

HOW PAY-TO-WIN MAKES US LOSE: INTRODUCING MINORS TO GAMBLING THROUGH LOOT BOXES

Abstract: Loot boxes are a feature in video games where players can acquire virtual goods like weapons, characters, or aesthetic alterations to enhance their gaming experience. Players can earn loot boxes through normal gameplay or purchase them with legal tender. The type and rarity of the rewards are commonly determined by a random number generator, ensuring that the success of acquiring a specific good is based on luck rather than skill. Due to the elements of consideration (wager), luck, and reward in loot box mechanisms mirroring those found in traditional gambling devices, some legislators view loot boxes as a form of unregulated gambling. This is bolstered by findings that show how excessive and prolonged gaming can encourage the same psychological responses found in problem gambling. Advocates of the gaming industry argue that loot boxes function less like gambling devices and more like legal forms of “gambling per se,” similar to the distribution of rare cards in packs of baseball cards. Video game developers have exacerbated the issue by implementing policies that manipulate players into making more in-game purchases. Even if these mechanisms do not comfortably fit within the legal definition of gambling, profit-based loot boxes should be regulated, considering the damaging psychological effects they have on the end users, many of whom tend to be young children.

INTRODUCTION

With at least one gamer in seventy-five percent of homes in the United States and over forty-three billion dollars spent on the video game industry in 2018, video games have become commonplace in the American home.¹ Not unlike smart phones and social media, constant exposure to video games can influence the daily lives of users by affecting how they make decisions and respond to certain stimuli.² Considering their influential effects and wide

¹ See ENTERTAINMENT SOFTWARE ASSOCIATION, 2019 ESSENTIAL FACTS ABOUT THE COMPUTER AND VIDEO GAME INDUSTRY 5, 20, https://www.theesa.com/wp-content/uploads/2019/05/ESA_Essential_facts_2019_final.pdf [<https://perma.cc/R98W-FUTT>] (showing that at least one person plays video games in three-fourths of U.S. homes and breaking down purchases in the video game industry by physical and digital format sales).

² See Sang Hee Kim et al., *Reduced Striatal Dopamine D2 Receptors in People with Internet Addiction*, 22 NEUROREPORT 407, 410 (2011) (connecting continuous exposure to video games to diminished dopamine receptors in the brain, leading to a greater desire to play more); Trevor Haynes, *Dopamine, Smartphones & You: A Battle for Your Time*, SCI. IN THE NEWS (May 1, 2018), <http://sitn.hms.harvard.edu/flash/2018/dopamine-smartphones-battle-time/> [<https://perma.cc/W7TJ-7Y8A>] (detailing the connection between anxiety, sleep deprivation, and risk of injury to continuous smart phone usage).

reach, issues can arise when game developers capitalize on the manipulative capabilities of video games and exploit those features for the pursuit of greater profits.³

Microtransactions, or purchases within video games, account for more than half of the profits made by some of the biggest video game developers.⁴ This is partially due to the fact that it costs half as much to generate the same revenue from a microtransaction than to release a physical copy of a new game.⁵ Loot boxes are a specific, and increasingly popular, type of microtransaction that amassed significant controversy in 2017.⁶ They take many forms, but generally appear as an opaque box that contains some form of reward, or “loot,” that is

³ See U.S. Patent No. 9,789,406 (filed July 3, 2014) (granting a patent to developer Activision Blizzard that matches online players—who do not have a specific purchasable gear—with stronger opponents—who have equipped such gear—creating a false association between a player’s skill and that missing item); PETER NAESSENS, SECRETARIAAT KANSSPELCOMMISSIE, KANSSPEL COMMISSIE, ONDERZOEKSRAPPORT LOOT BOXEN (Apr. 2018), *translated in* PETER NAESSENS, Secretariat, Gaming Comm’n, *Research Report on Loot Boxes*, at 5–7, https://www.gamingcommission.be/opencms/export/sites/default/jhksweb_nl/documents/onderzoeksrapport-loot-boxen-Engels-publicatie.pdf [https://perma.cc/YX2Z-HTHT] (listing several features that developers use to encourage loot box purchases such as behavior monitoring, collection of personal data, celebrity endorsements, personal currency systems, and hiding random number generator data).

⁴ See Activision Blizzard, Inc., Annual Report (Form 10-K), at 41, 45, F-17 (Feb. 27, 2018) (noting that \$4.907 billion out of \$7.156 billion in total net bookings came from “other revenues,” which includes microtransactions, downloadable content (DLC), and licensing IP to other parties); James Brightman, *Ubisoft’s Sales Are More Than 80% Digital*, GAMES INDUSTRY (July 18, 2017), <https://www.gamesindustry.biz/articles/2017-07-18-ubisofts-sales-are-more-than-80-percent-digital> [https://perma.cc/5CP7-C7U9] (stating that 80% of the game developer Ubisoft’s sales come from digital sales, which largely include microtransactions); Matthew Handrahan, *EA’s Ultimate Team Earning Around \$650 Million a Year*, GAMES INDUSTRY (Mar. 2, 2016), <https://www.gamesindustry.biz/articles/2016-03-02-eas-ultimate-team-earning-around-usd650-million-a-year> [https://perma.cc/UQ4H-MB6V] (noting how the video game developer, Electronic Arts, attained \$1.3 billion of revenue from microtransactions, half of which came from just one game series).

⁵ See Electronic Arts, Inc., Annual Report (Form 10-K), at 34 (Feb. 27, 2018) (illustrating that the marginal cost of revenue for Electronic Arts was 31.8 cents to make one dollar from physical copy games while the marginal cost of revenue was 17.7 cents to offer digital services, such as microtransactions); see also Skill Up, *The Untold History of EA’s Long (and Rich) Pay-2-Win Love Affair*, YOUTUBE (Nov. 24, 2017), https://www.youtube.com/watch?v=PTLFNlu2N_M [https://perma.cc/S4GF-EG7Q] (referencing a 2015 Electronic Arts filing with the U.S. Securities and Exchange Commission that showed that the marginal cost of revenue for creating a game was forty cents to the dollar while the marginal cost of revenue for microtransactions was 20.6 cents).

⁶ See *G.G. v. Valve Corp.*, No. C16-1941-JCC, 2017 WL 1210220, at *1, *3 (W.D. Wash. Mar. 3, 2017) (discussing how skins acquired from loot boxes were used by minors to gamble on third-party websites); Desirée Martinelli, Note, *Skin Gambling: Have We Found the Millennial Goldmine or Imminent Trouble?*, 21 GAMING L. REV. 557, 558–59 (2017) (noting how minors are using skins from loot boxes in the game Counter Strike: Global Offensive (CS:GO) as a form of de facto currency); Ben Gilbert, *The Latest Major ‘Star Wars’ Game Finally Dropped Its Most Controversial Aspect—But It May Be Too Late*, BUS. INSIDER (Mar. 16, 2018), <https://www.businessinsider.com/star-wars-battlefront-2-drops-loot-boxes-2018-3> [https://perma.cc/QB62-LUDH] (describing the Star Wars Battlefront II loot box system as controversial because it encouraged a pay-to-win model where players gain a competitive advantage over more skilled players through in-game purchases offering better weapons and player boosts).

revealed once the box is opened.⁷ The loot typically comes in two forms: (1) cosmetic benefits that change the design of a player's character or weapon, also known as "skins;" and (2) some form of player enhancement such as a stronger weapon or new character.⁸ A random number generator determines the probability of receiving specific rewards, with more desirable items having a lower probability of distribution.⁹ One can typically obtain loot boxes through normal gameplay, like "leveling up" or winning several matches, or by purchasing them directly with legal tender.¹⁰

The unique danger of this business model is that the psychological effects of continuously opening loot boxes appears to parallel the psychological stimuli associated with problem gambling.¹¹ The apparent correlation is astounding, with scores of children spending thousands of dollars on these intangible goods even when they know that newer loot will be released with the game's next update in the following months, restarting an endless cycle of

⁷ See ANTHONY J. DREYER ET AL., VIDEO GAMING: IS MY LOOT BOX LEGAL? (Sept. 26, 2019), <https://www.skadden.com/insights/publications/2019/09/quarterly-insights/video-gaming-is-my-loot-box-legal> [<https://perma.cc/D3KF-P462>] (describing a loot box as a game mechanic that rewards players with various in-game items that come in a variety of virtual containers, such as card packs and crates).

⁸ See Aaron Drummond & James D. Sauer, *Video Game Loot Boxes Are Psychologically Akin to Gambling*, 2 NATURE HUM. BEHAV. 530, 530 (2018) (describing loot boxes as randomized reward systems that provide unique and desirable benefits to their purchasers). Loot boxes often contain other rewards like emotes, which animate the avatar in a non-impactful way within the game, such as by making them dance, or can contain things, like sprays that the player can tag around a play area. See Hirun Cryer, *Overwatch How to Earn Loot Boxes Guide—Emotes, Sprays, Legendary Skins*, USGAMER (Aug. 9, 2017), <https://www.usgamer.net/articles/09-08-2017-overwatch-how-to-earn-loot-boxes-guide-emotes-sprays-legendary-skins> [<https://perma.cc/NV76-524X>] (detailing the loot box rewards in the game Overwatch, including skins, emojis, and sprays).

⁹ NAESENS, *supra* note 3, at 5, 8 (defining loot boxes as boxes that provide rewards on a random basis and noting that the random number generator is one of the tools that developers use to encourage purchases).

¹⁰ See Guðmundur Þorsteinsson & Rúnar Freyr Júlíusson, *A Case Study on Loot Boxes in Two Video Games: A Comparison between Overwatch and Star Wars Battlefront*, 1, 13, 22 (2018) (unpublished B.S. thesis, Reykjavik University), https://skemman.is/bitstream/1946/30791/1/BSc_thesis_A_Case_Study_on_Loot_Boxes_in_Two_Video_Games_GTh_RFJ.pdf [<https://perma.cc/92W6-XVFR>] (stating that loot boxes can be purchased or earned and illustrating the tiered packaging prices of loot boxes ranging from two dollars up to \$99.99).

¹¹ See Drummond & Sauer, *supra* note 8, at 531 (comparing the identical mechanics of loot boxes to traditional forms of gambling); Simone Kühn et al., *The Neural Basis of Video Gaming*, 1 TRANSLATIONAL PSYCHIATRY (Nov. 15, 2011), at 1, <https://www.researchgate.net/publication/230569677> [<https://perma.cc/5S32-72NY>] (following 154 fourteen-year-old children and splitting such groups into frequent and infrequent gamers to show that frequent gamers have a higher likelihood to develop gambling like behaviors and experience greater dopamine release); David Zendle & Paul Cairns, *Video Game Loot Boxes Are Linked to Problem Gambling: Results of a Large-Scale Survey*, PLOS ONE (Nov. 21, 2018), at 4–6 (conducting a study of over seven thousand players and showing a high correlation between problem gambling behavior and spending up to \$300 on loot boxes).

consumerism.¹² The fact that children are often the end users of video games has prompted many nations to investigate and regulate the use of loot boxes within their borders.¹³

This Note argues that although loot boxes may not be considered a traditional form of gambling, they should still to be regulated in some way.¹⁴ The

¹² Ethan Gach, *Meet the 19-Year-Old Who Spent Over \$10,000 on Microtransactions*, KOTAKU (Nov. 29, 2017), <https://kotaku.com/meet-the-19-year-old-who-spent-over-10-000-on-microtra-1820854953> [<https://perma.cc/85HZ-37PL>] (documenting the journey of a single gamer from the age of thirteen to nineteen years old who spent \$13,500.25 on microtransactions), Tom Herbert, *Boy, 14, Accidentally Drains Mum's Entire Bank Account Playing FIFA*, METRO (Dec. 16, 2017), <https://metro.co.uk/2017/12/16/boy-14-accidentally-drains-mums-entire-bank-account-playing-fifa-7164264/> [<https://perma.cc/9XMU-NS86>] (referencing a fourteen-year-old that inadvertently spent a month's worth of his mother's salary on coins for the video game FIFA 18); see U.K. GAMBLING COMM'N, YOUNG PEOPLE AND GAMBLING 2017: A RESEARCH STUDY AMONG 11–16 YEAR OLDS IN GREAT BRITAIN, at 19–20, 22–23 (2017), <https://live-gamblecom.cloud.contensis.com/PDF/survey-data/Young-People-and-Gambling-2017-Report.pdf> [<https://perma.cc/WG28-CKJR>] (collecting survey data in the United Kingdom that shows that 20% of boys between the ages of eleven and sixteen have made a bet with in-game items and that 1% of children have made an online bet without their parents' permission).

¹³ NAESSENS, *supra* note 3, at 16 (stating that the use of loot boxes in four video games are in violation of the Belgian Gaming and Betting Act due to their elements of game, wager, chance, and win/loss); Press Release, Kansspelautoriteit, A Study by the Netherlands Gaming Authority Has Shown: Certain Loot Boxes Contravene Gaming Laws, at 1–2 (Apr. 19, 2018), https://www.lawofthelevel.com/wp-content/uploads/sites/187/2018/04/press_release_loot_boxes_19_april_2018_-_en.pdf [<https://perma.cc/3HJQ-HZEL>] (stating how certain loot boxes fitting within a specific criterion will constitute gambling and must be modified if developers want to continue their use); Press Release, U.K. Gambling Comm'n, Declaration of Gambling Regulators on Their Concerns Related to the Blurring of Lines Between Gambling and Gaming, at 1–2 (Sept. 17, 2018), <https://www.gamblingcommission.gov.uk/PDF/International-gaming-and-gambling-declaration-2018.pdf> [<https://perma.cc/YFX4-XGMU>] (committing to prevent gambling in video games targeted to minors with signers including Austria, the Czech Republic, France, Gibraltar, Ireland, Isle of Man, Jersey, Latvia, Malta, the Netherlands, Norway, Poland, Portugal, Spain, the United Kingdom, and the state of Washington).

¹⁴ See Letter from Patricia Vance, President, Entm't Software Rating Bd., to Sen. Margaret Wood Hassan, U.S. Senate, 1, 3 (Feb. 27, 2018), https://cdn.arstechnica.net/wp-content/uploads/2018/02/ESRB-response-to-Senator-Hassan_Vance-2-27-18.pdf [<https://perma.cc/4336-P63V>] (stating that the president of the Entertainment Software Rating Board (ESRB), the agency associated with video game regulation, believes that video games are not a form of gambling and are more comparable to the sale of baseball cards). Currently, the loot box mechanisms are not a form of gambling in the United States, due in part to the fact that some video games require the purchase of their in-game token to buy loot boxes. See Wire Act, 18 U.S.C. § 1084 (2018) (requiring a wager on a sporting event or contest to constitute a violation); Illegal Gambling Business Act, 18 U.S.C. § 1955 (2018) (requiring a violation of state law to constitute a violation; no such state law existing at the time of this publication); *Mason v. Mach. Zone, Inc.*, 851 F.3d 315, 320 (4th Cir. 2017) (holding that video game tokens are not considered money for Maryland's Loss Recovery Statute because they cannot be resold on a secondary market). This Note will look to other nations that have begun regulating loot boxes to see what standards they follow to characterize loot box purchases as gambling. See, e.g., KANSPELAUTORITEIT, GUIDE ON ASSESSING GAMES OF CHANCE, at 13 (Apr. 13, 2018), https://kansspelautoriteit.nl/publish/library/6/guide_on_assessing_games_of_chance.pdf [<https://perma.cc/Q7B6-6P2S>] (stating that prizes do not need an economic value to constitute gambling); NAESSENS, *supra* note 3, at 9–10 (stating that a wager can be made with virtual currency as long as the virtual currency was purchased with real money).

danger of loot boxes stems from players' psychological responses, their similarities to traditional gambling mechanics, and the fact that minors are likely unaware of the tactics used against them.¹⁵ Part I of this Note discusses the history and psychological effects of loot boxes, as well as an overview of gambling law in the United States.¹⁶ Part II of this Note examines international and domestic criteria for gambling and how they apply to loot boxes.¹⁷ Part III of this Note argues that loot boxes should be regulated like gambling devices due to their similarities in game mechanics, psychological responses related to playing, and business tactics that keep players addicted.¹⁸

I. THE MIND, THE GAME, AND THE GAMBLE: THE PSYCHOLOGY AND HISTORY OF LOOT BOXES AND GAMBLING

Although gambling can be an enjoyable pastime for adults, it can have dangerous repercussions on a developing mind.¹⁹ When video game developers are aware of these vulnerabilities and capitalize on them for profit, adolescents, as well as adults, can be put at risk.²⁰ Section A of this Part focuses on the history of loot boxes and provides an overview of the controversies that led to their

¹⁵ See Mark D. Griffiths, *Is the Buying of Loot Boxes in Video Games a Form of Gambling or Gaming?*, 22 GAMING L. REV. 1, 1–2 (2018) (illustrating the use of chance, exchange of goods, and loss incurred as identical in both gambling and loot boxes); Kühn et al., *supra* note 11, at 4 (describing how the dopamine receptors of children that play video games for more than 12.1 hours per week resemble the same dopamine responses associated with problem gambling and “loss chasing behavior”); Heather Alexandra, *Activision Patents Matchmaking That Encourages Players to Buy Microtransactions*, KOTAKU (Oct. 17, 2017), <https://kotaku.com/activision-patents-matchmaking-that-encourages-players-1819630937> [<https://perma.cc/SGY2-TEJP>] (referencing Activision Blizzard’s patent that matches players who lack a specific skin with higher-skilled players who have that skin to create a false association between skill and that purchasable cosmetic product).

¹⁶ See *infra* notes 19–149. Belgium and France are two European nations that have successfully instituted laws regulating loot boxes and threatened punishment on developers who refuse to comply. NAESSENS, *supra* note 3, at 17–18 (providing recommendations for the four games reviewed to conform with Belgian gambling law); Press Release, Kansspelautoriteit, *supra* note 13, at 1 (demanding that video game developers who have loot boxes in their video games modify their loot box systems to conform with Dutch law, or face fines and penalties).

¹⁷ See *infra* notes 150–186 and accompanying text.

¹⁸ See *infra* notes 187–226 and accompanying text.

¹⁹ See Kühn et al., *supra* note 11, at 4 (describing the effects of overplaying video games as similar to dopaminergic responses associated with gambling and drug use); Joseph Macey & Juho Hamari, *Investigating Relationships Between Video Gaming, Spectating Esports, and Gambling*, 80 COMPUTERS HUM. BEHAV. 344, 348–49 (2018) (conducting a study showing a positive correlation between video game habits and video game gambling and a very strong correlation between video game-related gambling habits and problem gambling).

²⁰ See ’406 Patent, *supra* note 3 (allowing a patent for Activision Blizzard to match weaker players to more skilled players that have a specific skin to manipulate players into making more loot box purchases); Zende & Cairns, *supra* note 11, at 3, 5–7 (showing a statistically significant positive correlation between higher-risk, gambling-related behavior and purchases of loot boxes and microtransactions).

public scrutiny.²¹ Section B discusses the psychological effects of loot boxes and video games on developing minds.²² Section C of this Part looks at the organizations that educate consumers on the video game industry and their stance on the association between loot boxes and problem gambling.²³ Section D of this part looks at the United States' federal gambling laws and contrasts them to the laws used in the Netherlands and Belgium—nations that have been more effective at curtailing loot box-based business models.²⁴

A. *The Legend of Loot Boxes: A Link to Their Past*

Loot boxes are typically found in competitive online multiplayer video games where players can show off their newly acquired rewards to other players.²⁵ When individuals spend legal tender to acquire better weapons and characters in loot boxes, a “pay-to-win” system arises where the most successful players are those that spend the most money, as opposed to those with the greatest skills.²⁶ This is in contrast to video games that limit rewards to just skins, which do not affect gameplay, but instead change a color or other aesthetic feature of a character or in-game item.²⁷

The first iteration of loot boxes originated in ZT Online, a 2006 Chinese massively multiplayer online video game.²⁸ The loot box mechanism in ZT

²¹ See *infra* notes 25–49 and accompanying text.

²² See *infra* notes 50–73 and accompanying text.

²³ See *infra* notes 74–83 and accompanying text.

²⁴ See *infra* notes 83–148 and accompanying text.

²⁵ See Drummond & Sauer, *supra* note 8, at 530 (distinguishing between video games that give a player power-improving perks and those that simply provide aesthetic, non-performance-enhancing skins, or visual customizations); see also Anna Bell, *Everything You Need to Know About Overwatch's Loot Boxes*, BLIZZARD WATCH (Feb. 11, 2016), <https://blizzardwatch.com/2016/02/11/overwatch-loot-boxes-cosmetic-rewards/> [<https://perma.cc/LC3P-VSN7>] (describing Overwatch's loot box model as one with purely cosmetic rewards that players can win through regular game play or with an in-game purchase); Gilbert, *supra* note 6 (describing the Star Wars Battlefront II loot box system as controversial because it encouraged a pay-to-win model, where players gain a competitive advantage over higher-skilled players through in-game purchases that offer better weapons and other enhancements).

²⁶ See William Grosso, *Looking at Pay to Win*, GAMASUTRA (Nov. 2, 2016), https://www.gamasutra.com/blogs/WilliamGrosso/20161102/284598/Looking_at_Pay_to_Win.php [<https://perma.cc/JEJ4-CURH>] (characterizing pay-to-win games as those where the most successful players spend the most, and explaining that the skill gap is narrowed by the ability to progress through purchases).

²⁷ See John Vrooman Haskell, *More Than Just Skin(s) in the Game: How One Digital Video Game Item Is Being Used for Unregulated Gambling Purposes Online*, 18 J. HIGH TECH. L. 125, 139 (2017) (defining skins as in-game items that change color components or other appearance-based aspects of a character).

²⁸ See Joel Martinsen, *Gamble Your Life Away in ZT Online*, DANWEI (Dec. 26, 2007), http://www.danwei.org/electronic_games/gambling_your_life_away_in_zt.php [<https://perma.cc/V8PB-TCYU>] (providing general insight into the mechanisms of ZT Online and their loot box system as well as its resemblance to gambling); Steven T. Wright, *The Evolution of Loot Boxes*, PC GAMER (Dec. 8, 2017), <https://www.pcgamer.com/the-evolution-of-loot-boxes/> [<https://perma.cc/9D3F-ZZ92>] (referencing ZT Online as the first game to incorporate a loot box like system).

Online was simple and cheap, allowing players to open a chest containing random equipment for one Chinese yuan, the equivalent of thirteen cents.²⁹ Even this primitive and inexpensive loot box model produced significant profits, as individual players would spend up to tens of thousands of yuan, or several thousand American dollars, but still find themselves at a disadvantage relative to other players with deeper pockets.³⁰ This is widely regarded as one of the first addictive pay-to-win business models in video games and its success paved the way for Western developers.³¹

In 2010, North America and Europe were introduced to loot boxes in *Team Fortress 2*, a game created by the powerhouse game developer, the Valve Corporation.³² Players attained rewards through regular gameplay or by purchasing a key to open a “supply crate”—*Team Fortress 2*’s version of the loot box.³³ Players could continuously purchase keys, but only in increments of less than five dollars per batch.³⁴ In modern iterations, game developers incentivize players to purchase loot boxes at discounted packages for up to one hundred dollars at a time.³⁵

²⁹ Martinsen, *supra* note 28.

³⁰ *See id.* (following the story of Lu Yang, who spent tens of thousands of yuan on the game but was still at a disadvantage to players who boasted higher spending power).

³¹ *See* Wright, *supra* note 28 (noting *ZT Online* as the first free-to-play Massively Multiplayer Online game that utilizes random number generators to enhance game progression through microtransactions).

³² *See Team Fortress 2 Update Released*, STEAM (Sept. 30, 2010), <https://store.steampowered.com/news/4411/> [<https://perma.cc/L8N6-3VHU>] (introducing the Mann-conomy: a process where players can pay for “Mann. Co. Supply Crate Keys” to purchase “Mann Co. Supply Crates,” a version of loot boxes).

³³ Wright, *supra* 28 (describing *Team Fortress 2*’s supply crates as the first popular version of loot boxes on the Western market).

³⁴ *See* Sebastian Haley, *What Does \$100 Buy You in Mass Effect 3 Multiplayer?*, VENTUREBEAT (Mar. 6, 2012), <https://venturebeat.com/2012/03/06/what-does-100-buy-you-in-mass-effect-3-multiplayer/> [<https://perma.cc/E34K-CVFN>] (noting how *Mass Effect 3*’s loot box system allowed purchase through credits earned in the game or by one or two-dollar increments); Wesley Yin-Poole, *You Can Now Buy Battlefield 4 Battlepacks*, EUROGAMER (May 28, 2014), <https://www.eurogamer.net/articles/2014-05-28-you-can-now-buy-battlefield-4-battlepacks> [<https://perma.cc/3S4G-SZY7>] (noting that *Battlefield 4* loot boxes, or “Battlepacks,” could be purchased in one, two, or three-dollar increments).

³⁵ *See* Þorsteinsson & Júlíusson, *supra* note 10, at 22 (illustrating the tiered packaging prices of both the Activision Blizzard game *Overwatch*, ranging from \$2–\$99.99, and the Electronic Arts game *Star Wars Battlefront II* from \$5–\$99.99). Some game developers have taken a novel approach, allowing loot boxes to offer in-game power ups, better gear, and cosmetic upgrades, but preventing their purchase with real money. *See* Dustin Bailey, *Rainbow Six Siege’s Developers Have “Bit of Pride” in How They’ve Handled Microtransactions*, PCGAMES^N (Nov. 18, 2017), <https://www.pcgamesn.com/rainbow-six-siege/rainbow-six-siege-alpha-packs-microtransactions> [<https://perma.cc/849U-232H>] (interviewing *Rainbow Six Siege*’s brand director on how players can purchase new game maps but can only acquire loot boxes through regular game progression, eliminating the pay-to-win model).

Loot boxes first began garnering controversy in 2017.³⁶ Much of the controversy was focused on how children were spending thousands of dollars without their parents' consent, leading to the belief that loot boxes exposed minors to gambling-like behaviors and led to patterns of addictive behavior.³⁷ Counter Strike: Global Offensive (CS:GO) was one of the most popular shooting games of its time, as well as one of the largest culprits of online gambling, utilizing loot boxes to offer players appealing color designs, or skins, for their in-game weapons.³⁸ Skins in CS:GO were tradeable amongst players, a feature associated with "skin gambling."³⁹ The platforms for skin gambling were managed by third-party websites that allowed users to wager skins for the possibility of acquiring rarer skins.⁴⁰ Rare skins were, and still are, highly desirable, with the highest recorded sale of a single skin being sold at over sixty thousand dollars.⁴¹ The growing issue with skin gambling led to parents bringing suit against the game developer, Valve, and resulted in an arbitration agreement that ended the practice.⁴²

Star Wars: Battlefront II, a game associated with one of the most famous loot box controversies, was another free-to-play game that differed from its

³⁶ See *G.G.*, 2017 WL 1210220, at *1, *3 (discussing arbitration regarding how minors were using skins acquired from loot boxes in CS:GO as de facto currency on third-party gambling websites); Ivana Kottasová, *The New Star Wars Video Game Is Under Attack*, CNN BUS. (Nov. 16, 2017), <https://money.cnn.com/2017/11/16/technology/battlefront-ii-star-wars-game-gambling> [<https://perma.cc/EFJ4-KYEJ>] (noting players' discontent with the alleged pay-to-win system of Star Wars Battlefront II and the Belgian Gaming Commission's investigation on how loot boxes in this game resemble gambling and can cause gambling addiction in minors).

³⁷ Kottasová, *supra* note 36 (referencing the Belgian Gaming Commission's statement that minors and people suffering from gambling addiction should abstain from games with loot box mechanics); see, e.g., Gach, *supra* note 12 (following one boy who spent over \$13,000 on microtransactions over the course of six years); Herbert, *supra* note 12 (documenting a fourteen-year-old boy who spent a month's worth of his mother's salary on microtransactions for the game FIFA 18).

³⁸ See Martinelli, *supra* note 6, at 558 (noting how skin trading was prevalent in CS:GO and how CS:GO skins constituted 80% of all skins used for gambling on third-party websites).

³⁹ *Id.*

⁴⁰ See *G.G.*, 2017 WL 1210220, at *1, *3 (litigating over Valve's inclusion of skins in CS:GO, where they were used as de facto currency on gambling sites). Although third-party websites were hosting the gambling, Valve was still receiving a 15% fee from every skin sold in the marketplace. *McLeod v. Valve Corp.*, No. C16-1227-JCC, 2016 WL 5792695, at *1 (W.D. Wash. Oct. 4, 2016).

⁴¹ Eugene Bozhenko, *The Most Expensive CS:GO Skins on Steam Market*, SKINS CASH (Mar. 20, 2019), <https://skins.cash/blog/expensive-csgo-skins/> [<https://perma.cc/Z9C5-J7QK>] (noting that the Dragon Lore style of one gun was sold for \$61,052.63 in January 2018).

⁴² See *G.G.*, 2017 WL 1210220, at *1 (bringing suit against game developer, Valve, for creating a gambling environment through the use of weapon skins as de facto currency); Evan Lahti, *What Happened to CS:GO Skin Prices After Valve's Gambling Ban*, PC GAMER (July 15, 2016), <https://www.pcgamer.com/what-happened-to-csgo-skin-prices-after-valves-gambling-ban/> [<https://perma.cc/MYT6-C8XC>] (referencing Valve's response to litigation in the form of cease and desist letters to gambling websites utilizing their skins); Valve, *Adjustments to Maps and Trade*, COUNTER STRIKE (Mar. 29, 2019), <https://blog.counter-strike.net/index.php/2018/03/20308/> [<https://perma.cc/W5WB-HRLY>] (modifying the skin trading system in CS:GO in response to fraud or scams, implicitly to third-party gambling websites).

predecessors by relying heavily on the pay-to-win model.⁴³ The game developer, Electronic Arts, focused exclusively on unlockable characters, weapons, and ships in loot boxes, and avoided cosmetic unlockable items at the outset.⁴⁴ Many players felt like they were cheated out of a complete game, as unlocking all of the game's hidden content would take thousands of hours of gameplay or, alternatively, thousands of dollars of in-game purchases for what was marketed as a "free" game.⁴⁵

Both Electronic Arts and Valve have since caved to consumer and legal demands to mitigate, modify, or completely diminish their loot box systems.⁴⁶ Valve sent cease-and-desist letters to third-party gambling websites and now puts limits on the tradability of skins in CS:GO.⁴⁷ Electronic Arts responded to consumer outcry by completely terminating all in-game purchases for Star Wars: Battlefront II in November 2018, only a year after its release.⁴⁸ Their responses may have been too late, as several organizations around the world had begun investigating these loot box-based business models and alleging that they constitute gambling targeted at children.⁴⁹

B. Dungeons and Dopamine: The Effects of Video Games on the Mind

There is a fear among concerned parents that video games have detrimental effects on the minds of developing children.⁵⁰ On the one hand, some

⁴³ Owen S. Good, *I Spent \$90 in Battlefront 2, and I Still Don't Have Any Control over My Characters*, POLYGON (Nov. 16, 2017), <https://www.polygon.com/2017/11/16/16658476/star-wars-battlefront-2-loot-crate-costs-analysis> [<https://perma.cc/7W5X-QJCD>] (describing the mechanics of Battlefront II and noting that the creators planned to include cosmetic options in the future but not in the early stages of launch).

⁴⁴ *Id.*

⁴⁵ *Id.*; Cal Jeffrey, *You Won't Believe How Much Money or Time It Will Take to Unlock All Star Wars Battlefront 2 Content*, TECHSPOT (Nov. 16, 2017), <https://www.techspot.com/news/71920-you-wont-believe-how-much-money-or-time.html> [<https://perma.cc/5SMB-SVA3>] (estimating that it would cost over two thousand dollars of in-game purchases or 4,527 hours of playing for a player to acquire all of Battlefront II's hidden content).

⁴⁶ See Bob Buskirk, *EA Removes All Microtransactions from Star Wars Battlefront II*, THINK COMPUTERS (Nov. 17, 2017), <https://thinkcomputers.org/ea-removes-all-micro-transactions-from-star-wars-battlefront-ii/> [<https://perma.cc/QBT5-NVK7>] (reporting that Electronic Arts was turning off all microtransactions as a result of consumer outcry); *Adjustments to Maps and Trade*, *supra* note 42 (modifying the skin trading system in CS:GO in response to third-party gambling websites that utilize skins as a token to make a bet or wager).

⁴⁷ See *Adjustments to Maps and Trade*, *supra* note 42 (noting that Valve modified the skin trading system in light of the skin gambling controversy).

⁴⁸ See Buskirk, *supra* note 46 (noting the removal of in game purchases as a feature in Star Wars Battlefront II).

⁴⁹ Press Release, U.K. Gambling Comm'n, *supra* note 13, at 1–2 (committing to prevent gambling in video games targeted to minors, with fifteen nations signing the memorandum of intent as well as the state of Washington).

⁵⁰ See Kühn et al., *supra* note 11, at 1 (following 154 fourteen-year-old children, some of whom are frequent gamers and others infrequent, to show that frequent gamers have a higher likelihood of

parents and experts claim that video games encourage violent tendencies and anti-social behavior amongst children.⁵¹ On the other hand, studies have shown that playing video games in moderation may have benefits for children, such as improved reaction time, enhanced multitasking, problem solving, and addressing shortcomings from certain conditions such as dyslexia.⁵² Both schools of thought find common ground in the notion that video games will cause problems in developing minds when played in excess.⁵³

The science behind “overplaying” references the excessive levels of dopamine produced when playing video games, which tend to create a predisposition to addictive behavior.⁵⁴ To prevent this, the individual or, in the instance

developing gambling-like behaviors and experience greater dopamine release); Victoria L. Dunckley, *This Is Your Child's Brain on Video Games*, PSYCHOL. TODAY (Sept. 25, 2016), <https://www.psychologytoday.com/us/blog/mental-wealth/201609/is-your-childs-brain-video-games> [<https://perma.cc/ENM8-39VE>] (indicating how video games cause stress and create over-stimulation in the frontal lobe of the brain leading to aggressive and troublesome behavior in developing children).

⁵¹ See Craig A. Anderson & Brad J. Bushman, *Effects of Violent Video Games on Aggressive Behavior, Aggressive Cognition, Aggressive Affect, Psychological Arousal, and Prosocial Behavior: A Meta-Analytic Review of the Scientific Literature*, 12 PSYCHOL. SCI. 353, 357 & n.2 (2001) (showing a significant correlation between exposure to violence in video games and aggression among participants); Ricardo A. Tejero Salguero & Rosa M. Bersabé Morán, *Measuring Problem Video Game Playing in Adolescents*, 97 ADDICTION 1601, 1605 (2002) (following 223 adolescents and showing that playing video games excessively creates addictive behavior and can injure their social development); see also Katica Maric, *The Negative Effects of Video Games on Our Children*, MOMMY CONNECTIONS (Mar. 27, 2017), <https://www.mommyconnections.ca/blog/2017/03/27/the-negative-effects-of-video-games-on-our-children/> [<https://perma.cc/96ET-WJGZ>] (referencing how parents should limit game time even with games that have an “appropriate for all ages” label as violence in any video game can increase aggression in children).

⁵² See Danielle Dai & Amanda Fry, *Effect of Video Games on Child Development*, DEVELOPMENTAL PSYCHOL. VAND. 1, 2–3 (2014), <https://my.vanderbilt.edu/developmentalpsychologyblog/2014/04/effect-of-video-games-on-child-development/> [<https://perma.cc/Y9V2-WH2Q>] (noting that playing video games in moderation assist gamers in multitasking functions, quick thinking, hand-eye coordination, and encouraging pro-social behaviors); Sandro Franceschini et al., *Action Video Games Make Dyslexic Children Read Better*, 23 CURRENT BIOLOGY 462, 462–64 (2013) (showing how reading speed and special attention improved significantly for children with dyslexia after playing non-educational action video games before taking reading and writing tests); Isabela Granic et al., *The Benefits of Playing Video Games*, 69 AM. PSYCHOLOGIST 66, 72–73 (2014) (noting that video games that require cooperation tend to lead to better offline behavior with peers, but qualifying that competitive video games may have the opposite affect). See generally *Brown v. Entm't Merch. Ass'n*, 564 U.S. 786, 789, 799 (2011) (striking down the validity of a California act that bans the sale of violent video games to minors, which includes games involving any killing or maiming of human beings, on the basis that a link between such violence and detriment to minors is too attenuated to survive strict scrutiny).

⁵³ See Dai & Fry, *supra* note 52, at 2–3 (claiming that video games can provide cognitive and social benefits, but that too much play could have adverse effects); Kim, *supra* note 2, at 410 (noting how continuous exposure to video games can lead to addictive behavior typical in drug addicts); Kühn et al., *supra* note 11, at 4–5 (noting how children who play more than 12.1 hours of video games per week develop similar dopaminergic responses to those associated with pathological gambling and addictive drug use).

⁵⁴ See Kim, *supra* note 2, at 410 (noting how excessive video game playing can diminish dopamine receptors, which leads to greater desire to play more and to pursue greater stimuli); Kühn et al.,

of a minor, their parents, are responsible for moderating play time.⁵⁵ Although parents may be able to control how much their children play, manipulative business tactics can exacerbate the subconscious desire to play more and spend money to further their progress.⁵⁶ For example, many game developers utilize tracking software that follows player actions in order to offer goods at personalized prices at times when the player would be most susceptible to making a purchase.⁵⁷

Loot boxes in particular are troubling because the act of opening a loot box invokes the same mental stimuli one experiences by playing a traditional

supra note 11, at 4–5 (describing how dopamine releases in children who play more than 12.1 hours of video games a week resemble the dopaminergic responses that pathological gamblers and drug addicts experience).

⁵⁵ See Deborah Godfrey, *Setting Limits on Video Games*, POSITIVE PARENTING (Jan. 31, 2020), <https://positiveparenting.com/setting-limits-on-video-games/> [<https://perma.cc/LKX7-88GK>] (setting ground rules that parents could follow to better limit screen time for children); Dino Grandoni, *Scientist Discovers the Ideal Amount of Time Kids Should Spend Playing Video Games*, HUFFINGTON POST (Aug. 8, 2014), https://www.huffingtonpost.com/2014/08/05/amount-time-video-games-kids_n_5651027.html [<https://perma.cc/WZ26-JY2A>] (suggesting that parents limit children's play time to one to three hours per day); Letter from Patricia Vance to Margaret Wood Hassan, *supra* note 14, at 3 (stating that the president of the ESRB believes that their duty is to educate parents on how to moderate their children's video game exposure, implying that the duty of moderation is ultimately in the hands of parents).

⁵⁶ See Kühn et al., *supra* note 11, at 4–5 (noting how adolescents that played more than 12.1 hours of video games per week had diminished dopamine receptors, which has been linked to future “loss chasing” behavior, behavior indicative of pathological gamblers); Alexandra, *supra* note 15 (referencing Activision Blizzard's patent designed to manipulate players into purchasing more loot boxes or keep playing to earn a specific weapon skin); see also The Game Theorists, *Game Theory: WARNING! Loot Boxes Are Watching You RIGHT NOW!*, YOUTUBE (Jan. 14, 2018), <https://www.youtube.com/watch?v=IXgzc41W3s> [<https://perma.cc/84GJ-N5LH>] (noting how video game designers use the psychological principles of the Skinner Box, loss aversion, and the sunk cost fallacy in implementing loot boxes to manipulate users to continuously purchase loot boxes).

⁵⁷ See Jim Sterling, *Turning Players into Payers (The Jimquisition)*, YOUTUBE (Oct. 23, 2017), <https://www.youtube.com/watch?v=TQsc14gDPbk> [<https://perma.cc/4RUZ-JT45>] (articulating how several video game developers utilize services, like Scientific Revenue, to use “dynamic pricing” and track user behavior to calculate when, and at what discounted rates, to offer deals on microtransactions in order to maximize revenue); see also The Game Theorists, *supra* note 56 (noting how loss aversion and sunk costs are prevalent in both gambling and loot boxes, but distinguishing how casinos legally cannot adjust a player's win percentage, but that some video games, like Fire Emblem Heroes, can alter percentages after a string of losses to incentivize more spending); Jason Venter, *Understanding Fire Emblem Heroes: A Beginner's Guide*, POLYGON (Feb. 8, 2017), <https://www.polygon.com/fire-emblem-heroes-guide/2017/2/8/14541874/rewards-base-maps-difficulty-battle-dying-summoning-ritual-teams-merge-arena-heroes-tower-quests> [<https://perma.cc/AF85-CNL2>] (noting that the odds of getting a “five star character” are increased for individual players after they draw such a character from their random number generated loot box system five times in a row). See generally Jack Fenimore, *Scientific Revenue: 5 Fast Facts You Need to Know*, HEAVY (Oct. 23, 2017), <https://heavy.com/games/2017/10/scientific-revenue-mobile-gaming-jim-sterling/> [<https://perma.cc/4YM6-QMZP>] (describing a company that previously offered tactics to track users to maximize revenue through strategically timed price discrimination among users).

gambling game, such as a slot machine.⁵⁸ The underlying psychological principles are identical in several respects, namely: Skinner Box reward models employing variable ratio reinforcement and diminished loss aversion perpetuating the sunk cost fallacy.⁵⁹ The Skinner Box is a form of operant conditioning, wherein reinforceable behavior is encouraged through a series of rewards when a participant conducts a specific action, for example, pressing a button to get a treat.⁶⁰ Skinner Box tests have shown that participants have a high rate of responding to the reward, but with a rate of extinction over time, meaning that the participant will not continue pressing the button or will begin to press it at a significantly lower rate.⁶¹ Rates of extinction are at their lowest when rewards are given *sporadically* as opposed to *consistently*, a process known as variable interval reinforcement schedule.⁶² This system of giving rewards is in line with the low likelihood of getting extremely rare items in loot boxes, thus incentivizing the player to incessantly play the same game to obtain the desired loot.⁶³ Similar to slot machines, loot boxes give the player a reward in small increments at sporadic times.⁶⁴ If the system gave rewards in sudden large sums, or if the losses were more infrequent, the addictive nature of the game would be mitigated.⁶⁵

The sunk-cost fallacy is a psychological and economic theory to explain why people who have dedicated time, funds, or energy into something continue to expend even more time, funds, or energy in pursuit of that thing, even

⁵⁸ See Drummond & Sauer, *supra* note 8, at 530 (referencing how variable ratio reinforcement is consistent in both gambling and loot box mechanisms and providing a chart denoting six features shared by both gambling and loot box acquisition in video games).

⁵⁹ See The Game Theorists, *supra* note 56 (citing how video game developers utilize psychological principles of the Skinner Box, loss aversion, and the sunk cost fallacy to manipulate users to continuously purchase loot boxes).

⁶⁰ See Saul McLeod, *Skinner—Operant Conditioning*, SIMPLE PSYCHOL. (Jan. 21, 2018) (describing the mechanics of operant conditioning and Skinner Box tests).

⁶¹ See *id.* (noting that a constant reward system has a medium extinction rate and, when rewards are offered at variable rates, that extinction rates are slower, with slower rates indicating a longer cycle of use).

⁶² *Id.*

⁶³ See Drummond & Sauer, *supra* note 8, at 530 (indicating that variable rate reinforcement is a similarity in psychological responses to both loot boxes and traditional forms of gambling); see also The Game Theorists, *supra* note 56 (connecting the Skinner Box's variable ratio reinforcement to the allegedly addictive nature of random number generator-based loot boxes).

⁶⁴ See Andrew Thompson, *Engineers of Addiction: Slot Machines Perfected Addictive Gaming. Now, Tech Wants Their Tricks*, THE VERGE (May 6, 2015), <https://www.theverge.com/2015/5/6/8544303/casino-slot-machine-gambling-addiction-psychology-mobile-games> [<https://perma.cc/7DCQ-FG3D>] (describing how small and sporadic rewards in slot machines utilize the psychology of the Skinner Box to keep users gambling for longer).

⁶⁵ See *id.* (noting how if the rewards provided by slot machine were too large, it would likely result in the player collecting their winnings and leaving).

when the probability of success is exceptionally low.⁶⁶ This is due in part to diminished loss aversion in gamblers and addicts.⁶⁷ The lower the loss aversion, the more likely that the participant will keep playing in order to recoup losses, even when faced with impossible or extremely difficult odds.⁶⁸ Loss aversion becomes applicable to loot boxes when developers offer rewards at extremely low likelihoods or for a limited period of time, such as seasonal-based rewards.⁶⁹ This incentivizes players to continue playing or to take the easier route of purchasing packs of loot boxes in the hopes of acquiring that specific look.⁷⁰ This incessant desire to hoard unlockable items is exacerbated by some games that are superficially based on skill—advertised as “free-to-play,” but allow the “pay-to-win” model to progress through the game faster or secure advantages over other players by way of purchasing microtransactions.⁷¹ In these games, there is a significant power disparity between players who make purchases within the game and players who play the game without spending money.⁷² By capitalizing on these behavioral responses, video game

⁶⁶ Hal R. Arkes & Catherine Blumer, *The Psychology of Sunk Cost*, 35 *ORG. BEHAV. & HUM. DECISION PROCESSES* 124, 124 (1985).

⁶⁷ See Hideaki Takeuchi et al., *Heterogeneity of Loss Aversion in Pathological Gambling*, 32 *J. GAMBLING STUD.*, 1143, 1144 (2015) (noting how pathological gamblers have a lowered loss aversion, causing them to continue gambling in order to regain profits, usually resulting in worsening scenarios).

⁶⁸ See *id.* (noting how chasing profits in pathological gamblers leads to worsening scenarios due to lowered loss aversion).

⁶⁹ See *id.* (referencing how a greater likelihood of gambling addiction is tied to diminished loss aversion); Stefanie Fogel, ‘Overwatch’s’ Winter Wonderland 2018 Seasonal Event Starts Dec. 11, *VARIETY* (Dec. 4, 2018), <https://variety.com/2018/gaming/news/overwatch-winter-wonderland-2018-date-1203079427/> [<https://perma.cc/KMD9-AQYK>] (referencing Activision Blizzard’s seasonal skins in Overwatch, which are items only available for less than one month); see also The Game Theorists, *Game Theory: How Loot Boxes HACK YOUR BRAIN!*, YOUTUBE (Jan. 10, 2018), <https://www.youtube.com/watch?v=Xu6pXCxiRxU&t=422s> [<https://perma.cc/7P2V-78SV>] (tying the concept of loss aversion to seasonal and other temporary loot box rewards in video games).

⁷⁰ See *supra* note 69 and accompanying text.

⁷¹ See Grosso, *supra* note 26 (illustrating a high correlation between win percentage and in-game purchases, supported by findings that the highest performing players are those who make the most purchases). A microtransaction is any purchase made related to a video game after purchasing the game itself. Eddie Makuch, *Microtransactions, Explained: Here’s What You Need to Know*, GAMESPOT (Nov. 20, 2018), <https://www.gamespot.com/articles/microtransactions-explained-heres-what-you-need-to/1100-6456995/> [<https://perma.cc/F23S-2HDF>]. Although commonplace in “pay-to-win” video games, microtransactions can be included in any video game and can range from purchasing in-game currency to perform certain actions or even purchasing characters or levels for a game. See *id.* (noting that microtransactions are typical in nearly all modern games and listing various examples of microtransactions).

⁷² See Grosso, *supra* note 26 (noting that free-to-play games typically invoke a “player vs. player” model, which requires a player to surpass other players to succeed, with the best players typically being the ones who spend the most); see also Ben Gilbert, *How the Abysmal ‘Game of War’ Featuring Kate Upton Makes So Much Money*, *BUS. INSIDER* (May 22, 2015), <https://www.businessinsider.com/how-game-of-war-makes-money-2015-5> [<https://perma.cc/SHRX-4HUH>] (noting that the difference between players that pay to play Game of War and those that utilize its free features have a sig-

developers are benefiting from the addictive principles behind gambling games without being restricted by the same laws as traditional gambling institutions.⁷³

C. Super Regulatory Bros.: The Organizations Overseeing Video Games

The Entertainment Software Association (ESA) is the trade association trusted with the oversight of video games, computers, internet, and related handheld devices.⁷⁴ The ESA created the Entertainment Software Ratings Board (ESRB) in 1994 to control the ratings of video games, offer guidance to users and parents about their use, and enforce industry guidelines on developers.⁷⁵

As of 2019, the ESRB has declared that it does not consider loot boxes as a form of gambling because some form of digital reward is always received by the player, as opposed to slot machines, which involve the risk of winning nothing for the player's expended wager.⁷⁶ The ESRB has instead resolved to combat the loot box crisis by assigning a label to video games that have "in-game purchases."⁷⁷ This regulation will only apply to physical video games, as opposed to those that users can directly download online, a growing demographic in video game sales.⁷⁸ Consumers will have difficulty determining what elements are present in the game, as the ESRB will not discriminate between

nificant power imbalance, making paying for in-app purchases a prerequisite to becoming a top player).

⁷³ See Letter from Sen. Margaret Wood Hassan, U.S. Senate, to Patricia Vance, President, ESRB, 1–2 (Feb. 14, 2018), <https://www.hassan.senate.gov/imo/media/doc/180214.ESRB.Letter.Final.pdf> [<https://perma.cc/5GGH-EUNL>] (requesting that the ESRB change their position and consider how loot boxes can be considered gambling); Letter from Patricia Vance to Margaret Wood Hassan, *supra* note 14, at 3 (stating that the ESRB does not see loot boxes as gambling and instead sees their random reward system as analogous to baseball cards).

⁷⁴ *We Are ESA*, ENT. SOFTWARE ASS'N, <http://www.theesa.com/about-esa/> [<https://perma.cc/8CMC-HDW3>].

⁷⁵ *About ESRB*, ENT. SOFTWARE RATING BOARD, <http://www.esrb.org/about/> [<https://perma.cc/V837-88G7>].

⁷⁶ See Jason Schreier, *ESRB Says It Doesn't See 'Loot Boxes' as Gambling*, KOTAKU (Oct. 11, 2017), <https://kotaku.com/esrb-says-it-doesnt-see-loot-boxes-as-gambling-1819363091> [<https://perma.cc/DZZ4-LXVD>] (quoting an email between an ESRB spokesperson and the publication, Kotaku). The ESRB differentiates loot boxes from traditional gambling mechanisms, like slot machines, which could result in a player receiving nothing in exchange for their wager. *Id.*

⁷⁷ Press Release, Entm't Software Rating Bd., ESRB to Begin Assigning "In-Game Purchases" Label to Physical Video Games (Feb. 27, 2018), <https://esrbstorage.blob.core.windows.net/esrb-content/about/news/downloads/igp-press-release-final-22718.pdf> [<https://perma.cc/JCQ5-8AAT>].

⁷⁸ See ENTM'T SOFTWARE ASS'N, ESSENTIAL FACTS ABOUT THE COMPUTER AND VIDEO GAME INDUSTRY 10 (2018), http://www.theesa.com/wp-content/uploads/2018/05/EF2018_FINAL.pdf [<https://perma.cc/FRG5-729L>] (showing a growing market share of digital sales for the video game industry from 2010 to 2017); Press Release, Entm't Software Rating Bd., *supra* note 77 (noting how the "In-Game Purchases" label will only be applied to video games that come in boxes or other physical containers).

microtransactions, like loot boxes, and downloadable content, like additional maps or other more traditional add-ons for a game.⁷⁹

Several United States senators and state congressmen have either pursued legislation that would regulate the dissemination of loot boxes or have requested that the ESRB change their position on whether loot boxes constitute gambling.⁸⁰ Their stance hinges on the notion of consumer protection, focusing on how children are often the end users of video games.⁸¹ Some proposed regulations include limiting the sale of video games with loot boxes to those over the age of twenty-one and requiring game developers to disclose the odds, or “drop rates,” of items received from loot boxes.⁸² Thus far, legislation has failed in the

⁷⁹ See Press Release, Entm’t Software Rating Bd., *supra* note 77 (noting that all microtransactions will have the same label, but because nearly all modern games have some form of downloadable content or loot box mechanism, this will not assist parents in determining which games have gambling mechanics by simply noting the label).

⁸⁰ See S. 6266, 65th Leg., Reg. Sess. (Wash. 2018) (requesting the Washington state gambling commission to study the relationship between loot boxes and gambling targeted to minors); Steven Blickensderfer & Nicholas A. Brown, *U.S. Regulation of Loot Boxes Heats Up with Announcement of New Regulation*, NAT’L L. REV. (May 9, 2019), <https://www.natlawreview.com/article/us-regulation-loot-boxes-heats-announcement-new-legislation> [<https://perma.cc/4TNX-VZPA>] (describing a loot box regulation legislation proposed by Senator Josh Hawley of Missouri titled “The Protecting Children from Abusive Games Act”); Michael Brestovansky, *‘Loot Box’ Bills Fail to Advance*, HAW. TRIB.-HERALD (Mar. 24, 2018), <https://www.hawaiitribune-herald.com/2018/03/24/hawaii-news/loot-box-bills-fail-to-advance/> [<https://perma.cc/7X97-8SRA>] (referencing the failure of Hawaii House bills, H.R. 2686 and H.R. 2727, and Senate bills, S. 3024 and S. 3025, which intended to limit the sale of video games utilizing loot boxes to people under the age of twenty-one, and disclosing the probabilities of rewards within loot boxes); Baker McKenzie, *USA: New Loot Box Bill Introduced . . . Again*, LEXOLOGY (Apr. 30, 2018), <https://www.lexology.com/library/detail.aspx?g=04c83f73-6a42-43ec-baf3-dd30b7094ab0> [<https://perma.cc/E7RF-3LMR>] (referencing new legislation proposed by California, Hawaii, Minnesota, New Hampshire, and Washington regarding loot boxes and microtransactions); Letter from Margaret Wood Hassan to Patricia Vance, *supra* note 73 (stating that the ESRB should reevaluate their stance on loot boxes due to the psychological and mechanical similarities to casino gambling).

⁸¹ See Wash. S. 6266 (requesting that the Washington state gambling commission investigate the possibility that loot boxes constitute gambling targeted to minors); Blickensderfer & Brown, *supra* note 80 (describing Senator Hawley’s proposed bill as one that regulates games utilizing loot boxes or pay-to-win business models and target users under the age of eighteen); Letter from Margaret Wood Hassan to Patricia Vance, *supra* note 73 (stating that the ESRB has a duty to inform parents about video games and ensure that young players are shielded from dubious market practices); see also *State v. One “Jack and Jill” Pinball Mach.*, 224 S.W.2d 854, 860 (Mo. Ct. App. 1949) (stating that consideration, chance, and reward are the three elements of gambling).

⁸² See H.R. 2686, 29th Leg., Reg. Sess. (Haw. 2018) (prohibiting the sale of video games with randomized reward or virtual items that can be redeemed for randomized rewards to anyone under the age of twenty-one); H.R. 2727, 29th Leg., Reg. Sess. (Haw. 2018) (requiring the disclosure of probabilities and odds of drop rates for loot boxes in video games). China has a similar regulation to the requirements under H.R. 2727, but it was successful in its implementation. See Haw. H.R. 2727; Chaim Gartenberg, *China’s New Law Forces Dota, League of Legends, and Other Games to Reveal Odds of Scoring Good Loot*, THE VERGE (May 2, 2017), <https://www.theverge.com/2017/5/2/15517962/china-new-law-dota-league-of-legends-odds-loot-box-random> [<https://perma.cc/BC4R-UEDV>] (describing China’s Ministry of Culture’s regulation requiring the disclosure of odds, or “drop rates,” of items received from loot boxes).

United States, but some states are partnering up with agencies both domestically and abroad to look into the connection between gambling and loot boxes.⁸³

D. Rolling the Dice on Legislation: Gambling in the United States and Abroad

The administration of gambling laws varies across the United States because federal gambling laws only serve as guidelines that defer to state legislation for enforcement.⁸⁴ Although some legal definitions have uniformity across state lines, fundamental differences in some other definitions lead to conflicting results in different jurisdictions.⁸⁵ Subsection One of this Section looks at the three elements of gambling law.⁸⁶ Subsection Two of this Section looks at federal statutes as guidelines and where they fall short in regard to loot boxes.⁸⁷ Subsection Three of this Section looks at two European nations, the Netherlands and Belgium, and how they have pursued the regulation of loot boxes within their borders.⁸⁸

⁸³ See Wash. S. 6266 (requesting that Washington's state gambling commission investigate the connection between loot boxes and video games); Brestovansky, *supra* note 80 (noting how Hawaii's attempts to pass a bill regulating loot boxes failed to become law); Colin Campbell, *FRC Pledges Loot Crate Investigation (Update)*, POLYGON (Nov. 27, 2018), <https://www.polygon.com/2018/11/27/18115365/ftc-loot-crate-investigation-senator-hassan> [<https://perma.cc/K7BU-ZPDU>] (referencing the Federal Trade Commission's pledge to investigate the connection between loot boxes and gambling due to calls from New Hampshire Senator Maggie Hassan); Press Release, U.K. Gambling Comm'n, *supra* note 13, at 2 (showing that the state of Washington has signed onto an international committee investigating the link between loot boxes and problem gambling); see, e.g., McKenzie, *supra* note 80 (listing proposals in California, Hawaii, Minnesota, and several other states to investigate how loot boxes and similar microtransactions affect vulnerable audiences or otherwise limit their sale or use by those audiences).

⁸⁴ See 18 U.S.C. § 1084 (stating that a violation of the Wire Act will not occur where such gambling is permitted by state or foreign law); *United States v. Yaquinta*, 204 F. Supp. 276, 277 (N.D. W. Va. 1962) (noting that the Wire Act was drafted with the intention of supporting state gambling laws, not to replace those laws with federal guidelines); Anthony Cabot, *The Absence of a Comprehensive Federal Policy Toward Internet and Sports Wagering and a Proposal for Change*, 17 VILL. SPORTS & ENT. L.J. 271, 275 (referencing how most federal gambling laws are only violated when they violate state or local law); Haskell, *supra* note 27, at 137 (noting how the Unlawful Internet Gambling Enforcement Act (UIGEA) only criminalizes betting in states that have not legalized online gambling).

⁸⁵ Compare *Mason*, 851 F.3d at 319–20 (stating that, because virtual gold purchased for a video game is not redeemable for money, it does not hold a monetary value), and *Phillips v. Double Down Interactive LLC*, 173 F. Supp. 3d 731, 740–41 (N.D. Ill. 2016) (stating that because the video game developer never risks their own money for their online casino, the player who purchased and lost these virtual tokens did not experience a true gambling loss), with *Kater v. Churchill Downs Inc.*, 886 F.3d 784, 787–88 (9th Cir. 2018) (stating that virtual chips constitute consideration under the broad definition of “thing of value” under Washington state law).

⁸⁶ See *infra* notes 89–105 and accompanying text.

⁸⁷ See *infra* notes 106–118 and accompanying text.

⁸⁸ See *infra* notes 119–149 and accompanying text.

1. Tic-Tac-Toe: The Three Key Elements of Gambling Law

Although state law determines whether a specific game or machine constitutes a form of gambling, federal law is helpful in establishing a basis for what constitutes gambling in general.⁸⁹ To be considered a form of gambling under federal law, there are three requisite elements: (1) price or consideration; (2) the predominant element of chance; and (3) a reward or prize.⁹⁰

Consideration simply requires that someone pay a price to participate in a game.⁹¹ Consideration can be an issue when the price to play a game is a token that can be purchased with legal tender, but cannot be exchanged back into legal tender.⁹² Although some states allow the use of any object as a wager, regardless of its value, other states require the ability to exchange the wager back into a monetary equivalent.⁹³

To identify the element of chance, courts consider a balancing test to determine whether success in a game relies more on chance or skill.⁹⁴ This is complicated by the lack of universal conformity on whether a particular game

⁸⁹ See *supra* note 84 and accompanying text.

⁹⁰ See *United States v. Various Gambling Devices*, 368 F. Supp. 661, 663 (N.D. Miss. 1973) (noting how the acquisition of money or property from playing a game of chance constitutes a gambling device); *State v. Pinball Machs.*, 404 P.2d 923, 925 (Alaska 1965) (noting the three elements of gambling as price, chance, and prize); *One "Jack and Jill" Pinball Mach.*, 224 S.W.2d at 860 (noting that consideration, chance, and reward are the three elements of gambling, but qualifying that the reward must be in the form of money or property and that amusement is not a form of money or property).

⁹¹ See *Pinball Machs.*, 404 P.2d at 925 (noting that consideration, or price, is fulfilled once someone pays to play a game); Ronald J. Rychlak, *Video Gambling Devices*, 37 UCLA L. REV. 555, 556 (1990) (defining consideration as what is at the risk of loss if the player is unsuccessful in winning the game).

⁹² See *Mason*, 851 F.3d at 320 (holding that virtual gold and chips that cannot be resold on a secondary market are not considered money); *Phillips*, 173 F. Supp. 3d at 740–41 (stating that money cannot be won or lost in gambling devices using virtual currency when the currency cannot be cashed out for real currency); *Soto v. Sky Union, LLC*, 159 F.Supp. 3d 871, 878–79 (N.D. Ill. 2016) (noting how California law allows the legal definition of a wager to include virtual coins since a wager can be made by money or “any other means”); see also CAL. PENAL CODE § 330b (West 2020) (stating that a slot machine or device is one that is operated by money or any other means).

⁹³ Compare *Mason*, 851 F.3d at 319–20 (stating that, because virtual gold purchased for a video game is not redeemable for money, it does not hold a monetary value), and *Phillips*, 173 F. Supp. 3d at 740–41 (stating that because the video game developer never risks his or her own money for its online casino, the player who purchased and lost these virtual tokens did not experience a true gambling loss), with *Kater*, 886 F.3d at 787–88 (stating that virtual chips constitute consideration under the broad definition of “thing of value” under Washington state law), and *Fife v. Sci. Games Corp.*, No. 2:18-cv-00565-RBL, 2018 WL 6620485, at *4 (W.D. Wash. Dec. 18, 2018) (noting that even free coins constitute a “thing of value” for Washington’s gambling law when given alongside the opportunity to pay for virtual coins).

⁹⁴ See *People ex rel. Ellison v. Lavin*, 71 N.E. 753, 755 (N.Y. 1904) (stating how games will often include a mixed form of luck and skill, but that the defining factor of a game is the one that dominates the game’s mechanics, typically controlling how and when a player wins).

relies more on skill or more on chance.⁹⁵ For example, some states consider poker as a game of chance, while other states consider it a game of skill.⁹⁶ In either case, the determining factor is which one of the elements the court finds to be dominant in the game mechanics.⁹⁷

The final factor, prize or reward, requires that the participant receive some monetary gain or other property when they win the game.⁹⁸ Prizes often have some tangible value, but intangible gains, like mere amusement, do not qualify as a prize or reward.⁹⁹

This criterion is not always definitive because some exceptions, like the sale of baseball cards, fit the three criteria but are still not considered gambling.¹⁰⁰ The distinction between typical gambling mechanisms and baseball card trading often hinges on the interplay of chance and prize.¹⁰¹ It is argued that when a person purchases a pack of baseball cards, chance does not play the same part of the exchange because the cards in the pack are *predetermined* before the buyer makes a purchase.¹⁰² Thus, the cards being purchased are not randomized the same way that, for example, a slot machine is when one pulls

⁹⁵ See Rychlak, *supra* note 91, at 556 (differentiating between the Supreme Courts of Montana and Ohio, where the former considers poker as a game of skill and the latter considers it a game of chance).

⁹⁶ See *id.*

⁹⁷ See *Yaquina*, 204 F. Supp. at 277 (noting how federal gambling law was largely intended to support states in enforcing their own gambling laws, as opposed to supplanting them); *Pinball Machs.*, 404 P.2d at 926 (noting that although skill would increase the likelihood of success at a game of pinball, it can still be considered a game of chance); *Lavin*, 71 N.E. at 755 (noting that the dominant element determines whether a game is comprised of skill or luck).

⁹⁸ See *Various Gambling Devices*, 368 F. Supp. at 663 (noting that the reward of either money or property can result in a game being considered as a form of gambling); *Pinball Machs.*, 404 P.2d at 927 (noting that the prize does not have to have monetary market value, but that something must be gained that would not have otherwise been provided for if not for the game of chance; in this case, more free games at a pinball machine).

⁹⁹ See *Pinball Machs.*, 404 P.2d at 926 (noting how winning free games from a pinball machine can fulfill the element of prize); *One "Jack and Jill" Pinball Mach.*, 224 S.W.2d at 860 (noting that amusement is not a thing of value, so it cannot be considered a prize or reward).

¹⁰⁰ See *Price v. Pinnacle Brands, Inc.*, 138 F.3d 602, 604–05 (5th Cir. 1998) (noting that baseball cards containing “chase cards” include the elements of consideration, chance, and prize). *But see* *Schwartz v. Upper Deck Co.*, 956 F. Supp. 1552, 1554, 1558 (S.D. Cal. 1997), *overruled by* *Schwartz v. Upper Deck Co.*, 104 F. Supp. 2d 1228, 1230 (S.D. Cal. 2000) (noting how elements of chance and prize are present in the sale of baseball cards, but claiming that the consumer did not pay for the chance to get a specific rare card, but rather, they paid for whatever cards were actually within that pack).

¹⁰¹ See *Schwartz*, 104 F. Supp. 2d at 1554, 1558 (stating that consideration was not fulfilled because the consideration was for the cards received, not for the random chance of procuring a rare card).

¹⁰² See *Schwartz*, 104 F. Supp. 2d at 1230 (noting that, although the plaintiffs may have some claim for gambling, this is more a form of gambling per se as opposed to actual gambling); *Dumas v. Major League Baseball Props., Inc.*, 104 F. Supp. 2d 1220, 1223 (S.D. Cal. 2000) (noting that by buying a pack of baseball cards, the player knew that there was a likelihood of not receiving their desired card, but would have to accept whatever cards they actually received).

the lever, but instead are predetermined, which makes it fall in the category of “gambling per se,” similar to criterion for the sale of lottery tickets.¹⁰³ Furthermore, because people can trade these cards at certain stores for their fair market value, they are easily distinguishable from slot machines and other typical gambling devices where the element of chance can result in a player receiving nothing in return for their wager.¹⁰⁴ Although some have used this same argument to defend the use of loot boxes, loot boxes substantially differ in their effects and mechanisms because they are distributed exclusively through a digital medium.¹⁰⁵

2. League of Legislation: Federal Statutes as Guidelines

There are three predominant federal legislative acts relevant to online forms of gambling: the Illegal Gambling Business Act (IGBA), the Unlawful Internet Gambling Enforcement Act (UIGEA), and the Wire Act.¹⁰⁶ Although these laws offer some guidance on a federal level, they are largely used as guidelines and often require a violation of state law to initiate a violation.¹⁰⁷

The IGBA has the broadest application because it targets owners of gambling institutions generally, as opposed to limiting the scope to use over the Internet or by means of telecommunication.¹⁰⁸ The IGBA focuses on the owners of gambling businesses, making it illegal to “conduct, finance, manage,

¹⁰³ See Schwartz, 104 F. Supp. 2d at 1230 (claiming that the sale of baseball cards is gambling per se); Sara A. Elliott & Daniel S. Mason, *Emerging Legal Issues in the Sports Industry: Are Trading Cards a Form of Gambling?*, 13 J. LEGAL ASPECTS OF SPORT 101, 114–15 (2003) (noting how baseball cards are analogous to lottery tickets because it as easy to sell them at hobby shops as it is to redeem a lottery ticket).

¹⁰⁴ See Elliott & Mason, *supra* note 103, at 114–15 (referencing the ability to resell baseball cards at hobby shops to show that a prize is guaranteed whenever a pack of baseball cards is received, trivializing the probability of loss associated with the element of chance).

¹⁰⁵ See DREYER ET AL., *supra* note 7 (describing loot boxes as something that is purchased within a video game and equating it to other microtransactions); Letter from Patricia Vance to Margaret Wood Hassan, *supra* note 14, at 3 (stating that the ESRB sees loot box mechanisms as analogous to baseball cards).

¹⁰⁶ See STEPHEN CRYSTAL & JEREMY SMITH, *ESPORTS BETTING: THE PAST AND FUTURE* 1, 24 (Kelly Segovia ed., 2017) (noting the Illegal Gambling Business Act (IGBA), UIGEA, and Wire Act as the three principle statutes relevant to skin gambling); Martinelli, *supra* note 6, at 561–63 (referencing the three aforementioned acts as relevant primary sources in video game related gambling); *see also* 18 U.S.C. § 1084 (stating that violation requires the use of betting through a wire communication facility); 18 U.S.C. § 1955 (stating that anyone who owns or manages an illegal gambling business will be in violation of this statute); Unlawful Internet Gambling Enforcement Act, 31 U.S.C. § 5363 (2018) (limiting the scope of the act to those that use the internet to provide gambling services).

¹⁰⁷ See Yaquinta, 204 F. Supp. at 277 (noting that the Wire Act was drafted with the intention of supporting State gambling laws, not to replace those laws with federal guidelines); Cabot, *supra* note 84, at 275 (referencing how federal laws are drafted to aid, but not preempt, state gambling laws).

¹⁰⁸ Compare 18 U.S.C. § 1955 (punishing anyone that runs an illegal gambling business in violation of state law), with *id.* § 1084 (requiring the use of a wire communication facility for a violation), and 31 U.S.C. § 5363 (requiring the use of the internet for a violation).

supervise, direct, or own any illegal gambling business.”¹⁰⁹ The Act defines an illegal gambling business as one that violates state law, includes five or more participants in the business, and has either been in continuous operation for thirty days or procures more than two thousand dollars of revenue within a day.¹¹⁰ By including the state law requirement, this federal act intended to provide guidelines and supplement punishments, while leaving the final determination to the states.¹¹¹

Much like the IGBA, the UIGEA also exclusively focuses on its punishment on those who manage gambling institutions, as opposed to punishing users of gambling websites.¹¹² The UIGEA appears to be more relevant to loot boxes than the IGBA because it focuses specifically on Internet-based gambling.¹¹³ Its effect is limited to those that accept wagers and bets placed over the internet, but the Act qualifies that the bet must come from a source of credit, electronic fund transfer, check, or other proceed from a financial institution.¹¹⁴ This creates an issue for websites that utilize non-traditional payment mechanisms, such as cryptocurrencies like Bitcoin, or utilize in-app or in-game coins and tokens to make a wager.¹¹⁵

Not unlike the UIGEA, the Wire Act applies to businesses using wire communication, like the Internet, to encourage the making of bets or wagers.¹¹⁶ The caveat accompanying the Wire Act is that a violation requires betting on a sporting event or contest, under which video games and loot boxes

¹⁰⁹ See 18 U.S.C. § 1955 (noting that a fine or imprisonment under this statute will only be levied against the owner or supervisor of an illegal gambling business).

¹¹⁰ *Id.*

¹¹¹ See *id.* (stating that a federal violation can only occur when a state law is violated); Kaitlyn Dunphy, Note, *Following Suit with the Second Circuit: Defining Gambling in the Illegal Gambling Business Act*, 79 BROOK. L. REV. 1295, 1320 (2014) (noting that the legislative intent behind the IGBA was to aid states in enforcing anti-gambling laws as opposed to supplanting them).

¹¹² See 18 U.S.C. § 1955 (noting that a violation will be levied against someone who exercises a supervisory, managerial, or other form of executive or financial control of an illegal gambling business); 31 U.S.C. § 5363 (stating that a violation of this statute requires that a person accept a wager).

¹¹³ See 31 U.S.C. § 5363 (stating that the focus of this statute is on internet-based gambling businesses); see also Haskell, *supra* note 27, at 136 (referencing how the UIGEA was passed to specifically target online poker gambling websites).

¹¹⁴ 31 U.S.C. § 5363.

¹¹⁵ See *id.* (stating that a violation only occurs when an illegal gambling business accepts a wager in the form of credit, funds transferred from a business, check, or other proceed that the Federal Reserve may be able to regulate); *Mason*, 851 F.3d at 320 (holding that virtual gold and chips that cannot be resold on a secondary market are not considered money for Maryland’s Loss Recovery Statute); Martinelli, *supra* note 6, at 562 (noting that the UIGEA of 2006 leaves a loophole for cryptocurrencies and purchases made with virtual goods).

¹¹⁶ See 18 U.S.C. § 1084 (stating that a violation will occur whenever wire communications are used in the context of a bet or wager on a sporting event or contest); Matthew R. Tsai, Note, *Fantasy (e)Sports: The Future Prospect of Fantasy Sports Betting Amongst Organized Multiplayer Video Game Competitions*, 6 U. NEV. L.V. GAMING L.J. 393, 404 (2016) (noting that the application of the Wire Act extends to uses pertaining to both the internet and phones).

are unlikely to fall.¹¹⁷ All other aspects of the Wire Act carve out exceptions for news agencies that transmit information, but the underlying purpose remains the same: without an incident related to sports gambling, courts will not find a violation.¹¹⁸

3. Your Legislation Is in Another Castle!: Successful Regulation in European Nations

Several nations have begun investigating loot boxes to determine whether their practices stray too closely to traditional gambling mechanics, implicating the need for regulation.¹¹⁹ The Netherlands and Belgium were among the first countries to demand video game developers modify their business models to conform with existing legislation.¹²⁰ This Subsection focuses on how these two nations have been successful in pursuing legislation against video game developers.¹²¹

a. Gambling Laws in the Netherlands

The Netherlands Gambling Authority (NGA), established on April 1, 2012, is the non-departmental government body responsible for the supervision, regulation, and interpretation of gambling games and relevant laws within the Netherlands.¹²² The NGA utilizes the Betting and Gaming Act, Netherlands's dominant gambling legislation, to regulate games of chance and gambling devices.¹²³ To determine whether this non-departmental body has regula-

¹¹⁷ See 18 U.S.C. § 1084 (dictating that a wager on a sporting event or contest is required to violate the act). See generally Kristin Hallmann & Thomas Giel, *eSports—Competitive Sports or Recreational Activity?*, 21 SPORTS MGMT. REV. 14, 15, 17, 19 (2018) (determining that eSports do not fit into the five typical criteria to consider it an actual sport, but indicating that further organizational structure may permit that to change over time).

¹¹⁸ 18 U.S.C. § 1084.

¹¹⁹ See Press Release, U.K. Gambling Comm'n, *supra* note 13, at 1–2 (including Austria, the Czech Republic, France, Gibraltar, Ireland, Isle of Man, Jersey, Latvia, Malta, the Netherlands, Norway, Poland, Portugal, Spain, the United Kingdom, and the state of Washington as signatories on this international declaration).

¹²⁰ See NAESSENS, *supra* note 3, at 17–18 (providing recommendations for the four games reviewed to conform with Belgian gambling law); Press, Release, Kansspelautoriteit, *supra* note 13, at 1 (demanding that some video game developers who have loot boxes in their video games, modify their loot box systems to conform with Dutch law, or face fines and penalties); see also Michael McWhertor, *Valve Brings Back Steam Trading for Dutch Players, Blocks Them from Opening CS:GO Loot Crates*, POLYGON (July 12, 2018), <https://www.polygon.com/2018/7/12/17565720/csgo-loot-boxes-netherlands-belgium-steam-trading-marketplace> [<https://perma.cc/8DUG-KZPP>] (referencing a patch in CS:GO that prevents players in the Netherlands and Belgium from opening loot boxes).

¹²¹ See *infra* notes 122–149.

¹²² KANSPELAUTORITEIT, <https://kansspelautoriteit.nl/english/> [<https://perma.cc/D7SS-J5P5>].

¹²³ KANSPELAUTORITEIT, *supra* note 14, at 4 (referencing the Betting and Gaming Act as “Wet op de Kansspelen: Wok”). See generally Wet op de Kansspelen: Wok 10 December 1964, Stb. 1964 (providing the regulations relating to betting and gambling in the country of the Netherlands). While

tory authority, the game in question must go through a multi-step test.¹²⁴ If the game fails any of the following criterion, then it is unlikely to be regulated by the Betting and Gaming Act.¹²⁵

First, the game must pose a potential risk to one of the public goals of the NGA, which include: informing consumers and consumer protection, preventing addictive practices, and stopping criminal conduct.¹²⁶ Games that are rarely played, not harmful to the public, or commercialized are not scrutinized.¹²⁷ Second, if any overlapping laws or regulations are also applicable, that law will take precedent over the Betting and Gaming Act, even when those games are considered traditional forms of gambling.¹²⁸ Third, the game must provide some form of prize.¹²⁹ The prize must have economic value, but if a prize is intangible, models of supply and demand can be used to determine what an informed buyer would have spent.¹³⁰

Finally, the NGA determines whether the game is one of skill or chance based on the degree of influence a player can exercise on the outcome.¹³¹ Games of chance are generally regarded as those where the player cannot exercise any influence in the elements of the game.¹³² Under these rules, games played against the house are always games of chance, especially when the estimated value of success for the participant is at a net negative.¹³³ Additionally, games of skill include those where players can influence the outcome by playing with a strategy, by engaging in information collecting, by altering a strategy during

the *Wet op de Kansspelen* is the official act that dictates how gambling should be regulated in the Netherlands, the document itself is in Dutch, so the English translation of the official "Guide on Assessing Games of Chance" distributed by the Netherlands Gambling Authority will be referenced in this Note to avoid mistranslations. *See generally* KANSPELAUTORITEIT, *supra* note 14 (referencing the *Wet op de Kansspelen*: Wok and illustrating the intricacies of gambling laws in the Netherlands).

¹²⁴ *See* KANSPELAUTORITEIT, *supra* note 14, at 6 (illustrating the vetting process through a simplified diagram).

¹²⁵ *See id.* at 5–6 (referencing the process of vetting whether games can be regulated under the Betting and Gaming Act, but noting that the document can be amended at any time and that the Netherlands's courts have the final say in interpretation).

¹²⁶ *Id.* at 7.

¹²⁷ *Id.*

¹²⁸ *Id.* at 8–9 (noting that slot machines are regulated by a different law and are thus not regulated by the Betting and Gaming Act).

¹²⁹ *See id.* at 10–11 (noting that the prize is the determining factor regardless of whether the game is purchased or is free-to-play).

¹³⁰ *Id.* at 5, 13 (noting how video game skins have intangible value, but can be considered as a prize).

¹³¹ *Id.* at 14–16 (referencing random events as ones where a player cannot exercise influence and games involving strategy as ones where a player can exercise influence).

¹³² *See id.* (referencing card games, bingo, dice games, roulette, and drawings using random number generators as games of chance).

¹³³ *Id.*

the game, and by selecting opponents.¹³⁴ For example, in a game of chess, players can make specific choices in response to their opponent's moves, changing their tactic from a defensive play style to an offensive play style according to the circumstance.¹³⁵ Games like roulette are considered games of chance because the player cannot influence the game in any way once the players have placed wagers and the dealer has begun turning the roulette wheel.¹³⁶ In instances where the player cannot influence the results, as where results are based on random events, the game will likely be a game of chance.¹³⁷

b. Gambling Laws in Belgium

Gambling law in Belgium is governed by the Gaming and Betting Act of 1999, which regulates and defines gambling games throughout Belgium.¹³⁸ Article Two, Section One of the Gaming and Betting Act states that any game involving a bet that leads to a loss or win for a player through a mechanism of chance will be considered a gambling game.¹³⁹ Gambling is not illegal in Belgium, but once a game has features of gambling, it must acquire a permit and cannot be played by children under the age of eighteen.¹⁴⁰ A gambling feature within a video game can still result in the game being classified as a form of gambling even though is not necessary to complete the rest of the game.¹⁴¹

The first element of Belgian gambling law is that a bet must be made within the game to justify jurisdiction of the Gaming and Betting Act.¹⁴² The bet does not need to be made with real money as long as the wager was made with something that could be purchased with real money.¹⁴³ In this sense, wagers made with virtual goods, like in-game currencies used to purchase loot

¹³⁴ *Id.* at 14–15. *But see* HR, 3 maart 1998, NJ 1999, 106628 E m.nt, ECLI:NL:PHR:1998:ZD0952 (ruling that poker, though it may contain elements of skill, is still considered a game of chance).

¹³⁵ *See* KANSSPELAUTORITEIT, *supra* note 14, at 15 (referencing the different decisions a player can make during a chess game that lead to the conclusion that it is a game of skill under the Netherlands's gambling laws).

¹³⁶ *See id.* at 14 (stating that a game of chance is denoted by conditions that cannot be influenced by the player).

¹³⁷ *Id.*

¹³⁸ NAESSENS, *supra* note 3, at 8. *See generally* Les jeux de hasard, les paris, les établissements de jeux de hasard et la protection des joueurs [Gaming and Betting Act] of May 7, 2017, MONITEUR BELGE [M.B.] [Official Gazette of Belgium], May 7, 2019 [hereinafter Belgian Gaming and Betting Act].

¹³⁹ Belgian Gaming and Betting Act, *supra* note 138.

¹⁴⁰ *See* NAESSENS, *supra* note 3, at 3, 8 (noting that only players of the age of eighteen and older can play games involving bets and that a permit must be obtained to operate a game of chance). Under Belgian law, casino games, as opposed to games that incorporate lotteries or simply utilize a betting mechanism, are limited to players over the age of twenty-one. *Id.* at 3.

¹⁴¹ *Id.* at 9.

¹⁴² *Id.*

¹⁴³ *See id.* at 9–10 (noting that as long as the virtual currency can be purchased with real money, then the virtual currency can constitute a wager).

boxes, still constitute wagers under Belgian gambling law even if one cannot exchange those virtual goods back into legal tender.¹⁴⁴

The second element requires a chance to win or lose something of higher or lower value than the wager itself.¹⁴⁵ When compared to its American counterpart, Belgian law is unique in that the player's subjective value can determine the value of the item, further guided by the value that the owner or developer ascribes to it.¹⁴⁶ Belgian law also does not require that chance be the dominant factor in a game.¹⁴⁷ Even if chance is a secondary factor of the game, the game still qualifies as a game of chance as long as it fulfills the remaining criteria.¹⁴⁸ By focusing on the gambling components, even when their use is not necessary to complete the game, Belgian regulators are able to pursue companies that create games that superficially appear to be games of skill, while making a vast majority of their profits from chance-based gambling mechanics.¹⁴⁹

II. GRAND THEFT LEGISLATION: AMERICAN GAMBLING LAWS COMPARED TO THEIR EUROPEAN COUNTERPARTS

In the interest of consumer protection, American congressmen have begun looking to foreign models to determine what restrictions Congress can place on loot boxes domestically.¹⁵⁰ They would likely face some difficulties in adopting these laws verbatim because specific terms of art, such as what constitutes consideration, may prevent easy adoption of these foreign solutions.¹⁵¹ Further

¹⁴⁴ See *id.* at 9, 14 (stating that a wager need not be made with real currency and using FIFA 18 as an example where loot boxes must be purchased with in-game currency, but clarifying that this game still falls under the jurisdiction of the Gaming and Betting Act).

¹⁴⁵ *Id.* at 10.

¹⁴⁶ Compare NAESSENS, *supra* note 3, at 10–11 (noting that loss will be calculated by the value of the wager placed subtracted by the value of the item received), with *Mason*, 851 F.3d at 320 (noting that a wager must have resale value on a secondary market to be considered a form of currency to qualify for relief under Maryland's Loss Recovery Statute).

¹⁴⁷ See NAESSENS, *supra* note 3, at 11 (abandoning the notion that 51% of the game needs to be chance-based in the Belgian Gaming and Betting Act).

¹⁴⁸ See *id.* at 8, 9, 11–12 (noting that even the voluntary option to gamble in a game may lead to the possibility of it becoming a game of chance).

¹⁴⁹ See *id.* at 11–13 (stating that the secondary element of chance can still lead to a classification of “gambling” and referencing how players in Star Wars Battlefront II are most likely to be successful within the actual game if they collect the best weapons and characters from loot boxes).

¹⁵⁰ See Press Release, U.K. Gambling Comm'n, *supra* note 13, at 1–2 (referencing how the State of Washington is teaming up with several European countries to investigate the connection between loot boxes and gambling). Compare H.R. 2727, 29th Leg., Reg. Sess. (Haw. 2018) (requiring the disclosure of drop rates for loot boxes in video games), with Gartenberg, *supra* note 82 (describing China's 2017 regulation requiring video game developers to disclose the drop rates of loot boxes).

¹⁵¹ Compare *Mason v. Mach. Zone, Inc.*, 851 F.3d 315, 320 (4th Cir. 2017) (holding that virtual currency does not constitute legal tender for the purpose of consideration), and *Phillips v. Double Down Interactive LLC*, 173 F. Supp. 3d 731, 740–41 (2016) (N.D. Ill. 2016) (stating that virtual goods that cannot be converted back into legal tender do not constitute a form of consideration), with

complicating the issue is how some state laws conflict with each other, making it difficult to implement a federal regulation that affects the whole country.¹⁵² This Note focuses on the fundamental differences of gambling laws in European nations and American circuit courts that liberally define gambling, like the Ninth Circuit, with those that have a more restrictive approach, like the Fourth Circuit.¹⁵³

A. Insert Coin to Play: Consideration

The first step in determining whether a game falls under the traditional definition of gambling is to judge how consideration is defined in relation to the game.¹⁵⁴ Although each state can vary in their laws, the turning point seems to be whether the price to play has value in its relation to traditional forms of currency.¹⁵⁵ In its 2017 opinion in *Mason Machine Zone, Inc.*, the Fourth Circuit Court of Appeals held that players could use legal tender to “purchase gold,” an in-game currency, and place a wager on a spinning wheel in hopes of winning a random virtual reward.¹⁵⁶ The wager of the in-game gold did not meet the definition of consideration because the game developer already obtained the player’s funds once she exchanged her dollars for virtual gold, but the player could never directly exchange that gold back into dollars through

NAESSENS, *supra* note 3, at 9–10 (stating that consideration can be made with something purchased with legal tender, even if it does not convert back into legal tender).

¹⁵² Compare *Mason*, 851 F.3d at 319–20 (holding that virtual gold lost in a video game cannot qualify for the Maryland Loss Recovery Statute because it does not hold monetary value), with *Kater v. Churchill Downs Inc.*, 886 F.3d 784, 787 (9th Cir. 2018) (holding that virtual chips lost in a mobile casino video game qualify as a thing of value for Washington’s Recovery of Money Lost at Gambling Act).

¹⁵³ Compare *Mason*, 851 F.3d at 319–20 (holding that losing virtual currency does not qualify for the loss recovery statute in Maryland), with *Kater*, 886 F.3d at 787 (holding that losing virtual chips does qualify for the loss recovery statute in Washington), and *Fife v. Sci. Games Corp.*, No. 2:18-cv-00565-RBL, 2018 WL 6620485, at *4 (W.D. Wash. Dec. 18, 2018) (noting that free virtual coins can constitute a “thing of value” to qualify for a violation of Washington’s gambling laws).

¹⁵⁴ See *State v. Pinball Machs.*, 404 P.2d 923, 925 (Alaska 1965) (noting that price, chance, and prize are the three key elements of gambling law); *State v. One “Jack and Jill” Pinball Mach.*, 224 S.W.2d 854, 860 (Mo. Ct. App. 1949) (noting that consideration, chance, and reward are the three key elements of gambling law).

¹⁵⁵ Compare *Soto v. Sky Union, LLC*, 159 F. Supp. 3d 871, 878–79 (N.D. Ill. 2016) (noting that consideration under California’s gambling law allows a wager to be placed with something other than real currency), and *Fife*, 2018 WL 6620485, at *4 (noting virtual coins are a thing of value because a player needs to purchase more in order to play the game once they run out), with *Mason*, 851 F.3d at 319 (noting that the player did not lose money upon making a bet in the mobile game because the wager was made with virtual gold, which could not be redeemed for money).

¹⁵⁶ See *Mason*, 851 F.3d at 317 (defining the features of the virtual wheel in the casino portion of the game, *Game of War*). Players were able to also place a wager on the wheel through “gold” they acquired in the game, but the question for the court carried the assumption that the wager was made with gold that was purchased with legal tender. *Id.* at 317, 319.

any conceivable medium.¹⁵⁷ Thus, because the wager did not satisfy the consideration requirement, neither the player, nor the developer, stood to win or lose any real money by participating in the chance-based component of the game.¹⁵⁸

Standing in contrast with the Fourth Circuit's ruling, the state of Washington considered wagers with "virtual gold" as a thing of value, and thus meeting the consideration requirement, because they are (1) purchased with real money; or (2) necessary to play the game.¹⁵⁹ California holds an even looser definition than Washington, as it allows a wager be placed with legal tender or "any other means."¹⁶⁰ Under the California and Washington definitions, regardless of whether the wager is placed with cash or a virtual good purchased with cash, the consideration requirement will be met.¹⁶¹

Belgium, much like the Washington courts, allows a wager to be made with something that was initially purchased for money, even if it cannot be exchanged back into money later.¹⁶² Dutch law carries an even looser consideration requirement than its American counterparts.¹⁶³ Although consideration can be a factor in the assessment of what games constitute "gambling," a free game could still qualify as gambling if the game meets the other two elements of gambling—prize and chance.¹⁶⁴ By allowing broader definitions for their legal terms of art, these European countries have been able to hold developers accountable for introducing children, at least in a superficial way, to gambling games.¹⁶⁵

¹⁵⁷ *Id.* at 319–20.

¹⁵⁸ *Id.* at 319.

¹⁵⁹ See *Kater*, 886 F.3d at 787 (finding that virtual chips constitute a "thing of value" for consideration because they are necessary for the player to make a wager in the game); *Fife*, 2018 WL 6620485, at *4 (finding that virtual coins have value in regard to consideration because players must purchase more in order to continue playing).

¹⁶⁰ See CAL. PENAL CODE § 330b (West 2020) (stating that a slot machine or device is one that is operated by money or any other means); *Soto*, 159 F. Supp. 3d at 878–79 (holding that consideration under California's gambling law allows a wager to be placed with virtual goods that have no monetary value).

¹⁶¹ See *Soto*, 159 F. Supp. 3d at 878–79 (finding that virtual goods fulfill the element of consideration under California's gambling laws).

¹⁶² *Fife*, 2018 WL 6620485, at *4 (validating virtual coins as a form of consideration because players must purchase more in order to continue playing); NAESSENS, *supra* note 3, at 9–10.

¹⁶³ See KANSSPELAUTORITEIT, *supra* note 14, at 11 (noting that the Betting and Gaming Act still regulates games of chance that can be played for free).

¹⁶⁴ *Id.*

¹⁶⁵ See NAESSENS, *supra* note 3, at 16 (stating that video games that utilize microtransactions to facilitate the use of loot boxes violate Belgium's gambling laws); Kottasová, *supra* note 36 (referencing the Belgian government's call for game developers to acquire a gambling license); Press Release, Kansspelautoriteit, *supra* note 13, at 1–2 (calling for the modification of certain online games that utilize loot boxes to conform with the Netherlands's gambling laws).

*B. Rolling the Dice: Determining Whether a Game
Is Dominated by Luck or Skill*

The second step in determining whether a game constitutes a form of gambling is whether chance or skill is the dominant factor of the game.¹⁶⁶ There is a lack of federal uniformity on this distinction because state courts differ on how they determine the dominant factor of a game.¹⁶⁷ For example, some states consider poker as a game of luck, but others see it as a game of skill.¹⁶⁸ The factors may seem arbitrary, as mere accidents or lucky strikes do not detract from the capacity of a game to be considered as one of skill.¹⁶⁹ Further complicating the issue, an aspect of a game that is entirely chance-based can escape the definition of gambling when surrounded by features that make the rest of the game skill-based.¹⁷⁰ Creating some clarity in the often-murky distinction between luck and skill, in games of chance, it is possible for luck to thwart even the most skilled opponent.¹⁷¹

In the district court opinion of *Mason v. Machine Zone, Inc.*, the court analyzed California gambling law in relation to the mobile video game, *Game of War*.¹⁷² The game included a virtual casino that allowed players to use legal tender to purchase virtual gold and to spin a wheel for the chance to win some in-game benefit.¹⁷³ Although the casino apparatus was purely luck-based, the game escaped the definition of gambling machine under California law because the rest of the game involved skill.¹⁷⁴ This analysis may seem dubious because pay-to-win games, like *Game of War*, only carry a superficial sem-

¹⁶⁶ See *Pinball Machs.*, 404 P.2d at 925 (noting that the presence of chance is one of the key elements of gambling law); *One "Jack and Jill" Pinball Mach.*, 224 S.W.2d at 860 (noting that chance is necessary to show that a game falls under the definition of gambling laws); Griffiths, *supra* note 15, at 2 (noting that gambling laws requires that a game is determined at least in part by chance).

¹⁶⁷ See *Pinball Machs.*, 404 P.2d at 926 (noting that, while skill increases the likelihood of success in pinball, that the dominant factor is still chance); *People ex rel. Ellison v. Lavin*, 71 N.E. 753, 755 (N.Y. 1904) (stating that when games involve aspects of both skill and luck, and when any notion of skill can be thwarted by mere chance, that game constitutes a game of chance, and using a game of dice as an example).

¹⁶⁸ Rychlak, *supra* note 91, at 556 (noting that the Supreme Court of Montana considers poker a game of skill while the Supreme Court of Ohio considers poker a game of chance).

¹⁶⁹ See, e.g., *Lavin*, 71 N.E. at 755 (stating that the chance of winning a game of billiards through accident does not change the fact that billiards is largely a game of skill).

¹⁷⁰ *Mason v. Mach. Zone, Inc.*, 140 F. Supp. 3d 457, 464 (D. Md. 2015) (noting that the mobile game, *Game of War*, was largely skill-based, and merely because the roulette style feature at issue was purely a game of chance, that it was not a gambling machine because the rest of game predominantly involved skill).

¹⁷¹ See *Lavin*, 71 N.E. at 755 (stating that in games of chance, luck will be able to overpower any strategy, practice, or skill).

¹⁷² 140 F. Supp. 3d at 459.

¹⁷³ *Id.* at 460.

¹⁷⁴ See *id.* at 463–64 (stating that the court will not consider a game as luck-based without taking into consideration all other, possibly skill-based, aspects of the game).

blance of skill.¹⁷⁵ In reality, the most consistently successful players in pay-to-win video games are those who spend the most money to displace the “wait time” required to advance and bolster their video game profiles.¹⁷⁶ Despite the court’s rationale, it is clear that games like Game of War closely parallel the traditional examples of luck-based games that can, and often do, override any skillful or strategic actions by the player.¹⁷⁷

Belgian law circumvents these issues by indicating that a game will still constitute gambling even when the chance feature is a non-essential element to the completion of the game.¹⁷⁸ This model thus permits a broader definition of gambling elements to further their public policy goal of consumer protection.¹⁷⁹ By scrutinizing nearly every component of a game that may manipulate vulnerable audiences, like features such as data collection and discriminate pricing, Belgian gambling law is able to better monitor and regulate games that profit on addictive practices that only superficially appear to be games of skill.¹⁸⁰

C. You’re a Winner!: The Element of Prize

The final element of gambling law is the ability to obtain a prize or reward upon winning a gambling game.¹⁸¹ Under domestic law, the prize must have a tangible value to the player, but may also be required to have an objective value on the secondary market.¹⁸² The prize cannot be completely subjec-

¹⁷⁵ See Grosso, *supra* note 26 (stating that app games that rely on the pay-to-win business model only appear to be games of skill, but in reality, the best players are simply the ones who spend the most on in-game purchases).

¹⁷⁶ See Gilbert, *supra* note 72 (noting that the game mechanics of Game of War are set up in such a way that spending money on in-app purchases is a prerequisite to becoming a top player); Grosso, *supra* note 26 (describing the game mechanics of a similar game, Clash Royale, and how the best players are those that make the most in-game microtransactions).

¹⁷⁷ See *supra* notes 175–176 and accompanying text (noting how pay-to-win games exhibit a positive correlation between spending and success in the game).

¹⁷⁸ NAESSENS, *supra* note 3, at 11 (stating that previous Belgian law required a showing that chance was the predominant feature of the game, but the new law requires that chance need only be a significant aspect of any one feature of a game).

¹⁷⁹ See *id.* at 8 (noting that one of the key components of the Gaming and Betting Act of May 7, 1999 is to protect players from manipulative gambling establishments).

¹⁸⁰ See *id.* at 11–12 (referencing how data collection by game developers can lead to the alteration of drop rates to manipulate players to make more in-game purchases); see, e.g., Venter, *supra* note 57 (describing Fire Emblem Heroes’ loot box system, which increases the odds of getting a highly desirable character for individual players after a string of unlucky rolls).

¹⁸¹ See *Pinball Machs.*, 404 P.2d at 925 (noting how prize or reward is one of the key elements of gambling law); *One “Jack and Jill” Pinball Mach.*, 224 S.W.2d at 860 (noting that chance is necessary to show that a game falls under the definition of gambling laws).

¹⁸² See *Soto*, 159 F. Supp. 3d at 880 (finding that the heroes received from the loot box mechanism in the mobile game, Clash of Clans, do not constitute a prize under California’s gambling laws because they do not hold any secondary market value). In their analysis, the court further states that receiving these heroes is not like a free play where the player gets the reward of an extended play,

tive or intangible and must have a value that can be measured across different persons.¹⁸³ This directly contrasts with Belgian law, where the element of prize is fulfilled even when it is only worth something to player in a subjective sense.¹⁸⁴ American law focuses more on an objective standard in that the return must have some tangible award that has a financial equivalent, but it does not require the same “consideration standard” of being able to turn back into a form of currency.¹⁸⁵

Ultimately, the fundamental difference in Belgian and Dutch law is that they allow a broader definition of gambling, which furthers their public policy goals of protecting consumer interest—principles that allow them to regulate loot boxes—whereas American regulations may fail to do so.¹⁸⁶

III. PIECING THE PUZZLE TOGETHER: CREATING AN AMERICAN SOLUTION TO THE LOOT BOX DILEMMA

Considering the risk that children face from the manipulative practices of video game developers, it is essential to the pursuit of consumer protection to define at least some loot box practices as a form of gambling.¹⁸⁷ Under current precedent, it is unlikely that even the loot boxes which players can purchase with legal tender, mirroring “pay-to-win” mechanics, can qualify as gambling.¹⁸⁸ Since the inception of gambling laws predate the invention of loot

something that California courts consider a thing of value. *Compare id.*, with *Pinball Machs.*, 404 P.2d at 926 (stating that a free game from a pinball machine fulfills the element of prize or reward).

¹⁸³ *Pinball Machs.*, 404 P.2d at 926 (stating that a free game fulfills the element of prize or reward even though it does not hold a redeemable monetary value); *One “Jack and Jill” Pinball Mach.*, 224 S.W.2d at 860 (stating that mere amusement from playing a game does not constitute a form of reward sufficient to fulfill the prize element of gambling statutes).

¹⁸⁴ NAESSENS, *supra* note 3, at 10–11 (noting that the prize can be of subjective, as opposed to objective, value to the player).

¹⁸⁵ See *Pinball Machs.*, 404 P.2d at 926 (noting how winning free games from a pinball machine can fulfill the element of prize).

¹⁸⁶ Compare NAESSENS, *supra* note 3, at 8 (noting that one of the purposes of Belgium’s gambling laws is to protect players from manipulative gambling establishments), and KANSPELAUTORITEIT, *supra* note 14, at 7 (noting that protecting consumers is a principal policy behind the Netherlands’s gambling laws), with *Mason*, 851 F.3d at 320 (holding that losing virtual gold in a video game is not a violation of Maryland’s gambling laws due to the technicality that virtual gold does not hold monetary value), and *Phillips*, 173 F. Supp. 3d at 740–41 (stating that money cannot be won or lost in gambling devices using virtual currency when the currency cannot be cashed out for real currency).

¹⁸⁷ See Kühn et al., *supra* note 11, at 1 (determining that children who frequently play video games have a higher likelihood of developing addictive behaviors); Dunkley, *supra* note 50 (noting that extensive exposure to video games may cause aggressive behaviors in developing minds).

¹⁸⁸ See *Phillips v. Double Down Interactive LLC*, 173 F. Supp. 3d 731, 739 (N.D. Ill. 2016) (N.D. Ill. 2016) (determining that losing funds in an mobile casino app does not breach the Illinois Loss Recovery Act because there are no “losers” or “winners” in these games); *Soto v. Sky Union, LLC*, 159 F. Supp. 3d 871, 880 (N.D. Ill. 2016) (noting that receiving heroes and talents in exchange for virtual coins does not constitute receiving a reward in exchange for consideration under California gambling laws). But see *Kater v. Churchill Downs Inc.*, 886 F.3d 784, 788 (9th Cir. 2018) (finding

boxes, it is likely that legislators will need to alter the definition of gambling or introduce legislation specific to video games to regulate the practices associated with loot boxes.¹⁸⁹

Although some existing legislation and judicial decisions from the Ninth Circuit would be useful in classifying loot boxes as a form of gambling, there are aspects of European law that would be more helpful in inventing an effective solution.¹⁹⁰ Section A of this Part speaks to the existing flaws in the American legal and legislative system that ignores some of the dangers present in existing loot box mechanisms.¹⁹¹ Section B of this Part provides possible solutions to issues involving the three core elements of gambling and suggests how legislators and courts can look at loot boxes to regulate them as a form of gambling.¹⁹²

A. Game Over: Where American Legislation Fails to Consider Loot Boxes as a Form of Gambling

Uniformly defining loot boxes as a form of gambling will be difficult without federal guidance because the criteria for illegal gambling differs vastly from state to state.¹⁹³ Even if states cannot agree on an exact definition, loot boxes should still be beholden to some of the same regulations as other gambling mechanisms.¹⁹⁴ This is because loot box systems provoke, and game developers capitalize on, the same psychological responses that are associated

that a mobile casino app that utilizes virtual coins does fall under the definition of gambling under Washington's law).

¹⁸⁹ See S. 6266, 65th Leg., Reg. Sess. (Wash. 2018) (calling upon the Washington gambling commission to investigate the similarities between loot boxes and gambling to help guide future legislation); Letter from Margaret Wood Hassan to Patricia Vance, *supra* note 73 (calling upon the ESRB to reevaluate their position on whether loot boxes constitute a form of gambling, requested by U.S. Senator Margaret Hassan); Wright, *supra* note 28 (noting that ZT Online, released in 2006, was one of the first games to incorporate loot boxes).

¹⁹⁰ See, e.g., *Soto*, 159 F. Supp. 3d at 878–79 (holding that consideration under California's gambling law allows a wager to be placed with virtual goods that have no monetary value); KANSSPELAUTORITEIT, *supra* note 14, at 14–15 (noting how games of skill are merely those where a player cannot exert any influence in order to change the outcome of the game); NAESENS, *supra* note 3, at 11–12 (stating that a non-essential component of the game can lead to the classification of a game of chance if it involves the elements of wager and chance).

¹⁹¹ See *infra* notes 193–206 and accompanying text.

¹⁹² See *infra* notes 207–226 and accompanying text.

¹⁹³ See Wire Act, 18 U.S.C. § 1084 (2018) (stating that a violation of the Wire Act will not occur in states that have legalized that form of gambling); *United States v. Yaquinta*, 204 F. Supp. 276, 277 (N.D. W. Va. 1962) (noting that the Wire Act was drafted with the intention of supporting State gambling laws, not to replace those laws with federal guidelines); Cabot, *supra* note 84, at 275 (referencing how most federal gambling laws require a violation of state or local law); Haskell, *supra* note 27, at 137 (noting how the UIGEA only criminalizes betting in states that have not legalized online gambling).

¹⁹⁴ See Letter from Patricia Vance to Margaret Wood Hassan, *supra* note 14, at 3 (stating that the ESRB refuses to declare that loot boxes are a form of gambling).

with gambling.¹⁹⁵ The mechanics and responses to loot box-based business models also mirror some of the same manipulative techniques that traditional casinos employ to keep people playing, namely: diminished loss aversion contributing to the sunk cost fallacy and Skinner Box reward models employing variable ratio reinforcement.¹⁹⁶ Game developers exacerbate these problems by implementing manipulative practices that trick users into creating an imaginary urgency to purchase their products.¹⁹⁷

Lawmakers who are aware of these practices should enact legislation to regulate games in the interest of consumer protection.¹⁹⁸ The parties who are tasked with educating customers have largely ignored consumer outrage and offered trivial solutions to mitigate these issues.¹⁹⁹ Their justification hinges on the notion that loot boxes are a form of gambling per se, which equates them with other chance-based hobbies such as opening packs of baseball cards.²⁰⁰ This characterization ignores a crucial difference between the two mediums: individuals can sell baseball cards on a secondary market whereas the goods received in loot boxes seldom can be.²⁰¹ This distinction should differentiate them from baseball cards because the key element that prevented baseball

¹⁹⁵ Kim, *supra* note 2, at 410 (stating playing video games in excess diminishes dopamine receptors, which leads to the desire to play more, a behavior typical in gambling addicts); Kühn et al., *supra* note 11, at 4 (describing how dopamine releases in children who play more than 12.1 hours of video games a week resemble the dopaminergic responses found in pathological gamblers).

¹⁹⁶ The Game Theorists, *supra* note 56 (citing how psychological principles of the Skinner Box, loss aversion, and the sunk cost fallacy are utilized by video game designers to manipulate users to continuously purchase loot boxes).

¹⁹⁷ See '406 Patent *supra* note 3 (describing a patent where players are duped into believing that their skill in a video game is due to their lack of specific weapon skins, a feature that has no real impact on their ability to play the game); NAESSENS, *supra* note 3, at 6–8 (referencing social behavior monitoring, data collection, the illusion of skill, celebrity endorsements, and several other features of loot boxes that game developers use to influence players into making in-game purchases); see also The Game Theorists, *supra* note 69 (noting game developer's practice of offering certain loot box rewards on a seasonal cycle, prompting consumers to make purchases due to a fear of loss).

¹⁹⁸ See Wash. S. 6266 (requesting the Washington state gambling commission to study the relationship between loot boxes and gambling targeted to minors); Letter from Margaret Wood Hassan to Patricia Vance, *supra* note 73 (stating that the ESRB should reevaluate their stance on loot boxes due to the psychological and mechanical similarities to casino gambling).

¹⁹⁹ See Press Release, Entm't Software Rating Bd., *supra* note 77 (noting that the ESRB will place a notice on video games that have any form of microtransaction, but not differentiate between loot boxes, which utilize gambling mechanics, and DLC, which is merely additional content for a fixed price); *About ESRB*, *supra* note 75 (stating that the purpose of the ESRB is to inform parents about video game use and to enforce industry guidelines on developers).

²⁰⁰ See Letter from Patricia Vance to Margaret Wood Hassan, *supra* note 14, at 3 (noting that the ESRB sees loot boxes as legally purchasable goods analogous to baseball cards).

²⁰¹ See *Mason v. Mach. Zone, Inc.*, 851 F.3d 315, 320 (4th Cir. 2017) (noting that virtual goods are not a form of money because they cannot be sold on the secondary market); Elliott & Mason, *supra* note 103, at 114–15 (stating that baseball cards are a legal form of gambling per se because they can be sold at hobby shops for their equivalent value).

cards from being considered gambling—resale value—does not exist for loot boxes in most forms.²⁰²

The judiciary should also consider other factors in regard to how they interpret gambling statutes.²⁰³ For example, the courts can look at the individual aspects of a video game that provide the majority of a company's revenue, such as the luck-based loot box business models.²⁰⁴ The aspect of skill is an illusion in some of these games and game developers are well aware that it is specifically these microtransactions that have bolstered their revenue over the last few years.²⁰⁵ Courts must look past the superficial aspects of these games to strike at the developers' real purpose in using these business models: the pursuit of profit.²⁰⁶

B. Press Start to Continue: Drafting Legislation to Protect a Vulnerable Audience

Most states in the United States do not consider digital currency as a form of consideration.²⁰⁷ In one regard, virtual coins do not fit the literal definition

²⁰² See *Dumas v. Major League Baseball Props., Inc.*, 104 F. Supp. 2d 1220, 1222–23 (S.D. Cal. 2000) (refusing to allow plaintiffs to claim a financial injury because the cards they received hold some value, making it a legal form of gambling per se); Elliott & Mason, *supra* note 103, at 114–15 (stating that baseball cards are a legal form of gambling per se because they can be sold at hobby shops for their equivalent value).

²⁰³ See *Mason v. Mach. Zone, Inc.*, 140 F. Supp. 3d 457, 463–64 (D. Md. 2015) (stating that the court will not look at a feature in a mobile game, *Game of War*, as a game of chance because the rest of the game is predominantly a game of skill).

²⁰⁴ See *id.* (refusing to look at the random number generator portion of *Game of War* in isolation without looking at the other, skill-based, portions of the game); Brightman, *supra* note 4 (stating that 80% of Ubisoft's sales come from microtransactions); Handrahan, *supra* note 4 (stating that over half of Electronic Arts' \$1.3 billion revenue comes from microtransactions, most of which comes from their sale of card packs, a loot box style mechanic).

²⁰⁵ See, e.g., *Activision Blizzard, Inc.*, *supra* note 4, at 41, F-17 (noting that \$4.907 billion out of \$7.156 billion in total net bookings came from "other revenues," which includes microtransactions, DLC, and licensing intellectual property to other parties); *Electronic Arts, Inc.*, *supra* note 5, at 33 (showing that over \$2 billion of Electronic Arts' annual revenue came from video game microtransactions).

²⁰⁶ See *Mason*, 140 F. Supp. 3d at 463–64 (stating that the court will not look at a feature in a mobile game, *Game of War*, as a game of chance because the rest of the game is predominantly a game of skill); NAESSENS, *supra* note 3, at 6, 17 (calling for the regulation of video games that contain loot boxes based on, among other principles, the fact that many of these games employ only an illusion of skill in order to manipulate players into making purchases).

²⁰⁷ See *Mason*, 851 F.3d at 320 (determining that virtual gold from an online game is not considered a form of currency under Maryland's gambling laws); *Phillips*, 173 F. Supp. 3d at 740–41 (stating that losing virtual currency in a mobile video game is not a form of gambling loss); *Soto*, 159 F. Supp. 3d at 878–79 (noting that, under California law, the aspect of consideration requires a coin, other object, or any other means, which would include virtual gems that are not real currency). *But see Kater*, 886 F.3d at 787–88 (holding that virtual chips constitute consideration under Washington's broad definition of "thing of value"); *Fife v. Sci. Games Corp.*, No. 2:18-cv-00565-RBL, 2018 WL 6620485, at *4 (W.D. Wash. Dec. 18, 2018) (noting that even free virtual coins constitute a "thing of

of money or even constitute a similar form of currency that is handled by financial institutions.²⁰⁸ They fall short of the definition of consideration because they do not hold value on a secondary market.²⁰⁹ Only the states of Washington and California have determined that virtual goods can constitute a form of consideration.²¹⁰ Other states are unable to regulate these digital forms of gambling due to the legal technicality that virtual goods purchased with real money do not hold value under their definitions.²¹¹

To effectively regulate loot boxes as a form of gambling, individual states, or the federal government, should adopt a new policy that mimics the Californian or Belgian model.²¹² Today's modern age encapsulates a growing technological field even in the financial sector, so traditional notions of money coming from a financial institution may not suffice.²¹³ By adopting the more expansive view of Belgium, allowing a wager to be placed with something that can be purchased with legal tender—or the even broader view of California, allowing a wager by “any other means”—game developers will be precluded

value” for Washington’s gambling law when given alongside the opportunity to pay for the same type of virtual coins).

²⁰⁸ See Unlawful Internet Gambling Enforcement Act, 31 U.S.C. § 5363 (2018) (requiring a wager be placed with either some form of credit or other means that is handled by a financial institution to constitute a federal violation); *Mason*, 851 F.3d at 319–20 (stating that virtual coins do not fit the definition of money because they cannot be exchanged for real money on a secondary market).

²⁰⁹ See *Mason*, 851 F.3d at 319–20 (holding that virtual goods that cannot be resold cannot be used as a form of consideration); *Phillips*, 173 F. Supp. 3d at 740–41 (noting that because the game developer keeps the money that was used to purchase the virtual tokens, there is nothing won or lost in a wager with digital currency; thus, the state’s gambling laws do not apply).

²¹⁰ See *Kater*, 886 F.3d at 787 (noting that a game cannot be played without placing a bet with the virtual good); *Fife*, 2018 WL 6620485, at *4 (noting that the purchase of coins with real money is necessary to play the game when a player runs out, thus fulfilling “thing of value” for consideration); see also *Soto*, 159 F. Supp. 3d at 879 (focusing on the language in California’s gambling law that permits the wager to be by “any other means”).

²¹¹ Compare *Mason*, 851 F.3d at 319–20 (refusing to convict defendant of a violation of the Maryland Loss Recovery Statute due to the principle that virtual coins do not fit within the definition of money), with *Kater*, 886 F.3d at 787 (finding that, in the state of Washington, virtual coins hold value in the sense that they are necessary to participate in the mobile gambling game), and *Soto*, 159 F. Supp. 3d at 879 (noting that any wager placed in the state of California, regardless of its monetary value, will fulfill the element of consideration).

²¹² See CAL. PENAL CODE § 330b (West 2020) (stating that a slot machine or device is one that is operated by money or any other means); *Soto*, 159 F. Supp. 3d at 878–79 (holding that consideration under California’s gambling law allows a wager to be placed with virtual goods that have no monetary value); NAESSENS, *supra* note 3, at 9–10 (noting that as long as the virtual currency can be purchased with real money, the virtual currency can constitute a wager).

²¹³ See 31 U.S.C. § 5363 (stating that violation only occurs when credit, funds transferred from a business, check, or other proceed that the Federal Reserve may be able to regulate are involved); Martinelli, *supra* note 6, at 562 (noting that the UIGEA of 2006 leaves a loophole for cryptocurrencies and purchases made with virtual goods).

from using digital currencies as intermediaries to escape the classification of gambling devices.²¹⁴

The element of chance is also unlikely to be found in loot boxes because loot boxes are typically just a feature within a greater skill-based game, with any gambling elements being outweighed by the skill required elsewhere in the game.²¹⁵ Although these games do require skill to be successful, many are often free-to-play and require the use of loot boxes, which are governed completely by chance, to be competitive.²¹⁶ In this sense, these games are only games of skill on a superficial level.²¹⁷ As long as U.S. courts consider the entirety of the game, rather than individual components, when analyzing games of chance, it is unlikely that they will consider loot boxes a form of gambling.²¹⁸

The pursuit of consumer protection would be better serviced if the United States adopted an approach that is similar to the Belgian model, which would allow courts and legislators to look at individual parts of a game outside of the games other features.²¹⁹ This is important because many of these games rely on loot boxes as their primary, and sometimes even sole, form of income, but not

²¹⁴ Compare CAL PENAL CODE § 330b (stating that a wager can be done with either money or something other than money), and NAESSENS, *supra* note 3, at 9, 13 (stating that virtual currency can constitute a wager as long as it holds a value to the player, but noting that Star Wars Battlefront II no longer falls under the jurisdiction of Belgian gambling law because loot boxes cannot be purchased with real money), with *Mason*, 851 F.3d at 319–20 (stating that virtual coins do not constitute a wager because they cannot be traded back into money on a secondary market).

²¹⁵ See *Mason*, 140 F. Supp. 3d at 463–64 (stating that the court will not take an isolated look at one luck-based aspect of the game without taking into consideration the other skill-based aspects of the game); *People ex rel. Ellison v. Lavin*, 71 N.E. 753, 755 (N.Y. 1904) (stating that a game will be considered one of skill or luck-based on which element appears to be dominant to succeed in that game).

²¹⁶ See NAESSENS, *supra* note 3, at 2–3, 12 (describing the games Star Wars Battlefront II, FIFA 18, and CS:GO as competitive games, typically games of skills, but noting that chance determines the success rate of loot box systems).

²¹⁷ See Grosso, *supra* note 26 (noting that free-to-win games that allow in game purchases lead to the pay-to-win business model where the most successful players are those that have made the most in-game purchases).

²¹⁸ See *Mason*, 140 F. Supp. 3d at 456 (determining that the casino function of Game of War is not a form of gambling under California law because the game is one of skill when viewed in its entirety). Some of the court cases that have found gambling mechanisms in loot box or slot style machines have done so only for mobile apps that consist entirely of digital casino games—games where the semblance of skill is completely lacking. See *Kater*, 886 F.3d at 788 (holding that the mobile game, Big Fish Casino, falls under Washington’s definition of gambling); *Fife*, 2018 WL 6620485, at *4, *6 (finding that the game, Jackpot Party Casino, falls under Washington’s definition of gambling). But see *Phillips*, 173 F. Supp. 3d at 739 (holding that a mobile casino game does not fall under Illinois’s definition of gambling when there are no “winners” or “losers,” determined by fact that the game developer never loses money directly when players make a wager).

²¹⁹ See NAESSENS, *supra* note 3, at 11–12 (noting that a nonessential element of chance in a game that can be played for a wager can lead to the classification of gambling even when the rest of the game appears to be a game of skill).

as their primary means of gameplay.²²⁰ By requiring that the luck-based features of a game be weighed against a game's other features, courts and legislators are allowing developers to mask pay-to-win business models as games of skill—ultimately creating a loophole to avoid a classification of gambling game.²²¹

Current regulatory schemes and judicial interpretations are unlikely to find prize, the final element of gambling, in loot box-based video games.²²² Washington cases that have found the element of prize have done so based on the principle that the player is betting virtual coins, gems, or something similar in exchange for the chance of winning more virtual coins.²²³ In loot boxes, the player often cannot trade the skin or weapon upgrade on any secondary market.²²⁴ Similar to the case of consideration, courts must reevaluate their stance on what constitutes a “thing of value” and consider digital goods as a form of reward so that loot boxes can fit within the traditional definition of gambling.²²⁵ If legislators are able to change how they view these three elements, then they can protect vulnerable audiences from the predatory practices of game developers who are only seeking to make a profit at the expense of the mental and emotional well-being of future generations.²²⁶

CONCLUSION

Under existing legislation and judicial precedent, a uniform scheme characterizing loot boxes as a form of gambling is unlikely. Loot boxes utilize the

²²⁰ See Brightman, *supra* note 4 (stating that 80% of Ubisoft's sales come from microtransactions); Handrahan, *supra* note 4 (stating that over half of Electronic Arts' \$1.3 billion revenue comes from microtransactions, most of which comes from their sale of card packs, a loot box style mechanic).

²²¹ See *Mason*, 140 F. Supp. 3d at 456 (determining that the Casino function of Game of War is not a form of gambling under California law because the game is one of skill when viewed in its entirety).

²²² See *Soto*, 159 F. Supp. 3d at 879 (finding that the receipt of heroes, talents, and gems in return for betting virtual gems does not constitute a “thing of value” for the element of prize).

²²³ See *Kater*, 886 F.3d at 787–89 (finding that the wager and receipt of virtual chips in a mobile game constitutes gambling under Washington law); *Fife*, 2018 WL 6620485, at *5 (finding that the wager and receipt of virtual coins in an online casino app constitutes gambling under Washington law).

²²⁴ See *Soto*, 159 F. Supp. 3d at 880 (stating that heroes and talents received do not have real value because they are not exchangeable for real money in any existing market).

²²⁵ Compare *NAESSENS*, *supra* note 3, at 10–11 (noting that the loss of a wager is denoted by the value of the wager minus the value of the obtained item), with *Mason*, 851 F.3d at 320 (noting that a wager must have resale value on a secondary market to be considered a form of currency to qualify for relief under Maryland's Loss Recovery Statute).

²²⁶ See *State v. Pinball Machs.*, 404 P.2d 923, 925 (Alaska 1965) (noting the three elements of gambling as price, chance, and prize); *State v. One “Jack and Jill” Pinball Mach.*, 224 S.W.2d 854, 860 (Mo. Ct. App. 1949) (noting that consideration, chance, and reward are the three elements of gambling, but qualifying that the reward must be in the form of money or property and that amusement is not a form of money or property).

same psychological responses that have duped individuals into gambling addictions over the course of history, but they are able to capitalize on modern tools to bolster their effectiveness, particularly with respect to data collection and price discrimination techniques. Even if they were to fall under gambling laws, all forms of loot boxes are not inherently deceptive. Specifically, it is the pay-to-win models that are duping young players into spending hundreds, if not thousands, of dollars to enjoy a simple video game. Games that utilize skin-only loot boxes do not give rise to these issues in the same respect. Considering how some of these game developers are making hundreds of millions of dollars annually on microtransactions due to predatory practices, the United States must take action. It could be that “gambling” is the wrong title to ascribe to loot boxes, but instead, some other regulation should be imposed. The principle behind this is that the laws should pursue the end goal of the concept behind gambling laws: consumer protection. As long as children playing these video games are better informed, protected from dubious practices, and able to enjoy themselves in a safe way, then there should be no issue with allowing kids and adults alike to play their games.

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