. 18-26 (filed Oct. 23, 2009) [hereinafter Zalewski].

¹⁶¹ See, e.g., Matt Vella, *Sony Patent is Hilarious, Terrifying*, FORTUNE (Apr. 30, 2013, 5:32 PM), <https://fortune.com/2013/04/30/sony-patent-is-hilarious-terrifying/> [<https://perma.cc/5XFN-73YD>].

¹⁶² *Id.*; Zalewski, col. 10 l. 13-33, fig. 9.

¹⁶³ Michael Howard, *There's a New Technology That Encourages You to Scream At Your TV to Skip Commercials*, ESQUIRE (Nov. 3, 2014), <https://www.esquire.com/news-politics/news/a30579/sony-patent-for-television-shouting-110314/> [<https://perma.cc/DW5A-MURP>].

¹⁶⁴ See *supra* Part II.

invention was crafted in terms of genuine prosocial goals (e.g., making sure consumers are not drinking liquids that are likely to have been churning around in a potentially unclean display bowl for weeks) instead of goals that might seem less customer-friendly (e.g., dispensing a beverage other than what a customer thought they were purchasing to save money or effort), the invention might be less likely to be misunderstood by a reader. Many of the video game patents discussed above could be positively reframed. Consider Marr, for example.¹⁶⁵ Rather than being potentially interpreted as an effort to bilk players out of money (e.g., by rewarding players for purchases by making matchmaking results easier in games), Marr could be characterized as a way to gently introduce players to new in-game content, such that those users are not overwhelmed with a deluge of purchasable content all at once. As another example, rather than being misunderstood as a method of targeting potential whales, Kim could perhaps be ethically characterized as a way to efficiently display ads so that users who do not engage with ads are not bothered by them.

VII. CONCLUSION

In sum, neither the growing costs of game development and marketing nor the concerns regarding video game monetization strategies are easily fixed through the patent system. Revival of the concept of moral utility would introduce an unacceptable level of uncertainty into the patent prosecution process and would have a dubious impact on the monetization strategies themselves. Nonetheless, video game developers and publishers should remember that such patents are in the public record, and the way in which monetization strategies are portrayed and implemented may have a serious impact on how the companies are received by the public. Indeed, such patents risk prompting action by a government agency like the FTC or inviting significant media backlash.

¹⁶⁵ See *supra* Part III.