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UNITED STATES DISTRICT COURT

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NORTHERN DISTRICT OF CALIFORNIA – SAN JOSE DIVISION

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JOHN COFFEE, MEI-LING MONTANEZ,
and S.M., a minor by MEI-LING
14 MONTANEZ, S.M.'s parent and guardian, on
behalf of themselves and all others similarly
15 situated,

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Plaintiffs,

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v.

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GOOGLE LLC,

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Defendant.

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Case No. 5:20-cv-03901-BLF

**FIRST AMENDED CLASS ACTION
COMPLAINT**

CLASS ACTION

District Judge Beth Labson Freeman
Courtroom 3, 5th Floor, San Jose
Magistrate Judge Susan van Keulen
Courtroom 6, 4th Floor, San Jose

Complaint Filed: June 12, 2020
Trial Date: Not Set

JURY TRIAL DEMANDED

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1 “We should be very reticent of creating an experience where the outcome can be
2 influenced by spending money. *Loot boxes play on all the mechanics of gambling except*
3 *for the ability to get more money out in the end.*”

4 “Do we want to be like Las Vegas, with slot machines or do we want to be widely
5 respected as creators of products that customers can trust?”

6 “*We have businesses that profit by doing their customers harm.*”
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8 - Tim Sweeney, Co-Founder of Epic Games
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1 Plaintiffs John Coffee, Mei-Ling Montanez, and S.M., a minor by Mei-Ling Montanez,
2 S.M.'s parent and legal guardian ("Plaintiffs"), file this Class Action Complaint against Google LLC
3 ("Google" or "the Company"). Plaintiffs bring this action based upon personal knowledge of the
4 facts pertaining to themselves, and on information and belief as to all other matters, by and through
5 undersigned counsel.

6 **NATURE OF THE ACTION**

7 1. Though its Google Play Store, Google promotes and sells randomized chances to win
8 prizes through "loot boxes," a type of gambling device. A loot box is a type of slot machine. A
9 player pays money to take a chance on a loot box. Playing a loot box takes no skill. One simply pays
10 money and then clicks on the loot box, like a gambler pulling the arm of a slot machine. The loot
11 box then lights up, flashes, and makes noises to build excitement as the player anxiously waits to
12 see if he or she will win a rare and valuable prize. The chance of winning a prize is randomized,
13 with the more desirable prizes much less likely to win. Playing a loot box is a gamble because one
14 never knows what the loot box contains until after the wager is made and the loot box is opened.
15 Sought-after prizes include important or better weapons, costumes, or player appearances (called
16 "skins"), or some other in-game item or feature designed or perceived to enhance gameplay or
17 provide competitive advantage. By design, the prizes that are the least likely to win are the most
18 valuable to players. While these prizes often can be bartered or sold, they also have inherent value.
19 Google, in concert with game developers, purposefully limits the availability of certain prizes so
20 their scarcity increases their value; conceptually like the JPG file by the artist Beeple that recently
21 sold at an art auction for \$69.3 million. The JPG file is nothing but a virtual image that could be
22 infinitely, indefinitely, and perfectly duplicated. However, because the artist made the JPG file
23 scarce – limited to just one copy – it broke art sale records. The virtual file has value to the purchaser,
24 just like the virtual prizes offered through loot boxes.

25 2. Loot boxes are very common. 58% of the top-100 grossing games in the Google Play
26 Store contain loot boxes. Of those, 93% are rated at the Google Play Store as suitable for children
27 aged 12 and above, and 57% are rated suitable for children aged 7 and up. Loot box games rated
28 suitable for children aged 3 and up were installed 545 million times from the Google Play Store.

1 3. Loot boxes constitute an illegal gambling device under California law. The
2 California Legislature has declared gambling against public policy and has enacted laws broadly
3 defining and prohibiting it, including prohibiting the control, operation, and dissemination of
4 gambling devices. As the Legislature declared: “Gambling can become addictive and is not an
5 activity to be promoted or legitimized as entertainment for children and families.” Cal. Bus. & Prof.
6 Code § 19801(c).

7 4. Computer games used to be sold, but now are available online for free. Google,
8 working in concert with game developers, has monetize these seemingly free games through in-
9 game purchases. Loot box are the king of in-app purchases, making up a large percentage of in-
10 game sales. Google exercises absolute control over the types of games and other activities permitted
11 on the Google Play Store. While Google prohibits other forms of gambling, it promotes and
12 encourages game developers to place loot boxes in games. It even coaches game developers on
13 “[h]ow to build and grow your app’s revenue streams” through “implementing the right
14 monetization strategy” with loot boxes. In return for its active participation in permitting,
15 controlling, and developing loot boxes, Google receives 30% of all loot box plays sold.

16 5. Loot boxes are also predatory, just like other forms of gambling. High quality
17 research shows loot boxes foster the same compulsive and addictive behavior, including gambling
18 addiction, as other forms of gambling. The compulsive behavior Google fosters in children,
19 teenagers, and adults generates hundreds of millions of dollars for Google annually in violation
20 California’s gambling laws and established public policy designed to protect children, families, and
21 other consumers from this type of predatory conduct.

22 6. Google exercises absolute control over the types of games and other activities
23 permitted on the Google Play Store. While Google prohibits other forms of gambling, it encourages
24 game developers to place loot boxes in games. It even coaches game developers on “[h]ow to build
25 and grow your app’s revenue streams” through “implementing the right monetization strategy” with
26 loot boxes. In return for its active participation in permitting, controlling, and developing loot boxes,
27 Google receives 30% of all loot box plays sold.

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1 7. With regard to loot boxes, Defendant’s Google Play Store is no different than a
2 physical casino. Just like a casino, Google permits, promotes, facilitates, and profits off gambling.
3 Because Google makes it so, the Google Play Store is the only place to buy the currency to play the
4 loot boxes, and it is the only place where they can be accessed. Just like casinos, while Google may
5 not manufacture the slot machines or design their random-chance algorithms, Google houses the
6 slot machine, and takes a cut off the top from every wager that is placed. However, unlike and worse
7 than a traditional licensed casino, Google facilitates gambling practices that are entirely unregulated,
8 bring 24/7 access to gambling into the homes of families everywhere, and exploit children as young
9 as four years old. Given the structural and psychological similarities, researchers have characterized
10 loot boxes as “gamblification of gaming” (Brooks & Clark 2019) and “predatory monetization
11 schemes” that disguise long-term costs and “entrap” the player in a belief that repeated spending
12 of money is justified as it increases the likelihood of obtaining valuable items (King & Delfrabbro
13 2018). The “disguised character” of the loot box gambling game “is extra problematic in the case of
14 children.”¹

15 8. Governments, regulators, psychologists, and other researchers agree loot boxes are
16 gambling devices that foster, create, and reinforce addictive behaviors. Those who have studied the
17 issue unanimously agree that loot boxes have all the structural and psychological hallmarks of
18 gambling and correlate with problem gambling among children, teenagers, and adults. The proven
19 link to problem gambling is robust. Numerous regulators around the world have prohibited or
20 restricted the use of loot boxes. Countries that have expressly regulated or are considering
21 regulations of loot boxes include the Netherlands, Belgium, the United Kingdom, Japan, France,
22 and China.

23 9. While Google does not itself create these videogames or the loot box games used to
24 entice gamers to gamble, Google works hand-in-glove with game developers in the creation,
25 marketing and sale of loot boxes in these games. Google’s contract with game developers makes
26

27 ¹ Belgian Gaming Commission, *Research Report on Loot Boxes* (April 2018), available at
28 https://www.gamingcommission.be/opencms/export/sites/default/jhksweb_nl/documents/onderzoekrapport-loot-boxen-Engels-publicatie.pdf

1 Google their agent and merchant of record for every loot box sale. It also requires certain content
2 regarding loot boxes, and specifically allows them even though it purports to otherwise prohibit
3 “gambling.” Google thus profits handsomely by facilitating and providing ancillary and necessary
4 services to the illegal and predatory practices at issue, including by 1) marketing, selling, and/or
5 distributing the games on Google products and through its Google Play Store platform; 2) acting as
6 the exclusive agent and merchant of record for the game developer in selling the loot boxes; and
7 3) processing, permitting, and handling all of the transactions with gamers, including taking a 30%
8 cut of all money spent by players before transferring the remainder to the developer.

9 10. Plaintiffs bring this action on behalf of all persons who paid to receive randomized
10 virtual items from a loot box within an app downloaded from the Google Play Store. On behalf of
11 themselves and the Class, Plaintiffs assert claims violations of the unlawful prong of Californian
12 Business & Professions Code § 17200, the unfair prong of California Business & Professions Code
13 § 17200, the Consumers Legal Remedies Act, and unjust enrichment for damages, restitution, and
14 injunctive relief.

15 **THE PARTIES**

16 11. Plaintiff John Coffee is a citizen of the State of California and a resident of Tehama
17 County. Since at least 2018, Plaintiff has owned and played Final Fantasy Brave Exvius, a game
18 marketed, sold and/or distributed by Google, and which he downloaded through the Google Play
19 Store onto his Android mobile device. While playing Final Fantasy Brave Exvius and other games
20 including War of the Visions: Final Fantasy Brave Exvius, Dragon Ball Legends, The Seven Deadly
21 Sins: Grand Cross, Dragon Quest, Puzzles & Dragons, Dragon Ball Z Dokkan Battle, Brave
22 Frontier, Arms of War, Mobius Final Fantasy, Final Fantasy Record Keeper, and Clash Royale, and
23 as a result of Defendant’s conduct, Plaintiff lost money and property by purchasing “loot boxes” in-
24 game and suffered injury in fact. The only way to purchase a chance on a loot box is to purchase
25 with money virtual currency² directly from Google, and Plaintiff has done just that. Therefore,
26

27 ² Virtual currency is a type of unregulated digital currency that is only available in electronic
28 form. It is stored and transacted through designated software, mobile or computer applications, or
through dedicated digital wallets, and the transactions occur over the internet through secure,

1 Plaintiff has lost money and property as a result of Google’s unfair business practices alleged when
2 he purchased virtual coins with money to buy chances on loot boxes and lost property in the form
3 of the virtual coins he used to buy chances on loot boxes. Plaintiff Coffee estimates he has paid
4 Google more than \$500 to purchase plays on loot boxes in exchange for the random chance of
5 winning valuable items. These amounts were charged by and paid to Google. Using his Google Play
6 Store-linked device to engage in the transaction, these amounts were charged by Google to
7 Plaintiff’s credit card that Google keeps on file. Plaintiff Coffee still owns and plays Final Fantasy
8 Brave Exvius and other games with loot boxes downloaded through the Google Play Store. To the
9 extent he plays these games on his Google Android mobile device in the future, he will be subjected
10 to Google’s predatory conduct involving loot boxes.

11 12. Plaintiff Mei-Ling Montanez is the parent and legal guardian of S.M., a minor. She
12 is and at all relevant times was a citizen of the State of New York who resides in Brooklyn, New
13 York. Since at least 2019, her son S.M. has owned and played Dragon Ball Z Dokkan Battle
14 (“Dragon Ball Z”), a game sold and distributed by Google. While playing Dragon Ball Z and other
15 games on Android devices, Plaintiff’s son S.M. has been induced to spend his parents’ money and
16 perhaps his own money to purchase loot boxes in-game from Google. Specifically, S.M. purchased
17 a chance on a “Summons,” which is the name given the loot box in Dragon Ball Z. Plaintiff and her
18 son lost money and property by purchasing loot boxes and suffered injury in fact. They lost money
19 when S.M. purchased virtual coins to buy chances on loot boxes and lost property in the form of the
20 virtual coins when he used them to buy chances on loot boxes. Therefore, Plaintiff and S.M. lost
21 money and property as a result of Google’s unfair business practices alleged.

22 13. Plaintiff S.M. is a minor. He is and at all relevant times was a citizen of the State of
23 New York who resides in Brooklyn. Since at least 2019, S.M. has owned and played Dragon Ball
24 Z. Dragon Ball Z was downloaded by S.M. from the Google Play Store onto a Samsung smartphone
25 device, which uses the Google Android operating system. S.M.’s mother estimates S.M. has paid
26 Google more than \$100 on in-app purchases from the Google Play Store, including on purchasing

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dedicated networks. Cryptocurrency is also a form of digital currency.

1 the virtual currency required to buy loot boxes. S.M. used his parents' credit card to buy the loot
2 box, which is on file with Google. S.M. played, and continues to play, Dragon Ball Z on his Samsung
3 smartphone. To the extent he plays these games in the future, he will be subjected to Google's
4 predatory conduct involving loot boxes.

5 14. Defendant Google LLC is a Delaware limited liability company with its principal
6 place of business and global headquarters at 1600 Amphitheatre Parkway, Mountain View,
7 California, 94043. Google is a global technology company that specializes in internet-related
8 services and products. Google developed, owns, controls, manages, and operates the Google Play
9 Store and Android operating system.

10 **JURISDICTION AND VENUE**

11 15. This Court has diversity jurisdiction over the claims asserted herein on behalf of a
12 nationwide class pursuant to 28 U.S.C. § 1332, as amended in February 2005 by the Class Action
13 Fairness Act. Jurisdiction is proper because:

14 (a) The proposed class includes more than 100 members, and many of the named
15 plaintiffs and class members are citizens of states that are diverse from the state of Defendants'
16 citizenship, the amount in controversy in this class action exceeds five million dollars, exclusive of
17 interest and costs; and

18 (b) Defendants have purposefully availed themselves of the privilege of
19 conducting business activities within the State of California, where Google has its principal place
20 of business; where its officers direct, control, and coordinate Google's activities, and where Google
21 engaged in the unlawful conduct alleged herein.

22 16. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391, because a
23 substantial part of the challenged conduct or omissions complained of herein occurred in this judicial
24 district, and defendant caused harm to at least one of the named plaintiffs and numerous class
25 members in this judicial district.

26 **INTRADISTRICT ASSIGNMENT**

27 17. Pursuant to Civil L.R. 3-2(c) and (d), assignment to the San Jose Division is proper
28 because a substantial part of the conduct which gives rise to Plaintiffs' claims occurred in this district

1 and specifically in Santa Clara County where Google is headquartered. Additionally, Google's
2 Terms of Service contain a provision in favor of this Division.

3 **SUBSTANTIVE ALLEGATIONS**

4 **A. The Rise of In-App Purchases, Google Play Store, and Google's Control of Apps**

5 18. Videogames have been popular for decades. For much of that time, game developers
6 created and sold videogames to consumers either directly or through third-party retailers, such as
7 GameStop, a model known as "pay-to-play." Before the widespread use of the internet, pay-to-play
8 was the way for videogames generates revenue. Under this model, consumers paid an upfront, single
9 price to obtain a fully functional videogame: most of the time consumers paid for a physical
10 computer disc or cartridge that was loaded with the game. With the advent of the internet, the "free-
11 to-play" model began, which was further accelerated by the rise of smartphone use and apps. With
12 the free-to-play model, anyone could play the functional game for free, but the game had a mixed
13 variety of paid and free business models with assorted monetization strategies. They included selling
14 advertisements, but also "microtransactions." "Microtransactions" are transactions where players
15 can purchase virtual items for relatively small amounts of money. They are commonly employed in
16 free-to-play games. Loot boxes are a form of in-app microtransaction.

17 19. As the pay-to-play model started to disappear, Google met the demand for free and
18 low-cost apps through its Google Play Store. About one billion people have devices loaded with
19 Google's Android operating system, the most pervasive operating system in the world. To load an
20 app onto one of these Android devices, one must go to the Google Play Store, accessed through its
21 own app that comes preloaded on Android devices.

22 20. As of March 2020, the Google Play Store featured over 2.9 million apps. Ninety five
23 percent of these apps are free to download. In 2019, Google Play customers downloaded 84.3 billion
24 mobile apps globally.

25 21. The Google Play Store contains thousands of game apps which can be downloaded
26 directly onto the Android-based device and played. Game apps are an activity, just like any other
27 game. Game apps are simply videogames – computer code that turns smart phones, tablets, and
28 computers into gaming devices.

1 27. Google is the “Merchant of Record” under the Developer Distribution Agreement
2 for the in-game purchases distributed and sold in the United States.

3 3.4 Acting as Your agent, and with You acting as a principal, Google is the
4 merchant of record for Products sold or made available to users in the
5 countries/territories described here.

6 28. Google provides a variety of services in addition to processing payments of in-app
7 purchases. It promotes, markets, and sells in-app purchases. It also helps game developers design
8 in-app purchases to maximize revenue potential and provides software development kits to assist
9 game developers in creating loot boxes.

10 29. Google is well paid for the many services it provides in the development and sale of
11 loot boxes and other in-app items. In accordance with the Developer Distribution Agreement, the
12 payment for all in-game purchases, including loot boxes, is controlled entirely by Google. Using
13 Google Play’s required billing payment system, the payments go directly to Google. However, as
14 illustrated by the pay structure, Google does far more than merely process online payments. An
15 online payment processor charges about 3% for processing payments over the internet. In
16 recognition of the role Google plays, Google and its game developers have a revenue sharing
17 arrangement where Google receives 30% of all revenue from the sale of loot boxes.

18 30. Google helps game developers create loot boxes and other in-game purchases that
19 maximize revenue. In so doing, Google exercises absolute control over numerous aspects of the
20 development, marketing, and sale of loot boxes and other in-app purchases, including deciding
21 whether to permit activities such as loot boxes and other forms of gambling through the Google Play
22 Store.

23 31. Under the Developer Distribution Agreement, Google requires game developers to
24 comply with its Developer Program Policy and provides that the game developers will develop and
25 sell in-app purchases with Google. The Developer Program Policy explains:

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27 ///
28 ///

1 Your innovation is what drives our shared success, but with it comes responsibility.
2 These Developer Program Policies, along with the Developer Distribution
3 Agreement, ensure that together we continue to deliver the world's most innovative
4 and trusted apps to over a billion people through Google Play.³

5 32. Through the Developer Distribution Agreement, Google creates and controls much
6 of the content of these games. For example, Google requires game developers to use Google's
7 "Software Development Kit" for the games to be offered on Google Play. Only by using Google's
8 SDK can the game developer also use the Google Analytics service to gain information about a
9 gamer's use of the game, or use Google's "ad exchange" services such as AdMob.

10 33. The Software Development Kit has its own code that is written and developed by
11 Google. Google requires it to be incorporated into every app game. The Software Development Kit
12 content provides Google a significant commercial benefit in addition to in-app loot box purchases
13 because not only is it the means for a developer to access the Google Play payment processor, but
14 it causes the app games to copy and transmit many different types of "communications" between
15 the user on the one hand, and the game developers on the other hand, which Google can use for
16 targeted advertising and other commercial purposes.⁴

17 34. Google's Developer Program Policy controls and regulates the type of games and in-
18 app purchases that are allowed, including whether to permit activities such as gambling and the
19 extent to which they are permitted by Google, including loot boxes.

20 35. The Developer Program Policy permits loot boxes, while prohibiting all other types
21 of gambling. The Developer Program Policy prohibits wagering with money or with in-app items
22 purchased with money, such as virtual currency. With respect to gambling generally, the Developer
23 Program Policy advises game developers that:

24 We don't allow content or services that enable or facilitate users' ability to wager,
25 stake, or participate using real money (including in-app items purchased with money)
26 to obtain a prize of real world monetary value. This includes but is not limited to,
27 online casinos, sports betting, and lotteries that fail to meet the requirements for

28 ³ <https://support.google.com/googleplay/android-developer/answer/10355942?hl=en>

⁴ Google's coercive use of the SDK and surreptitious copying of app user information is currently the subject of an MDL proceeding against Google in the Northern District of California, titled *In re: Google Play Store Antitrust Litigation*, Case No. 3:21-md-02981 (Donato, J.).

1 Gambling apps noted above, and games that offer prizes of cash or other real world
2 value.

3 36. However, it makes an exception for loot boxes by placing a meaningless condition
4 on their use. The Developer Program Policy provides:

5 Apps that employ in-store or in-app purchases must comply with the following
6 guidelines:

7 Apps offering mechanisms to receive randomized virtual items from a purchase (i.e.
8 “loot boxes”) must clearly disclose the odds of receiving those items in advance of
purchase.

9 37. Separately, Google generally requires parental disclosures according to specific
10 guidelines determined by Google and undertakes to police those guidelines. Those required
11 disclosures include “age appropriate” disclosures and whether games involve activities such as
12 “gambling” or “simulated gambling.” But Google does not require any disclosure that the games
13 contain loot boxes or that loot boxes are a form of gambling. In effect, Google prohibits warnings
14 that loot box play is a form of gambling because it dictates how and when disclosures are made.⁵

15 38. Google also requires developers to use the Entertainment Software Ratings Board
16 (“ESRB”) disclosures published by the Entertainment Software Association. The Entertainment
17 Software Association is a lobbying group for the videogame industry. It describes itself and its
18 mission as follows:

19 The Entertainment Software Association serves as the voice and advocate for the
20 video game industry. Our mission is to expand and protect the dynamic worldwide
marketplace for video games.⁶

21 39. According to the ESRB’s website,

22 ESRB ratings provide information about what’s in a game or app so parents and
23 consumers can make informed choices about which games are right for their family.

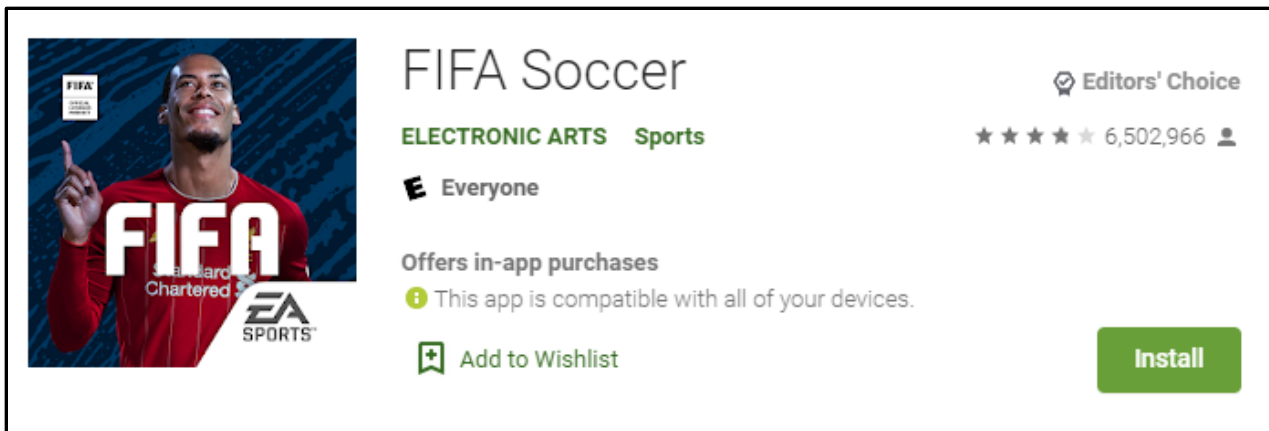
24 ⁵ Last year the ESRB announced it was adding a requirement for games containing loot boxes
25 that the game must disclose “In-Game Purchases (Includes Random Items).” Although this does not
26 actually disclose gambling or loot boxes, even this small concession has not been implemented by
Google. For example, as set forth below the FIFA Soccer game only states “Offers in-app
purchases.”

27 ⁶ See <https://www.theesa.com/about-esa> (last visited Mar. 16, 2021); see also
28 <https://www.theesa.com/esa-research/2020-essential-facts-about-the-video-game-industry/> (“[t]he
ESA represents the U.S. video game industry”).

1 Ratings have 3 parts: Rating Categories, Content Descriptors, and Interactive
2 Elements.

3 40. For games that contain lucrative loot boxes, the ESRB does not require a disclosure
4 that loot box plays are sold through the games that contain them, that they constitute gambling, or
5 that they foster compulsive and addictive behaviors, even for games rated for children and teenagers.
6 By requiring developers to follow ESRB ratings guidelines, Google effectively prohibits game
7 developers from making disclosures about loot boxes.

8 41. Since 2015, Google has provided ESRB-based age-ratings for games available from
9 the Google Play Store, but never discloses to parents the presence of loot boxes, that they are
10 gambling devices, or that they can lead to compulsive behavior and addiction. The only related
11 disclosure available to parents is that a game “Offers in-app purchases.” As an example, below is a
12 screen shot of Google Play’s disclosures concerning the FIFA game⁷:



20 **B. What Is a Loot Box?**

21 42. A loot box is a type of in-app purchase that, for a fee, allows a player to take a
22 randomized chance to obtain something of value. That is, a loot box is a gambling device. Google
23 describes loot boxes as an in-app “mechanism” that provides users with “randomized virtual items
24 from a purchase.”⁸

27 ⁷ https://play.google.com/store/apps/details?id=com.ea.gp.fifamobile&hl=en_US

28 ⁸ <https://support.google.com/googleplay/android-developer/answer/9858738?hl=en;>
<https://support.google.com/googleplay/android-developer/answer/10355942?hl=en>

1 43. A loot box is sold within another game that Google typically offers for free. Loot
2 boxes work like a slot machine. Functionally, a loot box works the same regardless of the game in
3 which it is found. First, through the Google Play Store, a player purchases virtual coins used to buy
4 a chance at a loot box. Once purchased, the player clicks on the loot box. The loot box then lights
5 up, flashes, and makes noises to build excitement as the player anxiously waits to see if he or she
6 will win a rare and valuable prize. No skill whatsoever is required – a loot box is purely game of
7 chance.

8 44. A loot box play is purchased only through the Google Play Store using money,
9 usually with a credit card number or Google Play gift card. The player uses money to purchase
10 virtual currency, and then uses the virtual currency to purchase a chance on a loot box. Whether the
11 purchase is viewed as being made with fiat currency or with property in the form of virtual currency
12 purchased with money, a loot box play costs real money.

13 45. With an Android device, Google makes it very easy for a player to purchase a loot
14 box. Once the “Purchase” button is pressed, Google charges the credit card number on file with the
15 Google Play Store or deducts the amount from the Google Play gift card. There is no additional
16 confirmation. A minor can accomplish the purchase without parental consent or knowledge. Loot
17 boxes generated revenue in excess of \$30 billion during 2018 and is projected to reach \$50 billion
18 by 2022.⁹

19 46. In accordance with Google’s game design recommendations and to create scarcity,
20 game developers assign very long odds to the more desirable loot box prizes. In attempt to placate
21 loot box critics, Google requires game developers to publish the odds of winning loot box prizes.
22 *See* <https://play.google.com/about/developer-content-policy-print/> (“Apps offering mechanisms to
23 receive randomized virtual items from a purchase (i.e. ‘loot boxes’) must clearly disclose the odds
24 of receiving those items in advance of purchase.”). However, stating the odds of winning does not
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27 ⁹ Wright, M. (Apr. 17, 2018), *Video gamers will be spending \$50 billion on gambling-like*
28 *loot box features by 2022, according to analysts*, available at
<https://www.telegraph.co.uk/technology/2018/04/17/video-gamers-willspending-50-billion-gambling-like-loot-box/>.

1 deter people from gambling. It does not work with slot machine players or loot box players,
2 especially children and teenagers.¹⁰

3 47. Google permits, encourages, and directs developers to place loot boxes in every
4 category of game offered through the Google Play Store, including games in the categories of
5 “Educational,” “Trivia,” “Word,” “Casual,” “Action,” “Adventure,” “Sports,” and “Strategy.”

6 **C. Examples of Loot Boxes**

7 48. Below are seven examples of loot boxes found in some of the most popular games.
8 Regardless of the game, loot boxes and the currency for purchasing them remains the same. Like
9 slot machines found in a casino, the superficial aspects of loot boxes found in different games – such
10 as the names, graphics, and sounds of the loot boxes – may differ, but the loot box devices are the
11 same. Regardless of the game, each loot box contains the elements that constitute gambling:
12 consideration, chance, and the possibility to win prizes of value. Any differences are purely
13 cosmetic.

14 **Example 1: Mario Kart Tour**

15 49. Mario Kart Tour is a popular and “free” animated kart racing game released by
16 Nintendo in September 2019. The game is rated it “E” for “Everyone.” Mario Kart Tour was
17 downloaded more than 123 million times during its first month. During that short time, it generated
18 \$37.4 million in player in-app revenue. As of March 2020, Mario Kart Tour has been the number
19 one app by overall downloads in 65 countries on Google Play.

20 50. A loot box in Mario Kart is called a “Pipe.” A player purchases a Pipe, clicks on it,
21 and then the Pipe shoots out a random prize of value. The prize may be a driver, kart, or glider of
22 common or rare variety.

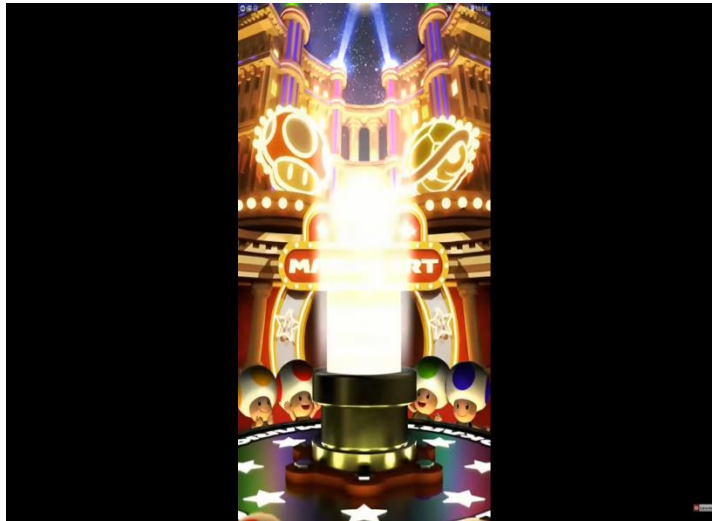
23 51. Virtual “rubies” are the main form of currency in the game. A player buys a “pipe”
24 in-game with the “rubies” purchased for money through Google Play. Google sells them in various
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26 _____
27 ¹⁰ See, e.g., *Score Family Fun Ctr. v. County of San Diego*, 225 Cal. App. 3d 1217, 1221 (1990)
28 (rejecting the argument that the ability to calculate odds meant a virtual casino game was not illegal
gambling: “this [odds] calculation does not predict, to the individual player, whether his particular
ticket will win”).

lots. For example, the player can purchase 3 Rubies for \$1.99 (\$0.66 per Ruby), 23 Rubies for \$12.99 (\$0.56 per Ruby), or 135 Rubies for \$69.99 (\$0.52 per Ruby). They can also be earned in limited amounts through game play.

52. Depending on the Pipe, each Pipe contains a determined amount of “Normal,” “Super,” and “High-End” items that one has a theoretical possibility of winning. Google and the game developer set the odds of winning a given prize based on their class and rarity. By design, the results are randomized, with the more valuable items being less likely to win. It is most likely a player will win an item that already has been obtained or is otherwise not desirable.

53. The following is a screenshot of a player opening a Pipe:



54. As one video game critic noted, the mechanics of Mario Kart’s loot box are designed to cause children to spend money on Pipes:

Mario Kart Tour locks its racers, karts and gliders behind a randomized loot box system, where if you spend a couple of rubies you can get a green Mario pipe to fire out some new item, maybe one of those super rare characters you’ve been wanting or maybe that glider you need to get five stars on that same clone of the same course you’ve raced on five times already. There isn’t even a character I particularly want here, and yet I keep pulling this thing down and reveling in its “surprise mechanic” of an animation, hoping that whatever emerges from that glowing white ball will give me some sort of peace. Spoilers! It won’t.

And this is the beating heart of Mario Kart Tour, the reason that Nintendo turned its game into a morass of currencies, unlocks, XP bars and [loot box] mechanics. The reason is that they work: they give us a little dopamine drip in our brains that the developer can parcel out to push us towards buying rubies on our own rather than “earning” them by grinding through what is bound to be an endless series of samey

1 races. All it needs to do is give you a few rewards for free before you're hooked into
2 that glorious feeling of pulling that pipe back: it's why loot boxes in so many games
3 have such elaborate animations and detailed sound effects: those loot boxes are the
4 heart of the experience, and they need to hit your animal brain as hard as they can.
5 And it works in Mario Kart Tour as well as any. I opened up the game to take a
6 screenshot for this article and played a few races, throwing a few more arbitrary stars
7 onto my totals.

8 I haven't spent any money on Mario Kart Tour yet, and I don't plan on doing so. I
9 can hold out until Shadowkeep for Destiny 2 launches, opening up a much broader
10 and more satisfying dopamine source. *But others won't be so lucky, particularly*
11 *children. They'll shell out some huge amount of money for some miniscule chance*
12 *to unlock musician Mario, and then they'll shell out more for the next thing. It's*
13 *disappointing to see from Nintendo, but the developer is clearly going to keep doing*
14 *it. It works.*¹¹

15 55. In September 2019, Nintendo (the game's publisher) announced it was not offering
16 Mario Kart Tour in Belgium because its loot boxes are prohibited under Belgian law. Nevertheless,
17 Google and Nintendo have continued to market and sell Mario Kart Tour and its in-game loot boxes
18 to consumers throughout the United States.

19 **Example 2: FIFA Soccer**

20 56. FIFA Soccer (mobile) is an online sports game developed by EA Sports that is free
21 to download from the Google Play store. FIFA is rated "E" for "Everyone". FIFA mobile allows
22 players to complete drills and contests, play online against other players, and compete in online
23 tournaments and leagues.

24 57. A large part of the FIFA game revolves around creating one's own team, which the
25 player uses to play other teams. To get the best players for one's team, one can take a chance on
26 FIFA's version of a loot box, known as a "Card Pack" or "Player Pack." These Packs are purchased
27 with FIFA Ultimate Team ("FUT") Coins, the name of the virtual currency used in FIFA and
28 purchased through Google Play. The potential prizes one can win by playing these loot boxes are
29 players for one's team.

30 58. Critics view the Card and Player Pack loot boxes as slot machines:

31 ¹¹ "I'm Still Playing Mario Kart For The Worst Reason," *Forbes* October 1, 2019 (Thier,
32 Dave). Available at <https://www.forbes.com/sites/davidthier/2019/10/01/im-still-playing-mario-kart-tour-for-the-worst-reason/#977582468cad>

1 “The thrill of opening a pack to hopefully land on of soccer’s most prominent names
2 is similar to rolling the ice in roulette or pulling the lever on a slot machine. It often
3 leads to disappointment, but the potential, however small, to win big keeps players
4 buying packs. When FUT coins run dry, players can purchase FIFA points using real
world currency and use them towards card packs. It a vicious cycle and one
insidiously glorified in countless loot box YouTube videos.”¹²

5 59. Researchers have found FIFA’s loot boxes “clearly serve as a proxy for gambling,
6 encouraging money bets on items of chance, which increases a player’s exposure to gambling-
7 related content and promotes perceived-efficacy for gambling.”¹³

8 60. While burying the odds of winning desirable players in a drop-down box, the most
9 desirable players are prominently displayed to sell loot boxes chances. These hard-to-win but
10 prominently displayed soccer players include Mbappe, Lewandowski, and Hazard. While the odds
11 of winning these players are extremely low, players are enticed by the thought of the win.

12 61. The producer and writer for *Bleacher Reports’* gaming content described FIFA as a
13 gambling system:

14 “Like any effective gambling system, the big prizes—say, Lionel Messi or Cristiano
15 Ronaldo—are not going to appear often but always seem within reach. This can lead
16 to accumulating massive spends without knowing. A common response to the survey
was players admitting they didn't realise how much they'd spent until they sat down
to work it out. One user estimated spending \$280,000 across a decade.”¹⁴

17 62. The Belgian Gaming Commission described how the prizes from FIFA loot boxes
18 are valuable:

19 A win and loss is experienced with the paid loot boxes. The loot boxes always contain
20 one or various players and items that can be used throughout the game to win
21 something. The more expensive the loot box, the bigger and more exceptional the
22 win is portrayed as being. Wins and losses are clearly shown in the system of
duplicate prizes. Winning duplicate items in a loot box is a regular occurrence; items
that cannot be quickly sold because they are not worth anything and that cannot be

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24 ¹² “Proof You’ll Regret Wasting Money on That FIFA 20 Loot Box.” Thomas Bardwell. CCN,
25 *Gaming News*. Available at <https://www.ccn.com/proof-youll-regret-wasting-money-on-that-fifa-20-loot-box/>.

26 ¹³ Wen Li, Devin Mills, Lia Nower, *The relationship of loot box purchases to problem video
gaming and problem gambling*, Addictive Behaviors, 97:27-34 (Oct. 2019).

27 ¹⁴ “Is It Too Expensive To Be Good At FIFA?” Nick Ackerman. *Bleacher Report*. May 20,
28 2019. Available at <https://bleacherreport.com/articles/2836528-is-it-too-expensive-to-be-good-at-fifa>. This article is not limited to “Apps” but appears to refer to the console and computer versions of the game as well.

1 saved either, forcing the player to immediately transact them, as it were. This is
 2 noteworthy because as soon as the loot box is opened, the computer system lets the
 3 player know that this is a duplicate prize, which means that this duplicate prize could
 4 have been avoided. In the case of a paid loot box, the player has thus received a
 5 useless item, which constitutes a lost wager.

6 The goal of the online game with paid loot boxes is to compile the strongest possible
 7 football team in order to win matches and gain status among the other players. If you
 8 obtain strong players by purchasing loot boxes, then this constitutes a win in the
 9 game. Rankings are also provided for teams that indicate which position a player has
 10 won or lost. These rankings appear to be greatly locally/regionally oriented.¹⁵

11 **Example 3: Roblox**

12 63. Roblox is a popular multiplayer online video game and game creation system that
 13 gamers download for free from the Google Play Store. With Roblox, relatively unskilled developers
 14 can design games that are then played by others. Roblox-designed games are particularly popular
 15 with children and is ranked #1 in Google Play apps in the Family/Action & Adventure category.
 16 Roblox has more than 100 million active monthly users and has generated over \$1 billion in revenue.
 17 It is age-rated “Everyone 10+” in the Google Play Store.”¹⁶

18 64. Loot boxes are put into many games that require no skill and are targeted to children.
 19 Roblox developers often admit they often use loot boxes merely to “scam” children. According to
 20 one Roblox game developer, “[a] lot of times it always seems as if they were trying to scam children,
 21 obviously this is not always the case, but some really do.”¹⁷

22 65. The virtual currency used to buy loot boxes in Roblox is called “Robux” and is
 23 purchased with real money.

24 **Example 4: Brawl Stars**

25 66. Brawl Stars is a multiplayer online battle arena game where players battle against
 26 other players. Brawl Stars is free to download from the Google Play Store. It is currently ranked #37
 27 in Google’s action game apps and is age-rated as “Everyone 10+.”

28 ¹⁵ Belgian Gaming Commission, *Research Report on Loot Boxes* (April 2018).

¹⁶ These numbers include Google Play and Apple users. “Roblox Mobile Has Grossed over \$1 billion in Lifetime Revenue.” Nov. 15, 2019. Katie Williams. *Sensor Tower*. Available at <https://sensortower.com/blog/roblox-one-billion-revenue>.

¹⁷ Available at <https://devforum.roblox.com/t/guidelines-around-users-paying-for-random-virtual-items/307189/66>

1 67. Brawl Stars players can unlock and play against each other (or the computer) with
2 different brawlers. Each brawler has its own unique offensive or defensive “kit.” Players want the
3 best brawlers to increase their chances of winning games.

4 68. The name of the Brawl Stars’ loot box is the “Brawl Box.” Brawl Boxes are
5 purchased with Brawl Stars’ version of in-game currency called “Gems.” Gems are purchased
6 through the Google Play Store for money. A “fistful of Gems” is 30 Gems and costs \$1.99, a “pouch”
7 of 80 gems is \$4.99, and a “crate full” of 950 Gems is \$49.99.

8 69. As required by Google, Brawl Stars displays the odds of winning Brawl Box prizes.
9 The best brawler in the game – and therefore the most coveted – is a “Legendary Brawler.” A player
10 typically has only a 0.3% chance of winning a “Legendary Brawler.” That means a gamer must
11 purchase hundreds of loot box plays to be sure to win a Legendary Brawler.¹⁸ To tempt players to
12 purchase Brawl Boxes, Brawl Stars uses an algorithm to slightly increase the odds of winning a
13 Legendary Brawler each time the player purchases a Brawl Box.

14 **Example 5: Final Fantasy Brave Exvius**

15 70. Final Fantasy Brave Exvius is a role-playing game where players command their
16 characters to attack and move through a series of stages until they encounter and defeat the “boss.”
17 Final Fantasy Brave Exvius is free to download from the Google Play Store. It has been downloaded
18 over 40 million times. Final Fantasy Brave Exvius is age-rated “T” for “Teen.”

19 71. The name of the Final Fantasy Brave Exvius’ loot box is the “Summons.” A
20 Summons is purchased with Final Fantasy Brave Exvius’ version of in-game currency called “Lapis
21 Crystals.” Lapis Crystals are purchased through the Google Play Store for money. A Summons
22 offers the chance of winning rewards and new and better characters. One has the worst odds of
23 obtaining the best characters from a Summons.

24 72. In an article published in *Polygon* about loot box addiction, the author describes how
25 the Summons loot box works:

26
27 ¹⁸ The probability of receiving a specific item from a loot box is referred to as the “drop rate.”
28 Each Brawl Box provides 3 random draws, and each random draw has the same drop rate of
approximately 0.1%.

1 The main way of improving your collection is by taking pulls on a slot machine. It's
 2 what many call a gacha game, after Japanese gachapon toy-vending machines.
 3 Instead of having characters join the party during the story like they might in a
 4 traditional role-playing game, the player buys loot box-like crystals that each contain
 5 a single random character in a "summon" tab. Making progress in the game earns a
 6 trickle of free Lapis gems, the currency used to buy summons, but the amount pales
 7 in comparison to buying Lapis with real money.

8 That leaves players feeling underfunded, as most pulls only have a 3 percent chance
 9 to get the rarest and best rank, a "rainbow" five-star character. And that rate was all
 10 rumor and supposition until a patch in late January 2018, when Gumi added the exact
 11 chances to pull a four- or five-star character, shortly after Apple announced plans to
 12 require posted drop rates for in-game purchases in iOS games. The change didn't just
 13 affect Brave Exvius; gacha games often use low drop rates and limited-time
 14 promotions to encourage players to pull and pull and pull to get the latest new
 15 addition. And many of these games encourage players to repeatedly pay large
 16 amounts.¹⁹

17 73. A middle-aged, married man going by "Nothing024" on Reddit reported spending
 18 \$1,500 in a day to obtain one character in Final Fantasy Brave Exvius. The odds of winning the
 19 character were 1-in-400, and each try cost \$2.50. The same man described another time when he
 20 spent \$700 for a character known as "Greg":

21 I put in my money again, \$99....no Greg, \$99....no Greg, \$99....no Greg.... I took a
 22 break for a little bit. My family had plans for the day. I was angry now. How could I
 23 have spent \$300 and not gotten what I wanted? When nobody was looking, around
 24 everyone, I did it again. \$99....no Greg, \$99...no Greg, \$99...no Greg, \$99... Finally.
 25 I had Gilgamesh. [...] Yeah, I spent \$700, but I would stop now. I had enough.²⁰

26 74. In November 2018, Square Enix (the game's publisher) announced it was no longer
 27 offering Final Fantasy Brave Exvius in Belgium because of "the present uncertain legal status of
 28 'loot boxes' under Belgian law." Nevertheless, Google and Square Enix have continued to market
 and sell Final Fantasy Brave Exvius and its in-game loot boxes to consumers throughout the United
 States.

¹⁹ "Players keep spending thousands of dollars on Final Fantasy Brave Exvius: Community members tell stories of banner addiction" Jay Allen. *Polygon*. June 8, 2018. Available at <https://www.polygon.com/features/2018/6/8/17435980/final-fantasy-brave-exvius-gambling-addiction-gacha>.

²⁰ *Id.*

Example 6: Dragon Ball Z: Dokkan Battle

75. Dragon Ball Z: Dokkan Battle is a free-to-play mobile game based on the Dragon Ball anime franchise and television series. Dragon Ball Z: Dokkan Battle is available from the Google Play Store for free. Since its release in 2015, the game has exceeded 300 million downloads and grossed more than \$2 billion worldwide. Dragon Ball Z: Dokkan Battle is rated “T” for teen.

76. The name of Dragon Ball Z: Dokkan Battle’s loot box is also the “Summons.” A Summons is purchased with Dragon Ball Z: Dokkan Battle’s version of in-game currency called “dragon stones.” Dragon stones are purchased through the Google Play Store for money. One dragon stone costs 99 cents, 6 dragon stones costs \$3.99 and 90 dragon stones costs \$44.99.

77. Dragon Ball Z: Dokkan Battle is made up of levels that play like a board game, with spots dedicated to items, power-ups, traps, and fights. During the fights, gamers can unlock “super attacks,” which is much more powerful than a typical attack. Gamers can also play with different characters. A Summons offers players the chance to win rewards and characters useful in the game.

78. As one online critic wrote about Summonses:²¹

[The] game requires immense Free-2-Play luck or some cash investment; however, even with cash investments, there’s no guarantee. This is a prime example of subtle gambling (not so much as subtle for adults, but for children) where the player buys a few stones, tries to pull for the character they want, but didn’t get them, so they’ll think, “Why not a few more stones? I really like this character.”

Example 7: “Who Wants To Be A Millionaire?”

79. In the “Trivia” category, Google offers for free an app game version of the TV game show “Who Wants To Be A Millionaire?”

80. “Who Wants To Be A Millionaire?” is rated “E for Everyone.”

81. The name of the loot box in this game is the “Mystery Box.” A Mystery Box is purchased with Who Wants To Be A Millionaire?’s version of in-game currency called “gems.” Gems are purchased through the Google Play Store for money. 150 gems cost \$1.99, 225 gems cost

²¹ <https://appgrooves.com/app/dragon-ball-z-dokkan-battle-by-bandai-namco-entertainment-inc/negative>

1 \$2.99, 400 gems cost \$4.99 (marketed as providing “6% More”), 900 gems cost \$9.99 (“20%
2 More”), 2,000 gems cost \$19.99 (“33% More”), and 5,500 gems cost \$49.99 (“46% More”).

3 82. Gems can only be spent on playing the Mystery Box loot boxes. A “Silver Mystery
4 Box” (which “Contains at least one Rare card!”) costs 250 gems, a “Gold Mystery Box” (which
5 “Contains at least two Rare card!”) costs 500 gems, and a “Diamond Mystery Box” (which provides
6 the “Best chance for Epic Experts”) costs 750 gems. Thus, given the conversion rate for dollars-to-
7 gems, playing the Silver Mystery Box for example costs \$2.27 to \$3.31.

8 83. Who Wants To Be A Millionaire? is a trivia game played head-to-head versus other
9 players. Similar to the television show, during the app’s trivia contests, gamers can use “lifelines”
10 to help them answer trivia questions. Mystery Boxes offer players the chance to win rewards such
11 as “experts” that come in four “rarities: Common, Uncommon, Rare, and Epic,” that are useful in
12 the game to help answer questions.

13 84. The following is a screenshot of a player opening a Mystery Box:

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D. Loot Boxes Create and Reinforce Addictive Behaviors Akin to Gambling Addiction

85. Loot boxes are designed to and do create and reinforce the same addictive and harmful behaviors associated with traditional gambling activities. Researchers have reached this conclusion by first examining the structural aspects and cognitive biases created by loot boxes and comparing them to casino games. Children, problem gamblers, and others are particularly susceptible to these cognitive traps. Researchers next performed quantitative research. Without exception determined that loot box spending is strongly associated with problem gambling behavior.

1 **1. Loot Boxes Are Structurally Similar to Traditional Gambling Games**
2 **and Exploit Gambling’s Cognitive Traps**

3 86. “The ‘starting block’ of problem gambling is often the availability of gambling
4 activities.”²² Recent peer-reviewed research (Zendle 2020) found that 58% of the top-100 grossing
5 games in the Google Play Store contained loot boxes, that 93% of the games containing loot boxes
6 (54 of 58) were rated at the Google Play Store as suitable for children aged 12 and above, and 57%
7 were rated suitable for children aged 7 and up. Loot box games rated suitable for children aged 3 and
8 up were installed 545 million times from the Google Play Store.

9 87. In their paper entitled “Predatory monetization schemes in video games (e.g. ‘loot
10 boxes’) and internet gaming disorder,” Professors Daniel King and Paul Delfabbro provided the
11 following description of a loot box, noting they all involve purchases with real money and resemble
12 “gambling slot machines”:

13 A loot box refers to an in-game reward system that can be purchased repeatedly
14 with real money to obtain a random selection of virtual items. The low probability
15 of obtaining a desired item means that the player will have to purchase an
16 indeterminate number of loot boxes to obtain the item. Loot boxes resemble
gambling slot machines because they require no player skill and have a randomly
determined outcome (i.e. prize).²³

17 88. To further entice consumers to spend real money on loot boxes, many of the games
18 use a “virtual” money system within the game. In the academic literature, this spending of real
19 money to obtain the requisite virtual in-game currency is referred to as the “eligibility condition” to
20 buying a loot box. That is, just like a casino exchanges cash for chips, instead of buying loot boxes
21 directly for a set dollar amount, the player must first purchase the in-game currency, which is then
22 used for loot boxes. In-game currencies frequently take the form of expensive-sounding items like
23 “gems” or “gold coins” so the player also feels he or she is getting something of value for the money.
24 The fact that loot box games do not allow the player to put physical money in the slot is not relevant,
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26 _____
27 ²² Zendle D, Meyer R, Cairns P, Waters S, Ballou N, *The prevalence of loot boxes in mobile*
and desktop games, *Addiction*, 115(9):1768-1772 (Sep. 2020).

28 ²³ King, Daniel and Delfabbro, Paul H., “Predatory monetization schemes in video games (e.g.
‘loot boxes’) and internet gaming disorder,” *Addiction*, 2018.

1 as contemporary gambling typically also is fully digitized (King et al. 2012). Further, the
 2 requirement to convert real money to proprietary currencies is the standard for gambling – with
 3 casino chips being the classic example.

4 89. This intermediate level of virtual currency acquired through abnormal exchange rates
 5 is also designed to reduce the salience of the real-world cost of loot box purchases and “disconnect”
 6 the gamer from the concern that real money is being gambled. The real money conversion necessary
 7 to purchase loot boxes has been analogized to the deception underlying casinos requiring the use of
 8 exchanged chips as its “in-game currency” because it is known players gamble “significantly more
 9 with chips than real cash.”²⁴ In fact, researchers have found that loot box systems are more highly
 10 associated with problem gambling when the amount players can spend on loot boxes is hidden
 11 behind the purchase of in-game currency.²⁵

12 90. Just like casinos handing out free chips or slot plays, certain games also award limited
 13 in-game currency for loot boxes as an introductory prize or at certain stages of gameplay. In
 14 gambling psychology, earned or free play is an addiction hook to give players a “taste” of what can
 15 be more quickly purchased.

16 91. In connection with its investigation into loot boxes, the Brussels Gaming
 17 Commission reached a similar conclusion about the deceptiveness of gambling with what is
 18 perceived to be virtual currency:

19 The use of points (coins) and especially their size are psychologically very
 20 sophisticated and aimed at creating a personal reality which is then disconnected
 21 from the real world. FIFA 18 teaches players to think in FUT currency and FIFA
 22 coins. . . . In Overwatch and Star Wars Battlefront II, the value of real money is
 23 also fully disconnected from the value of the in-game currency, causing players
 24 to lose contact with the real value.²⁶

25 ²⁴ Xiao Leon Y. and Henderson Laura L., “Towards and Ethical Game Design Solution to Loot
 26 Boxes: a Commentary on King and Delfabbro,” *Int’l J. of Mental Health and Addiction*, 2019. Julius
 27 Weintraub coined the famous saying “The guy who invented poker was bright, but the guy who
 28 invented the chip was a genius.”

²⁵ Zendle et al., *Adolescents and loot boxes: links with problem gambling and motivations for
 purchase*, Royal Society Open Science, 6(6):190049 (June 2019).

²⁶ Belgian Gaming Commission, *Research Report on Loot Boxes* (April 2018).

1 92. In their 2014 book *Virtual Economies*, Professors Vili Lehdonvirta and Edward
2 Castronova explain there are no differences between “real” or fiat currency and virtual currency –
3 “Both the US Dollar and World of Warcraft coins are fiat money.”²⁷ That is, “virtual world money”
4 is just a digital form of money like Bitcoin cryptocurrency or other now innumerable examples.

5 93. Loot boxes rely heavily on all the cognitive traps and behavioral heuristics involved
6 in gambling – doing everything possible to build up the player’s hoped-for win, tension, and
7 excitement, and in the process exploiting cognitive biases such as the gambler’s fallacy, near misses,
8 losses disguised as wins, sunk cost bias, an illusion of control, and the gambling behavior known as
9 chasing. Keith Whyte, Executive Director of the National Council On Problem Gambling, explained
10 to the FTC that loot boxes and slot machines are “so closely related”:

11 Given all everything we know about the similarities between boxes and slot
12 machines, it would actually be astounding and surprising were there not such a
13 connection. They are, in many ways, so closely related.²⁸

14 94. The similarities between gambling and loot boxes start with audio-visual effects that
15 provide the sensory feedback long used in casinos. For example, in many games opening the loot
16 box coincides with triumphant music (like the sounds of falling tokens onto a metal tray, loud
17 buzzing or musical tunes after winning on a casino’s slot machine), the loot box itself bursting open
18 with bright lights and colors. Yet these manufactured sound effects and colorful animations often
19 give the player common or duplicate items, and rarely does the player get exactly the item he wanted.

20 95. Gambling experts have raised concerns because loot boxes play off the identical
21 sensory feedback used in traditional casino games:

22 I would suggest you watch some of the animations used in games when ‘opening a
23 loot box,’ try to divorce them from similar animation and sound techniques used on
24 poker machines, you probably won’t be able to.

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26 ²⁷ Vili Lehdonvirta & Edward Castronova, *Virtual Economies: Design and Analysis*, at 191
(2014).

27 ²⁸ Workshop transcript from *Inside the Game: Unlocking the Consumer Issues Surrounding*
28 *Loot Boxes*. An FTC Workshop (Aug. 7, 2019), available at
https://www.ftc.gov/system/files/documents/videos/inside-game-unlocking-consumer-issues-surrounding-loot-boxes-session-2/ftc_loot_boxes_workshop_transcript_segment_2.pdf.

1 When opening the boxes, the possibilities of what may be ultimately draw for the
 2 player is scrolled across before them on their screen. This is identical to the way a
 3 slot machine scrolls around before ultimately stopping. As with the slot machine, the
 4 graphic display eventually stops on an item, which is given to the player – regardless
 5 of whether that is what they desired or not.²⁹³⁰

6 96. The loot box lights and sounds exploit the near-miss psychological effect of
 7 gambling. The player typically experiences the following when opening a loot box: shaking or
 8 dramatic animations, exciting or suspenseful noises, and above all, the split-second glimpse of the
 9 rarity of the items that are about to be unlocked. This, just before being awarded with something the
 10 player already possesses (a double, a common skin, or weapon, etc.), disappointing the player and
 11 not really “winning”. The player already owns the “won” prize and therefore will not benefit from
 12 it. The disappointment and the intensity of the effect increase when the “reward prediction error”³¹
 13 is low. This occurs when the player has low expectations, then suddenly glimpses the colors of the
 14 possible items he is about to receive. For a split second, he sees a rare color, and there comes the
 15 rush of dopamine, as the player is pleasantly surprised by the fact that he is about to win a rare item
 16 – only to be disappointed at the reveal that that particular item is something he already owns. On
 17 the flip side, another scenario could be that the player has won an extremely rare item when his
 18 expectations were low, and was therefore pleasantly surprised. He might give it another try, but this
 19 time the expectations will be higher due to the previous win – and the disappointment will also be
 20 higher when the same stroke of luck does not happen.

21 97. Loot boxes use more than just the audio-visual effects and near-miss psychologic
 22 triggers associated with traditional gambling mechanisms. Loot boxes are also designed to exploit
 23 the other major cognitive biases that explain gambling behavior and create gambling addiction. For
 24 instance, loot boxes are designed to create a slot machine effect and play off gambling’s cognitive

25 ²⁹ Commonwealth of Australia, The Senate, *Environment and Communications References*
 26 *Committee: Gaming micro-transactions for chance-based items*, at p.37 (Nov. 2018).

27 ³⁰ Similarly, the Belgian Gaming Commission also observed that “the player is confronted with
 28 animations that are very similar to animations used in slot machine operation.” Belgian Gaming
 Commission, *Research Report on Loot Boxes* (April 2018).

³¹ Reward Prediction Error or “RPE” refers to when low expectations award a higher amount
 of dopamine at the unexpected pleasant result of an action or event, and when high expectations
 award a bigger disappointment to the unexpected disappointing result.

1 bias characteristic known as the “gambler’s fallacy,” where even when a player is not receiving the
2 desired result – which happens frequently – there still exists a belief and hope that the next loot box
3 will contain the desired item(s). This is further reinforced when viewing favorable results from other
4 players opening loot boxes.³² The bias occurs when “the expectation that the probability of winning
5 increases with the length of an ongoing run of losses.”³³

6 98. One researcher described the physical experience invoked by this loot box
7 mechanism. The prime culprit is dopamine and loot boxes’ uncertainty boosting its effects:

8 Research by Kim (1998) found that waiting for the outcome of a gamble can activate
9 the brain’s chemical reward system, releasing endorphins that create pleasure. In a
10 gaming context, think of someone who really wants the Pharah Anubis skin in
11 Overwatch. They buy five loot boxes and get excited during the big flashy box-
opening animation. This excitement happens five times in a short space of time, with
five flashy box-opening animations that are almost an event in itself.

12 99. Another cognitive bias unfairly exploited by loot boxes is known as “sunk cost” bias.
13 Sunk cost bias describes a decision-making heuristic where an individual escalates their
14 commitment to a previously chosen, but unsuccessful course of action to justify these prior
15 investments. If a gamer spends \$5 on loot boxes and does not receive the prize he or she was hoping
16 to win, the gamer faces the choice of either stopping and accepting the loss or spending an additional
17 \$5, \$10, \$100, *etc.* to recuperate the initial loss. Once a player has started down this path it is often
18 hard to stop. This is particularly true for children, teenagers, and others vulnerable to gambling.

19 100. Commenting on loot boxes, Hawaiian congressman Chris Lee noted that loot boxes
20 “are specifically designed to exploit and manipulate the addictive nature of human psychology.”

21 101. Loot boxes are built around artificial scarcity. The main idea behind loot boxes is
22 that sales will increase because the more items the gamer already has, the less probable it is that
23 they will get what they want with a single purchase. The result of this statistical scarcity is that
24 gamers must purchase more loot boxes to increase their odds.³⁴ Therefore, loot box prizes are

26 ³² There are thousands of videos on YouTube.com of gamers opening loot boxes in many,
27 many different games. *See, e.g.*, video of opening FIFA Ultimate Team packs with over 14 million
views at: https://www.youtube.com/watch?v=CX0OZtaQ_kQ.

28 ³³ Willem A. Wagenaar, *Paradoxes of Gambling Behaviour*, at 13 (2016 ed.).

³⁴ In fact, the manufactured odds of receiving some loot box items are so slim the Nevada

1 classified using value-laden words to describe rarity levels, such as “Common,” “Rare,” “Epic,” and
 2 “Legendary” depending on the probability of getting them (which results from the randomized prizes
 3 awarded). Loot boxes also often play off notions of seasonal rarity, which often can be more
 4 aesthetically polished, and time-locked – that is, a gamer can only get them for a limited time, which
 5 adds to the pressure to buy the loot box in the moment to win. The most common ones are recurrent,
 6 with themes like Halloween, Christmas, Chinese New Year, April Fools, Easter, or the game’s own
 7 anniversary. Others, on the other hand, are unique or take place more occasionally – like World
 8 Championships, World Cups or the Olympics.



14 102. Larche *et al.* (2021) conducted experiments that found “loot boxes containing rare
 15 items are more valuable, arousing, rewarding and urge-inducing to players, similar to the way slots
 16 gamblers treat rare large wins in slots play.”³⁵

17 103. It is most likely a player will win an item that already has been obtained or is
 18 otherwise not desirable. However, these “losses disguised as wins” (LDWs) are another
 19 psychological factor at play with both traditional gambling games and with loot boxes. This
 20 psychological factor traditionally occurs when a player gains a credit on the spin of a slot machine,
 21 but it is fewer credits than the original wager. It also takes place when casinos offer
 22 “complementary” food, drinks, and accommodations. This outcome alters the gambler’s experience
 23 because the player feels like he or she won something out of the ordeal, but in reality lost. Obtaining
 24
 25

26 _____
 Gaming Control Board would declare them illegal for slot machines.

27 ³⁵ Larche CJ, Chini K, Lee C, Dixon MJ, Fernandes M, *Rare Loot Box Rewards Trigger Larger*
 28 *Arousal and Reward Responses, and Greater Urge to Open More Loot Boxes*, *J Gambl Stud*,
 37(1):141-163 (Mar. 2021).

1 a common or duplicate item when opening a loot box is a loss; it is like “winning a free drink” or
2 “winning \$1” after wagering \$2 – the player won something, but de facto lost.³⁶

3 104. Psychologists call the principle of how loot boxes work on the mind “variable ratio
4 reinforcement.” This kind of reward structure underpins many forms of gambling such as slot
5 machines. It results in people quickly acquiring behaviors and repeating these behaviors frequently
6 in hopes of receiving a reward by thinking they are one step closer to getting the reward the next
7 time. Dopamine cells are most active when there is maximum uncertainty, and dopamine system
8 responds more to an uncertain reward than if the same reward delivered on a predictable basis.

9 2. Loot Box Gambling Exploits Vulnerable Populations Such as Children

10 105. Children and adolescents are especially vulnerable to the type of psychological
11 manipulation at play with loot boxes. Teenage gambling, like alcohol and drug abuse in the 1930s,
12 is the fastest growing addiction.

13 106. First, adolescents have low impulse control. The teenage brain is still developing; the
14 part of the brain that is responsible for good impulse control and decision making is not fully
15 developed. Dr. Frances Jensen, the chair of the department of neurology at the University of
16 Pennsylvania Perelman School of Medicine and formally Harvard professor and director of
17 neuroscience at Boston’s Children’s Hospital, explains: “their frontal lobes are there. They’re there
18 and they’re built. They’re just not accessed in as rapid a manner because the insulation to the wiring
19 to them isn’t fully developed, so the signals go more slowly. Hence, teenagers are not as readily able
20 to access their frontal lobe to say, oh, I better not do this. An adult is much more likely to control
21 impulses or weigh out different factors in decisions, where a teenager may not actually have full on-
22 line, in-the-moment capacity.” Dr. Frances Jensen, *Why Teens are Impulsive- Prone and Should*
23 *Protect Their Brains*, NPR (Jan. 28, 2015). Adolescence is a developmental period characterized by
24 suboptimal decisions and actions. Casey et al., *The Adolescent Brain*, Annals of the New York

25
26 ³⁶ Graydon C, Stange M, Dixon MJ, *Losses Disguised as Wins Affect Game Selection on*
27 *Multiline Slots*, J Gambl Stud, 34:1377–1390 (2018) (“Despite the net loss to the player, LDWs are
28 accompanied by salient visual graphics and high fidelity winning sounds...players behaviorally
miscategorize LDWs as wins” and “LDWs can lead players to continue gambling despite financial
loss, and increase play durations.”).

1 Academy of Sciences, 1124(1):111–126 (2008). During this time, impulse control is still relatively
2 immature. *Id.*

3 107. Second, adolescents are more inclined to engage in risk-taking behaviors and risky
4 decision making than are adults. Margo Gardener & Laurence Steinberg, *Peer influence on risk*
5 *taking, risk preference, and risky decision making in adolescence and adulthood: an experimental*
6 *study*, *Developmental Psychology*, 41L625-635 (2005). Adolescents and young adults are more
7 inclined to risk taking because development of executive brain function and appreciation of risk is
8 continuing in this period. Kelley et al., *Risk taking and novelty seeking in adolescence: Introduction*
9 *to Part I*, *Annals of the New York Academy of Sciences*, 1021(1):27-32 (2004); Laurence Steinberg,
10 *Cognitive and affective development in adolescence*, *Trends in Cognitive Sciences*, 9(2):69-74
11 (2005).

12 108. Third, not only are adolescents more likely to take risks, but they are also more prone
13 to addiction. “They build a reward circuit around that substance to a much stronger, harder, longer,
14 stronger addiction. That is an important fact for an adolescent to know about themselves - that they
15 can get addicted faster.” Dr. Frances Jensen, *Why Teens are Impulsive- Prone and Should Protect*
16 *Their Brains*, NPR (Jan. 28, 2015).

17 109. Last, children and adolescents often lack a critical understanding of money and
18 financial management. Approximately one in four students in the 15 countries and economies that
19 took part in the latest OECD Programme for International Student Assessment (PISA) test of
20 financial literacy are unable to make even simple decisions on everyday spending, while only one
21 in ten can understand complex issues, such as income tax. OECD, *PISA 2015 Results (Volume IV);*
22 *Students’ Financial Literacy*, PISA, OECD Publishing, Paris (2017).

23 110. As detailed above, purchasing and opening a loot box is designed to be visually,
24 physically, and aurally stimulating. Opening a loot box gives the player a rush; the moment of
25 anticipation followed by release. The loot box mechanism has been proven to be effective on adults,
26 and its effects are generally intensified when used on minors who are more prone to engage in risk-
27 taking behaviors, more prone to gambling addiction, and “are less equipped to critically appraise
28 the value proposition of these schemes.”

1 111. Professor David Zendle was one of the invited academic participants to the Federal
2 Trade Commission’s August 2019 workshop investigating loot boxes. Dr. Zendle has published
3 numerous peer-reviewed papers discussing his research and surveys examining links and similarities
4 between gambling and loot boxes. Based on his and others’ scientific findings, Dr. Zendle explained
5 to the FTC the serious potential consequences of exposing vulnerable consumers to videogame loot
6 boxes:

7 That’s what I’m here to talk about today. So the reason why problem gambling is
8 such a big topic when it comes to loot boxes, and why people care about gambling
9 and loot boxes, is because loot boxes look so much like gambling. Both when you’re
10 playing on a roulette wheel or while you’re opening a loot box, you’re wagering
11 something that you have in your hand of value now on the uncertain hope of getting
12 something of greater value later on. It’s that reason that loot boxes have tripped
13 gambling regulations in a couple of countries within Europe, because of those formal
14 similarities, and because of those formal similarities, people are a bit worried for a
15 very long time that loot boxes by act as a gateway to problem gambling, particularly
16 amongst young and vulnerable populations...

17 We know that one of the main pathways to problem gambling is a process of
18 conditioning, whereby the gambler comes to need and expect the excitement
19 associated with the gambling win. So what we think-- one of the possible
20 explanations for this effect, is a situation in which people are buying a loot box,
21 getting excitement, buying a loot box, getting excitement, buying a loot box, getting
22 that reward, getting that hit, going out into the real world, seeing something that has
23 many of the formal characteristics of the loot box, like a slot machine, and that
24 conditioning transfers over. So therefore, spending money on loot boxes, literally
25 causes people to engage in gambling, leading to problem gambling.³⁷

19 112. Dan Trolaro, the Assistant Executive Director of the Council on Compulsive
20 Gambling of New Jersey, explained, “The mechanics within a loot box look and feel like a gamble.
21 Once minors are exposed to game of chance mechanisms, there is a significantly higher risk that
22 they will have problems with it at a later stage in their lives. The literature indicates that exposure
23 at an early age increases the risk of addiction and the severity of the addiction.”

24 113. Other experts agree. For example, the mental health director of the UK’s National
25 Health Service summarized their studies by declaring that the gaming industry is “setting kids up
26 for addiction by teaching them to gamble.”

27
28 ³⁷ *Id.*

1 114. According to Keith Whyte, the Executive Director of the National Council On
 2 Problem Gambling, “Those who play loot boxes may well be on their way to developing gambling
 3 problems due to their loot box play.”

4 **3. All Published, Quantitative Research Demonstrates Loot Boxes Are**
 5 **Linked to Problem Gambling**

6 115. The amount of scientific research examining loot boxes has exploded in the last five
 7 years. Numerous teams of researchers have studied thousands of adults, teenagers, and children in
 8 industry-independent, peer-reviewed, independently funded, and published studies.

9 116. At least ten articles have been now published, which report findings of original
 10 quantitative research on links between loot boxes and gambling. The scientific conclusions from all
 11 ten peer-reviewed articles are consistent that loot boxes are strongly correlated with clinically
 12 significant, severe gambling behavior in both children and adults:

13 a. Brooks & Clark (2019): Results replicated in two surveys (n=257) that
 14 “demonstrate that besides the surface similarity of loot boxes to gambling, loot box engagement is
 15 correlated with gambling beliefs and problematic gambling behaviour in adult gamers.”

16 b. Drummond et al. (2020): Survey of people (n=1049) from the United States,
 17 New Zealand, and Australian showed effects that were “generally clear cut,” “practically
 18 significant,” and “highlight the psychological similarity between loot boxes and traditional modes
 19 of gambling” – those “with higher gambling symptoms and more risk loot box related engagement
 20 spent more on loot boxes than those without” and “participants with greater loot box spending
 21 experienced greater negative mood, and more psychological distress.”³⁸

22 c. Kristiansen & Severin (2020): Analysis of participants (n=1137) aged 12-16
 23 showed “a significant positive correlation between loot box engagement and problem gambling
 24 severity.”³⁹

25
 26 ³⁸ Drummond A, Sauer JD, Ferguson CJ, Hall LC, *The relationship between problem*
 27 *gambling, excessive gaming, psychological distress and spending on loot boxes in Aotearoa New*
 28 *Zealand, Australia, and the United States-A cross-national survey*, PLoS One,15(3):e0230378 (Mar.
 2020).

³⁹ Søren Kristiansen & Majbritt Christine Severin, *Loot box engagement and problem*

1 d. Li, Mills, & Nower (2019): Analysis of adult video gamers (n=618) revealed
2 that “loot box purchasing was directly related to higher online gambling frequency, more extended
3 online gambling sessions, and great problem gambling severity.”⁴⁰

4 e. Macey & Hamari (2018): International survey of gamers (n=582) with 27%
5 under 18 years old and 31.3% between 18 and 21, revealed “evidence of a strong relationship
6 between loot box opening (paid and unpaid) and gambling.”⁴¹

7 f. Zendle & Cairns (2018): Large-scale analysis of gamers (n=7422) providing
8 “empirical evidence of a relationship between loot box use and problem gambling” that “was neither
9 small, nor trivial” – “It was stronger than previously observed relationships between problem
10 gambling and factors like alcohol abuse, drug use, and depression.” “[T]he strength of the
11 relationship that was observed here...suggests that important gambling-related harm is experienced
12 by users of loot boxes.”⁴²

13 g. Zendle & Cairns (2019): Large-scale analysis of gamers (n=1172) that
14 “confirm[ed] the size and positive correlation between loot box spending and problem gambling
15 that was previously observed” in Zendle & Cairns (2018). Results suggested “the relationship
16 between problem gambling and loot box spending may be comparable in strength to the relationship
17 between problem gambling and known risk factors in the gambling literature.”⁴³

18 h. Zendle (2020): Large-scale analysis of gamers (n=1200) that “strongly
19 suggest that paying money for loot boxes is linked to problem gambling” and that this “robust and
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23 *gambling among adolescent gamers: Findings from a national survey*, *Addict Behav.*, 103:106254
(Apr. 2020).

24 ⁴⁰ Wen Li, Devin Mills, Lia Nower, *The relationship of loot box purchases to problem video
gaming and problem gambling*, *Addictive Behaviors*, 97:27-34 (Oct. 2019).

25 ⁴¹ Joseph Macey & Juho Hamari, *eSports, skins and loot boxes: Participants, practices and
problematic behavior associated with emergent forms of gambling*, *New Media & Society*,
26 21(1):42-59 (2019).

27 ⁴² David Zendle & Paul Cairns, *Video game loot boxes are linked to problem gambling: Results
of a large-scale survey*, *PLoS One*, 13(11):e0206767 (2018).

28 ⁴³ David Zendle & Paul Cairns, *Loot boxes are again linked to problem gambling: Results of
a replication study*, *PLoS One*, 14(3):e0213194 (2019).

1 reliable” evidence base held true “regardless of the presence or absence of specific features of loot
2 boxes, if they are being sold to players for real-world money.”⁴⁴

3 i. Zendle, Meyer, & Over (2019): Large-scale analysis of 16- to 18-year-olds
4 (n=1155) provided evidence linking loot box spending and problem gambling in older adolescents
5 with “an order of magnitude larger than relationships between problem gambling and risk factors
6 such as alcohol dependence.”⁴⁵

7 j. von Meduna et al. (2020): Large-scale analysis of loot box purchasers
8 (n=586) demonstrated “the demand for gambling products and demand for loot boxes are closely
9 related” and “[d]ue to their combination of gambling-like elements with a permanent availability
10 and potentially unlimited number of purchases” the “loot box purchasers are at risk of experiencing
11 gambling problems.”⁴⁶

12 117. For example, Drs. Zendle, Meyer and Over (2019) proved the link between loot box
13 buying and problem gambling in a survey of 1,115 adolescents aged 16-18 years. They reported that
14 “loot boxes either cause problem gambling among older adolescents, allow game companies to
15 profit from adolescents with gambling problems for massive monetary rewards, or both.”⁴⁷ The
16 researchers found that problem gambling severity increased with the amount of money spent on loot
17 boxes, that these links were even “stronger than relationships previously observed in adults,” and
18 that the reasons for buying loot boxes were similar to common motivations for engaging in
19 conventional forms of gambling. The researchers concluded that “[w]hen taken together, these
20 results clearly suggest one thing: spending money on loot boxes is linked to problem gambling in
21 older adolescent populations.”

22
23 ⁴⁴ Zendle D, Cairns P, Barnett H, McCall C, *Paying for loot boxes is linked to problem*
24 *gambling, regardless of specific features like cash-out and pay-to-win*, *Computers in Human*
Behavior, 102:181-91 (2020).

25 ⁴⁵ Zendle D, Meyer R, Over H, *Adolescents and loot boxes: links with problem gambling and*
motivations for purchase, *R Soc Open Sci*, 6(6):190049 (2019).

26 ⁴⁶ von Meduna M, Steinmetz F, Ante L, Reynolds J, Fiedler, *Loot boxes are gambling-like*
elements in video games with harmful potential: Results from a large-scale population survey,
27 *Technology in Society*, 63:101395 (Sept. 10, 2020).

28 ⁴⁷ Zendle D, Meyer R, Over H, *Adolescents and loot boxes: links with problem gambling and*
motivations for purchase, *R Soc Open Sci*, 6(6):190049 (2019).

1 118. Zendle and Cairns (2018) reports the findings from their scientific survey of 7,422
2 gamers aged 18 or older. The researchers measured both how much these gamers spent on loot boxes
3 and the severity of their problem gambling in order to “establish[] both the existence, the size, and
4 the importance of links between purchasing loot boxes and problem gambling.” Drs. Zendle and
5 Cairns concluded their research “provides empirical evidence of a relationship between loot box use
6 and problem gambling. The relationship seen here was neither small, nor trivial. It was stronger than
7 previously observed relationships between problem gambling and factors like alcohol abuse, drug
8 use, and depression.” The relationship between other types of microtransactions and problem
9 gambling was not as strong, indicating a specific roll of loot boxes in this association. The
10 researchers also observed that “[d]ue to the formal features that loot boxes share with other forms
11 of gambling, they may be acting as a ‘gateway’ to problem gambling amongst gamers.”⁴⁸

12 119. Zendle and Cairns’ 2019 peer-reviewed paper titled “Loot boxes are again linked to
13 problem gambling: Results of a replication study,” discussed results of a survey that assessed the
14 replicability of their survey results published in 2018 (discussed in Paragraph 62 above). The 2019
15 paper analyzed the researchers’ large-scale survey of 1,172 gamers aged 18 and older. Drs. Zendle
16 and Cairns observed “Loot boxes share psychological and structural features with gambling,” that
17 there was again a “significant link” between problem gambling and loot box spending, and “the
18 severity of the link seen here suggests that relevant authorities should seriously consider restricting
19 access to loot boxes as if they were a form of gambling.”⁴⁹

20 120. Brooks and Clark (2019) found that risky loot box use is associated with increased
21 problem gambling symptoms and gambling related cognitions. Drs. Brooks and Clark studied the
22 relationships between gaming involvement, engagement with loot boxes, and their associations with
23 disordered gambling and gambling-related cognitions. In doing so, the researchers conducted two
24 different surveys: one involving 144 adults and the other of 113 undergraduate students. According
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27 ⁴⁸ David Zendle & Paul Cairns, *Video game loot boxes are linked to problem gambling: Results
of a large-scale survey*, PLoS ONE, 13(11):e0206767 (2018).

28 ⁴⁹ David Zendle & Paul Cairns, *Loot boxes are again linked to problem gambling: Results of
a replication study*, PLoS ONE, 14(3):e0213194 (2019).

1 to the authors, the survey results “demonstrate that besides the surface similarity of loot boxes to
2 gambling, loot box engagement is correlated with gambling beliefs and problematic gaming
3 behaviour in adult gamers.”⁵⁰

4 121. In their 2019 peer-reviewed paper, Dr. Wen Li and co-authors from the Center for
5 Gambling Studies at Rutgers University reported direct associations between problem gambling
6 symptoms and loot box spending, problem gaming symptoms and loot box purchasing, and loot box
7 purchasing and psychological distress. The researchers collected data from 618 adult video gamers
8 via an online survey to explore the relationship between loot box purchases and problem video
9 gaming and gambling behaviors. Drs. Li et al. observed that “[t]he advent of loot box purchasing in
10 video games has effectively introduced gambling into the video gaming environment” and
11 concluded “loot box purchasing was directly related to increased problem video gaming and
12 problem gambling severity” and “loot box purchases may also be indirectly related to mental distress
13 due to its association with problem video gaming and problem gambling behavior.”⁵¹

14 122. Profs. Macey and Hamari (2018), who conducted a survey, found “evidence of a
15 strong relationship between loot box opening (paid and unpaid) and gambling,” stated that “a real-
16 world analogue [of loot boxes] are lottery scratch cards.”⁵²

17 123. Profs. Kristiansen and Severin (2020) conducted a scientific literature review and
18 also found the published results to be consistent:

19 Taken together, this research has established that loot box purchasing is associated
20 with increased scores on gambling severity scales, and that expenditure on loot boxes
21 is positively correlated with problem gambling severity.⁵³

22
23 ⁵⁰ Gabriel A. Brooks & Luke Clark, *Associations between loot box use, problematic gaming
24 and gambling, and gambling-related cognitions*, *Addictive Behaviors*, 96:26-34 (2019).

25 ⁵¹ Wen Li, Devin Mills, Lia Nower, *The relationship of loot box purchases to problem video
26 gaming and problem gambling*, *Addictive Behaviors*, 97:27-34 (2019).

27 ⁵² Joseph Macey & Juho Hamari, *eSports, skins and loot boxes: Participants, practices and
28 problematic behavior associated with emergent forms of gambling*, *New Media & Society*,
21(1):42-59 (2019).

⁵³ Søren Kristiansen & Majbritt Christine Severin, *Loot box engagement and problem
gambling among adolescent gamers: Findings from a national survey*, *Addict Behav.*, 103:106254
(Apr. 2020).

1 124. To analyze potential similarities between adults and children in terms of loot box
2 behavior, Kristiansen and Severin (2020) also conducted a large-scale scientific survey of 5,000
3 gamers aged 12-16. They did so because “the current knowledge seem to suggest that loot box
4 engagement catalyze monetary gambling and gambling problems among video gamers” and
5 “[c]learly, such schemes may pose a risk to young people, who not fully understand the underlying
6 mechanisms and reward system.” The authors found that loot box use was prevalent among
7 adolescents, at rates that correspond with studies among adult gamers. Likewise, and corresponding
8 with the scientific research on adult usage of loot boxes, Kristiansen and Severin (2020)
9 demonstrated “significant positive correlation between loot box engagement and problem gambling
10 severity.”

11 125. These psychologists, gambling experts, and social science researchers who have
12 studied the issue unanimously agree that loot boxes have all the structural and psychological
13 hallmarks of gambling and correlate with problem gambling, among children and adults. The proven
14 link to problem gambling is robust and the results have been replicated. Researchers have
15 determined the scientific findings are “very consistent” among published research:

16 [T]he findings are very consistent that there is an association between problem
17 gambling and loot box buying among both adolescents and adults (and that the
18 association may be even stronger among adolescents).⁵⁴

19 **E. Countries Have Banned Loot Boxes For Violating Gambling Laws**

20 126. During the last two years, some countries have banned loot boxes as an illegal form
21 of unregulated gambling (Belgium, Netherlands, Japan, France), countries such as China regulate
22 loot boxes under national lottery laws, while regulators in others report current investigations,
23 including in Australia where a 2018 report concluded loot boxes are “psychologically akin to
24 gambling,” and in the United Kingdom where a July 2020 report from the House of Lords urged the
25 government to immediately “bring loot boxes within the remit of gambling legislation and
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28 ⁵⁴ Mark D. Griffiths, *Loot box buying among adolescent gamers: A cause for concern?*,
Education and Health, 37(3):63-66 (2019).

1 regulation.” Similarly, lawmakers in Hawaii, Minnesota and Washington introduced state
2 legislation to ban loot boxes in video games.

3 127. For instance, the Government of Belgium examined the use of loot boxes in various
4 videogames and determined that they violated that country’s gambling laws. In Belgium, as in
5 California, throughout the United States, and nearly everywhere else in the world, the definition of
6 gambling is boiled down to the same three core elements: consideration, prize and chance.⁵⁵ The
7 Belgian Gaming Commission specifically found that loot boxes contain “all of the constitutive
8 elements of gambling” and stressed that “[i]f there is no adequate intervention, then games of chance
9 in video games will increasingly cause harm to players, families, and society.”⁵⁶ Noting the
10 “importance of protecting minors and vulnerable players,” the report specifically found the loot box
11 games were illegal gambling:

12 The paid loot boxes in the examined games Overwatch, FIFA 18 and Counter-Strike:
13 Global Offensive fit the description of a game of chance because all of the
14 constitutive elements of gambling are present (game, wager, chance, win/loss).⁵⁷

15 128. Peter Naessens, Director at the Belgian Commission concluded that the sale of loot
16 boxes must stop:

17 Paying loot boxes are no innocent component of video games which present
18 themselves as a game of skill. Players are tempted and misled by them and none of
19 the protective measures for games of chance are applied. Now that it has become
20 clear that children and vulnerable persons in particular are being exposed to this
21 without any protection, the game producers, and also the parties involved, are called
22 upon to put a stop to this practice.⁵⁸

23 129. The Belgian Gaming Commission is not the only regulatory body that has determined
24 loot boxes are a form of gambling. Regulators in the Netherlands, United Kingdom, Japan, France,
25

26 ⁵⁵ Under Belgian law, it is illegal to operate a game of chance without first obtaining a permit
27 from the Gaming Commission. California’s Gambling Control Act contains the same prohibition.
28 *See* Cal. Bus. & Prof. Code § 19800 et seq.

⁵⁶ Belgian Gaming Commission, *Research Report on Loot Boxes* (April 2008), available at
https://www.gamingcommission.be/opencms/export/sites/default/jhksweb_nl/documents/onderzoekrapport-loot-boxen-Engels-publicatie.pdf.

⁵⁷ “FIFA Soccer” is the title of the current App version of what used to be called “FIFA 18”
which is currently available in Defendant’s Google Play Store in the United States.

⁵⁸ https://www.gamingcommission.be/opencms/opencms/jhksweb_en/gamingcommission/news/news_0061.html

1 and China have also all taken various steps to regulate video game loot boxes as gambling. For
2 example, in September 2019 Great Britain Parliament’s Digital, Culture, Media and Sport
3 Committee issued a report to Parliament determining that loot boxes constitute gambling and
4 encourage addictive behavior, and recommending that the sale of loot boxes to children should be
5 banned. Committee Chair Damian Collins MP said:

6 Loot boxes are particularly lucrative for games companies but come at a high cost,
7 particularly for problem gamblers, while exposing children to potential harm. Buying
8 a loot box is playing a game of chance and it is high time the gambling laws caught
9 up. We challenge the Government to explain why loot boxes should be exempt from
10 the Gambling Act.

11 130. A follow-on report published in July 2020 from the United Kingdom’s House of
12 Lords recommended immediately “bring[ing] loot boxes within the remit of gambling legislation
13 and regulation.”

14 131. Loot boxes are themselves games separate and apart from the associated video game.
15 The Belgian Gaming Commission determined that given the active participation required to
16 purchase and open loot boxes, “the game element is present both at the video game level as well as
17 at the loot box level.” Likewise, an appellate panel at The Hague rejected the argument that although
18 its Ultimate Team Pack loot boxes were not games of chance, they are inseparable from the FIFA
19 video game in which they were found. Since FIFA (a soccer game) was a game of skill, the loot box
20 must be treated as one, as well. The Hague rejected the argument because loot boxes can be bought
21 separately and opened separately from the FIFA game being played and the goods obtained from
22 loot boxes are separate from the matches. Therefore, loot boxes must be regarded and assessed on
23 their own. There is nothing unique about the loot boxes in FIFA that properly render them – but not
24 other loot boxes – a separate, standalone game of chance. As with FIFA, other loot boxes can be
25 bought and opened separate from playing the associated game.

26 132. Government officials in the Netherlands also studied loot boxes in ten popular
27 games. In its April 2018 report, the Netherlands Gaming Authority determined some loot boxes had
28 elements similar to slot machines, and addiction potential similar to blackjack, roulette and bingo.
According to the official report, “all of the loot boxes that were studied could be addictive,” “loot

1 boxes have a moderate to high addiction risk potential,” some “have integral elements that are
2 similar to slot machines” complete with “multiple visual and sound effects are added and a ‘near
3 miss’ effect is used,” and “as a result of opening loot boxes, socially vulnerable groups such as
4 young people could eventually be encouraged to play other games of chance.” Noting that all the
5 loot boxes could “foster the development of addiction,” the report from the Netherlands Gaming
6 Authority also observed online gamers attribute significant social status value on themselves and
7 other gamers based on the prizes they win from playing loot boxes.⁵⁹

8 133. Australian officials also determined the loot box mechanism constitutes a form of
9 gambling that targets minors and otherwise acts “as a gateway to problem gambling and associated
10 harm later in life.” Accordingly, the March 2020 report prepared by the Australian House of
11 Representatives Standing Committee on Social Policy and Legal recommended mandatory age
12 verification for loot box purchasing:

13 Given their resemblance to gambling, the Committee considers that loot boxes and
14 other simulated gambling elements in video games should be subject to appropriate
age restrictions, including through the use of mandatory age verification.⁶⁰

15 134. The March 2020 Australian report was preceded by an October 2019 report from the
16 Australian Gambling Research Centre finding “the use of ‘loot boxes’ or micro-transactions for
17 chance-based items in online video games [is] a form of gambling that is readily accessible to players
18 under the age of 18 years.” This 2019 Australian report also found the presence of loot boxes in
19 videogames “normalizes gambling”:

20 The use of for-money, in-game ‘loot boxes’ as a mechanism through which additional
21 in-game items can be obtained familiarises players, many of whom are less than 18
22 years of age, with a gambling activity that is practically identical to games available
23 on external sites. It coexists there with lotteries, eSports betting and other more
24 explicit gambling activities played in virtual currency. This process of
‘gambification’ can be seen as analogous to that occurring in the context of sports
betting, whereby gambling practices are becoming increasingly normalised as an

25 ⁵⁹ Netherlands Gaming Authority (Kansspelautoriteit), *Study into loot boxes: A treasure or a
burden?* (Apr. 10, 2018), available at <https://kansspelautoriteit.nl/english/loot-boxes/>.

26 ⁶⁰ Parliament of the Commonwealth of Australia, House of Representatives Standing
27 Committee on Social Policy and Legal Affairs, *Protecting the age of innocence: Report of the
inquiry into age verification for online wagering and online pornography* (Feb. 2020), available at
28 [https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/024436/toc_pdf/Protectingthe
ageofinnocence.pdf](https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/024436/toc_pdf/Protectingtheageofinnocence.pdf).

1 inherent component of sports engagement (Jenkinson, de Lacy-Vawdon, & Carroll,
2 2018; Lopez-Gonzalez & Griffiths, 2016).⁶¹

3 135. On July 2, 2020, nine months after the UK’s Department of Digital, Culture, Media
4 and Sport concluded that loot boxes should be regulated under the UK’s gambling laws, the House
5 of Lords called for the immediate regulation of loot boxes as gambling: “While we welcome the
6 government’s intention to consider the relationship between gambling and video gaming, we believe
7 that this issue requires more urgent attention.” The House of Lords’ report noted the “evidence we
8 have heard has stressed the urgency of taking action.” According, the House of Lords “echo the
9 conclusion of the [UK’s] Children’s Commissioner’s report, that if a product looks like gambling
10 and feels like gambling, it should be regulated as gambling” and therefore recommended that loot
11 boxes be immediately deemed gambling.⁶²

12 136. Here in the United States, the Federal Trade Commission recently hosted a workshop
13 on loot boxes and U.S. Senators Maggie Hassan (D-NH)), and Josh Hawley (R-MO) introduced a
14 bi-partisan bill co-sponsored by Ed Markey (D-MA) and Richard Blumenthal (D-CT) titled “The
15 Protecting Children From Abusive Games Act” that would prohibit loot boxes in minor-oriented
16 games. The proposed bill includes a prohibition in minor-oriented games of loot boxes, which it
17 defines as “an add-on transaction to an interactive digital entertainment product that in a randomized
18 or partially randomized fashion unlocks a feature of the product or adds to or enhances the
19 entertainment value of the product[.]”

20 **F. The Hague’s October 2020 Ruling That Loot Boxes Are Illegal Gambling**

21 137. In October 2020, an appellate panel at the Court of The Hague determined that loot
22 boxes are unlicensed games of chance and violate gambling laws.⁶³ The gambling law at issue had

23 _____
24 ⁶¹ Uma Jatkar & Rebecca Jenkinson, *House of Representatives Standing Committee on Social*
25 *Policy and Legal Affairs: Submission to the Inquiry into Age Verification for Online Wagering and*
Online Pornography, Australian Gambling Research Center, Australian Institute of Family Studies
(Oct. 25, 2019).

26 ⁶² The full report titled “Gambling Harm—Time for Action (July 2, 2020)” from the House of
27 Lords Select Committee on the Social and Economic Impact of the Gambling Industry is available
at <https://publications.parliament.uk/pa/ld5801/ldselect/ldgamb/79/79.pdf>.

28 ⁶³ See World Today News, *Court: Packs in FIFA are gambling games and EA must adapt*
game in in the Netherlands (Oct. 29, 2020), [https://www.world-today-news.com/court-packs-in-](https://www.world-today-news.com/court-packs-in)

1 the same core elements as the ones here: consideration, chance and prize. Whether loot boxes are a
2 game of chance separable from the associated games that included elements of player skill was also
3 debated.

4 138. The three-judge panel at The Hague affirmed a conclusion by the Dutch Gaming
5 Authority that Ultimate Team Pack loot boxes in EA's FIFA video games are an unlicensed, illegal
6 gambling game of chance completely separate from FIFA's game of skill.⁶⁴ Citing the need for
7 transparency and to warn consumers about the misconduct, The Hague also rejected the game
8 developer's objections to making the opinion public.

9 139. Based on expert testimony, The Hague concluded it has been established "that there
10 is evidence of a correlation between (buying) loot boxes and gambling problems," and therefore
11 loot boxes present a "high risk potential" for gambling addiction.

12 140. The Hague also opined that it is particularly problematic that loot boxes expose
13 vulnerable children to the addictive gambling games:

14 [E]xperts consider it very plausible that there is a risk that, in particular, underage
15 participants may become more sensitive to addiction as a result of [loot
16 boxes]. Minors are vulnerable and more easily addicted; if they gamble at a minor
17 age they are at greater risk of becoming addicted. In FIFA, minors have access to
18 [loot boxes]. When playing FIFA, they can unintentionally and unprotected come
19 into contact with a game of chance. Experts warn against loot boxes, individual
20 reports have been received from the defendant about loot boxes, including those from
21 plaintiffs, about their addictive effects, and media reports from participants have
22 appeared.

23 141. Citing public policies about preventing gambling addiction, particularly in minors –
24 similar to public policies at issue here – The Hague panel held banning loot boxes and imposing
25 fines for their continued use was "necessary, appropriate and proportional" and that any
26 "commercial interests do not outweigh the public interests at stake." In particular, the panel cited

27 _____
28 [fifa-are-gambling-games-and-ea-must-adapt-game-in-the-netherlands-gaming-news/;
https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2020:10428&showbutton
=true&keyword=gokken](https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2020:10428&showbutton=true&keyword=gokken) (link to official Hague opinion, last visited Mar. 10, 2021).

⁶⁴ There is nothing about The Hague's ultimate findings that is unique to the structure of the
loot boxes in FIFA. The opinion observes similar actions taken involving other loot boxes: "[f]our
providers of illegal loot boxes have been contacted and several providers have adjusted their
offerings."

1 “[t]he public interests of the prevention of gambling addiction, in particular among minors, the
 2 protection of the consumer and the prevention of crime and illegality, [which] can be regarded as
 3 legitimate objectives.” These public interests in enforcing the loot box ban were “so great” that it
 4 was not unreasonable to require the game developer to cease and desist within three weeks.

5 **G. Loot Boxes Constitute Gambling in Violation of California Law**

6 142. Loot boxes are a gambling device and constitute a form of gambling in violation of
 7 California law. Cal. Penal Code §§ 330 *et seq.* Further, by “exposing [loot boxes] for play,” Google
 8 is conducting a gambling operation in violation of California’s Gambling Control Act. Cal. Bus. &
 9 Prof. Code §§ 19800 *et seq.*

10 **1. Violations of California Penal Code §§ 330 *et seq.***

11 143. Under California law, loot boxes constitute illegal “slot machines or devices” when
 12 played on a mobile phone, tablet, computer, or other similar device. California Penal Code § 330b(d)
 13 broadly defines an unlawful “slot machine or device” as:

14 a machine, apparatus, or device that is adapted, or may readily be converted, for use
 15 in a way that, as a result of the insertion of any piece of money or coin or other object,
 16 or by any other means, the machine or device is caused to operate or may be operated,
 17 and by reason of any element of hazard or chance or of other outcome of operation
 18 unpredictable by him or her, the user may receive or become entitled to receive any
 19 piece of money, credit, allowance, or thing of value, or additional chance or right to
 20 use the slot machine or device, or any check, slug, token, or memorandum, whether
 21 of value or otherwise, which may be exchanged for any money, credit, allowance, or
 thing of value, or which may be given in trade, irrespective of whether it may, apart
 from any element of hazard or chance or unpredictable outcome of operation, also
 sell, deliver, or present some merchandise, indication of weight, entertainment, or
 other thing of value.

22 144. The California Bureau of Gambling Control describes a “gambling device” as
 23 follows:

24 California’s gambling device statutes are broad in their coverage and prohibit any
 25 person from owning, renting, or possessing illegal gambling devices. (Penal Code,
 §§ 330a, 330b, 330.1.) An illegal gambling device has three features:

- 26 1. It is a machine, apparatus, or device (coin operation is not required);
- 27 2. Something of value is given to play the device; and

1 3. The player has the opportunity to receive something of value by any element
 2 of hazard or chance (“something of value” is not limited to coins, bills, or
 3 tokens—it also includes free replays, additional playing time, redemption tickets,
 4 gift cards, game credits, or anything else with a value, monetary or otherwise.)
 5 (Penal Code, §§ 330a, 330b & 330.1.)⁶⁵

6 145. The loot boxes at issue meet this definition. First, a player uses his or her Android
 7 device to download game apps that offer loot boxes, turning the Android device into a device on
 8 which to play a loot box. Second, something of value is used to purchase a play on a loot box, either
 9 when the player purchases virtual coins with money to buy chances on loot boxes, or when virtual
 10 coins, which are property, are used. Third, the loot box offers the player a randomized chance to
 11 obtain something valuable.

12 146. The potential prizes are something of value, both to the player and otherwise. People
 13 are willing to spend money to try to win these virtual goods, regardless of whether they are cosmetic
 14 or improve gameplay. By its very nature, the purpose of purchasing and opening a loot box is to win
 15 something of value. A chance at winning a thing of value is the *sine qua non* of selling loot boxes.
 16 Google and the game developers are aware of this. In the games, they describe potential winnings
 17 as common, rare, and legendary.

18 147. Professor Robert Woodruff explains value in a widely cited published paper: “a
 19 customer perceived preference for and evaluation of those products attributes, attribute
 20 performances, and consequences arising from use that facilitate (or block) achieving the customer’s
 21 goals and purposes in use situations.”⁶⁶ This widely adopted definition is based on the fact that value
 22 comes from a customer’s preferences, evaluations and perceptions. Because the perceived value of
 23 an item is rationally greater than the cost of obtaining that item, loot boxes are economically valued
 24 at no less than the cost to obtain them.

25 148. The value of a loot box’s virtual items is derivative of the same factors dictating the
 26 value of tangible items. Research demonstrates that “[i]n general, [] virtual items are valued for

26 ⁶⁵ Bureau of Gambling Control, Law Enforcement Advisory: Illegal Gambling Devices (Nov.
 27 1, 2010), <https://www.abc.ca.gov/wp-content/uploads/2019/06/Law-Enforcement-Advisory-Illegal-Gambling-Devices-1.pdf>.

28 ⁶⁶ Robert B. Woodruff, *Customer value: the next source for competitive advantage*, J of the Acad Mark Sci, 25(2):139-153 (1997).

1 many of the same reasons as more tangible commodities.” Nevertheless, because “the symbolic
2 value of a virtual good stems from its role and meaning inside the game...A person not part of that
3 social world would probably not see the good as valuable at all.”⁶⁷ There would be no incentive to
4 acquire or offer loot box items, including cosmetics if they did not have some sort of value to the
5 player.

6 149. Analyzing whether loot boxes provided the random chance opportunity to win things
7 of value, the Belgian Gaming Commission – analyzing a broad definition comparable to California’s
8 – answered this question with a resounding yes:

9 [I]t is not important if a ‘skin’ in Overwatch, FIFA 18 or C-S: GO is merely of
10 aesthetic value. What is important is that players attach value to it and that this value
11 is also emphasized by the game developers themselves. Sometimes colour or numeric
12 codes are used to assign value to items. The items are also often assigned value by
13 creating scarcity. By offering certain items in loot boxes during a certain time frame,
14 players will be inclined to buy more loot boxes during that specific period (event)
15 because this is the only chance to obtain this ‘valuable’ item.⁶⁸

16 150. Economic theory holds that market price as the best indicator of value. Evidence of
17 the real-world value of the randomized loot box items includes that where these virtual items are
18 tradeable for money, transactions of fiat currency occur. Further, most virtual items are sold for less
19 than the cost of a loot box (representing real financial loss), refuting the assertion that no player who
20 opens a loot box makes a loss. Likewise, gamers who purchase virtual items also spend significantly
21 more in total on games, demonstrating a willingness to spend additional money to acquire virtual
22 items and the additional financial value of these items over and above the game itself.⁶⁹ Likewise,
23 where the potential prizes, as with loot box prizes, are categorized by frequency and rarity, value is

23 ⁶⁷ Vili Lehdonvirta, *Virtual item sales as a revenue model: identifying attributes that drive*
24 *purchase decisions*, Electron Commer Res, 9:97-113 (2009).

24 ⁶⁸ Belgian Gaming Commission, *Research Report on Loot Boxes* (April 2018).

25 ⁶⁹ Drummond A, Sauer JD, Hall LC, Zendle D, Loudon MR, *Why loot boxes could be regulated*
26 *as gambling*, Nat Hum Behav, 4(10):986-988 (Oct. 2020). Drummond and co-authors analyzed sales
27 of 2,319 virtual items from three popular games. In the aggregate, sales of the virtual items exceeded
28 one billion dollars, with the individual items being sold for between \$0.03 and \$743.80 each.
“Contradicting the common argument that loot boxes are not gambling because no player loses upon
opening a loot box” the “overwhelming majority of players incur financial losses when on-selling
loot box items, with ~93% of sales recouping less than the purchase price.”

1 inherently assigned to the items. Moreover, the collection of rare items is seen as a sign of status
2 within the gaming community, thus ascribing a form of social value to the items.⁷⁰ Much consumer
3 spending occurs to obtain or maintain social status. This concept is the very basis of the phrase
4 “keeping up with the Joneses.”

5 151. Professors from the Department of Psychology at the University of Waterloo
6 examined whether “players do indeed find rarer [loot box] items as being subjectively more
7 valuable.”⁷¹ To do so, Professors Larche et al. (2019) conducted two experiments to observe whether
8 “loot box rewards are treated in much the same way that monetary outcomes are treated in slots
9 play” and therefore “underscore that both reward structure may lead to similar rewards processing
10 and motivational effects.”

11 152. Results from Experiment 1 showed that “players systematically categorized valuable
12 and non-valuable loots based on increasing rarity, and hence increasing objective value, of the items
13 in a loot box”:

14 Players subjectively value most those loot boxes with the highest objective worth
15 (e.g., those that contains at least one of the most uncommon ‘legendary’ items)
16 compared to loots that were objectively worth less (e.g., those containing more
17 common items falling into the ‘rare’ and ‘epic’ tiers). Moreover, players also gave
larger ratings of arousal, valence and urge as the reward value of the loot box
increased.

18 153. In Experiment 2, Professors Larche et al. sought to replicate the results of Experiment
19 1, and to also analyze if common loot box items produce higher ratings of disappointment and
20 whether prominent measures of hedonic reward and arousal were associated with the levels of loot.
21 The researchers stated, “Experiment 2 successfully replicated the results for these subjective
22

23 ⁷⁰ For instance, Dr. Vili Lehdonvirta, an economic sociologist, professor at the University of
24 Oxford and former game developer, points out that in the game *Ultima Online*, “one of the most
25 highly valued virtual items in the whole system was a small brown lump named ‘horse dung’.
Despite its very modest appearance and complete lack of performance or functionality, people have
26 paid the equivalent of hundreds of U.S. dollars for the item.” Vili Lehdonvirta, *Virtual item sales as
a revenue model: identifying attributes that drive purchase decisions*, *Electron Commer Res*, 9:97-
113 (2009).

27 ⁷¹ Larche CJ, Chini K, Lee C, Dixon MJ, Fernandes M, *Rare Loot Box Rewards Trigger Larger
28 Arousal and Reward Responses, and Greater Urge to Open More Loot Boxes*, *J Gambl Stud*,
37(1):141-163 (Mar. 2021).

1 measures, in addition to supplying converging evidence of the arousing, hedonically rewarding and
2 motivating nature of these non-monetary rewards with PRPs [or “post reinforcement pauses” – an
3 index of reward reactivity that is longer following wins], SCRs [or “skin conductance responses” –
4 measuring sweat gland activity, a well-established indicator of physiological arousal], and force
5 measures.” The researchers found that “[s]imilar to the indisputable, rewarding feeling of winning
6 money, we show that obtaining in-game items within a loot box appear to activate the same reward
7 response in a slot machine” and that “such findings are indicative of players’ awareness and
8 sensitivity to the value of different loots, despite loot boxes not conferring any real-world monetary
9 worth.”

10 154. Professors Drummond, Sauer, Hall, Zendle and Loudon specifically analyzed
11 whether the virtual items that may be won from randomized loot boxes have monetary value. In
12 their 2020 paper published in the top-tier journal *Nature*, Drummond et al. determined that loot
13 boxes have value using numerous economic theories.⁷² The authors concluded:

14 We have demonstrated that virtual items have monetary value to gamers irrespective
15 of whether they can be cashed out. Therefore, randomised virtual items (loot boxes)
16 purchased for real money likely satisfy the requirements of value needed to meet the
17 legal definitions of gambling in many jurisdictions.⁷³

18 155. Similarly, Zendle et al. (2020), analyzed 1,200 gamers and determined that the
19 presence of a cash out mechanism is also not a uniquely strong gateway to the robust relationship
20 between loot box spending and problem gambling.⁷⁴ Indeed, Zendle (2020) concluded there was
21 “robust and reliable” evidence linking loot boxes to problem gambling “regardless of whether or
22 not loot boxes gave players gameplay advantages, allowed them to trade items for real world money,

23 ⁷² Drummond A, Sauer JD, Hall LC, Zendle D, Loudon MR, *Why loot boxes could be regulated
as gambling*, *Nat Hum Behav*, 4(10):986-988 (Oct. 2020).

24 ⁷³ The presence of a cash out mechanism is also not a uniquely strong gateway to the robust
25 relationship between loot box spending and problem gambling. Zendle, D., Cairns, P., Barnett, H.,
26 & McCall, C., *Paying for loot boxes is linked to problem gambling, regardless of specific features
like cash-out and pay-to-win*, *Computers in Human Behavior*, 102:181–191 (2020). From a
27 gambling definitional perspective, The Hague appellate panel also noted that it is “irrelevant
28 whether prizes can be converted into real money.”

⁷⁴ Zendle, D., Cairns, P., Barnett, H., & McCall, C., *Paying for loot boxes is linked to problem
gambling, regardless of specific features like cash-out and pay-to-win*, *Computers in Human
Behavior*, 102:181–191 (2020).

1 allowed them to cash-out, or showed near-misses.” From a gambling definitional perspective, The
2 Hague appellate panel also noted that it is “irrelevant whether prizes can be converted into real
3 money.”

4 156. While monetization is not a requirement for an item (tangible or not) to provide
5 value, there are also many ways to monetize the prizes won from loot boxes, thereby demonstrating
6 that these prizes are “things of value.”⁷⁵ The first is known as platform supported sale. Many game
7 creators and storefronts allow virtual items to be traded between accounts through digital
8 marketplaces that involve either fiat or digital currencies that can be used to purchase things that
9 have monetary value.

10 157. Additionally, because some of these specific high-demand items in the game can be
11 so difficult (and costly) to obtain, a “gray market” has also sprung up on the internet – websites
12 where the game accounts and in some cases individual items can be (and are) bought and sold for
13 real money outside of the game itself. Numerous websites have been created to broker these
14 transactions, bringing buyer and seller together to sell these items and accounts, for money outside
15 of the game.

16 158. The second is known as platform supported trade. Some games allow virtual items
17 to be traded between accounts within the game, often using in-game marketplaces. Theoretically,
18 no fiat currency is utilized in the transaction, however users may communicate and money is then
19 exchanged outside the game in exchange for the transfer of the item for a symbolic in-game price.
20 This is through account exchanges.⁷⁶ There is a market for many of the games’ player accounts to
21 be bought and sold outside of the game itself. The value, or price, of each game account is
22 determined by the “loot” the player possesses which is “locked” in their account. There are
23

24 ⁷⁵ Rockloff (2020) examined the best-selling video games by revenue, and reported that of
25 games with loot boxes, 84% (43 of 51) “allowed the skins or other items to be sold for cash or traded
26 for other items with a monetary value (e.g., other skins, in-game currency, etc.)”
27 Rockloff M, Russell AMT, Greer MN, Lolé L, Hing N, Browne M, *Loot boxes: Are they grooming
28 youth for gambling?*, NSW Responsible Gambling Fund (2020).

⁷⁶ For example, Electronic Arts has created an “auction house” for its mobile “Madden” NFL
franchise game. The auction house allows gamers to buy and sell various players that were won in
loot boxes within the game.

1 companies who specialize in buying and selling videogame accounts that contain prizes from loot
2 boxes.

3 159. The third is third-party sales of loot box items. Third-party companies commonly
4 referred to as “gold farmers” obtain virtual items and sell them to other players for money, including
5 fiat currency. The products offered may include items where the cost of obtaining the item is lower
6 than the average selling price for the item. Gold farmers do not participate in ‘normal’ or ‘for fun
7 play’ and are therefore able to obtain game resources more rapidly than recreational players.

8 160. The fourth way to monetize loot box prizes in the real-world economy is through
9 “skin gambling” where players use virtual items and loot boxes as pseudo-currency on third-party
10 gambling sites.⁷⁷

11 161. While loot box items can be monetized in a variety of ways, Professor Elizabeth
12 Handsley explained why that overly narrow conceptualization of ‘value’ ignores psychological
13 processes and is ultimately “neither here nor there” when it comes to valuing loot box prizes:

14 [The ability to]...convert loot boxes into real-life money is neither here nor there
15 because the items that are accessed via loot boxes are of value to the player. That’s
16 all that really matters from a psychological perspective. Whether that person can then
17 get money or some real-life tangible good in return for the loot boxes is neither here
18 nor there. The player is committed to the game. These games are very absorbing.
19 There are a lot of people who have a lot invested in playing games and getting to
20 higher levels, therefore the value to those can be very high. From a psychological
21 perspective, that’s what matters. Whether it’s money or some tangible good is really
22 not the point.⁷⁸

23 162. Whether the potential loot box items make playing the game easier and more
24 winnable (“functional” items) or allow players to customize the look of their in-game characters
25 (“cosmetic” items), all loot boxes provide a completely randomized chance to win valuable prizes.

26 163. For example, Hamari *et al.* (2017) found the value of in-game items that may be
27 obtained to “personalize” video game characters: “One prominent value proposition of a lot of in-
28

77 Commonwealth of Australia, The Senate, *Environment and Communications References Committee: Gaming micro-transactions for chance-based items*, at p.23-24 (Nov. 2018).

78 Commonwealth of Australia, The Senate, *Environment and Communications References Committee: Gaming micro-transactions for chance-based items*, at p.29 (Nov. 2018).

1 game content is that it affords players to differentiate themselves from other players by personalizing
2 their avatar or other belonging in-game.”⁷⁹

3 164. Lehdonvirta (2009) also observed that both functional and cosmetic attributes of
4 virtual goods drive consumers’ purchase decisions. “It could even be speculated that in some cases
5 the functional attributes of a virtual good serve only as an excuse for a purchase that is primarily
6 motivated by hedonic or social aspects, a technique commonly applied in marketing high-
7 performance automobiles.”⁸⁰

8 165. Because of scarcity bias (i.e., humans place a higher value on an object that is scarce),
9 players gamble money to open loot boxes hoping they can win the “rare” loot box items considered
10 more valuable than the “common” items, which are often worthless duplicates.⁸¹ Knowing this, loot
11 box purveyors “manufacture rarity (also known as ‘artificial scarcity’) to increase the value of the
12 assets they are selling.”⁸² The value of potential loot box prizes is not theoretical. At the January
13 2021 FUT Champions Cup, a staple of the FIFA e-sports calendar, players competed against each
14 other using teams worth \$27,000 based on then-current trading prices.

15 2. Violations of California’s Gambling Control Act

16 166. Under California’s Gambling Control Act, all “controlled games” constitute
17 “gambling” and anyone who “exposes for play one or more controlled games that are dealt, operated,
18 carried on, conducted, or maintained for commercial gain” is conducting a “gambling enterprise” or
19 “gambling operation.” *See* Cal. Bus. & Prof. Code §§ 17805(l) (“‘Gambling’ means to deal, operate,
20 carry on, conduct, maintain, or expose for play a controlled game.”), 17805(g) (defining “controlled
21 game”), 17805(m) (defining “gambling enterprise”), 17805(q) (defining “gambling operation”).

22
23 ⁷⁹ Hamari J, Alha K, Järvelä S, Kivikangas JM, Koivisto J, & Paavilainen J, *Why do players*
24 *buy in-game content? An empirical study on concrete purchase motivations*, *Computers in Human*
Behavior, 68:538-546 (2017).

25 ⁸⁰ Vili Lehdonvirta, *Virtual item sales as a revenue model: identifying attributes that drive*
purchase decisions, *Electron Commer Res*, 9:97-113 (2009).

26 ⁸¹ Mittone L, Savadori L, “The Scarcity Bias,” *Applied Psychology*. 58(3): 453-468 (2009).

27 ⁸² Vili Lehdonvirta, *Virtual item sales as a revenue model: identifying attributes that drive*
purchase decisions, *Electron Commer Res*, 9:97-113 (2009) (“Rarity is perhaps the most socially
28 oriented attribute of virtual goods, because its value is strongly associated with its ability to
distinguish a (small) group of owners from non-owners.”).

1 174. Plaintiffs have retained counsel competent and experienced in the prosecution of
2 class action litigation.

3 175. Questions of law and fact common to the members of the Class are central here and
4 predominate over questions that may affect only individual members. Among the questions of law
5 and fact common to the Class are:

- 6 (a) Whether loot boxes create or exacerbate addictive behaviors;
- 7 (b) Whether Defendant’s conduct violates Cal. Penal Code §§ 330, *et seq.*;
- 8 (c) Whether Defendant’s conduct violates California’s Gambling Control Act,
9 Cal. Bus. & Prof. Code §§ 19800, *et seq.*;
- 10 (d) Whether Defendant’s conduct violates the Illegal Gambling Business Act (18
11 U.S.C. § 1955);
- 12 (e) Whether Defendant’s conduct violates the Unlawful Internet Gambling
13 Enforcement Act of 2006 (31 U.S.C. §§ 5361-5367);
- 14 (f) Whether Google violated Business & Professions Code § 17200 by engaging
15 in an “unlawful” business practice by marketing, selling and distributing loot boxes and videogames
16 with gambling features and in violation of various state and federal laws as set forth herein;
- 17 (g) Whether Google violated Business & Professions Code § 17200 by engaging
18 in an “unfair” business practice by marketing, selling and distributing loot boxes and videogames
19 with gambling features and that create and/or exacerbate addictive behaviors, especially in minors,
20 as alleged herein;
- 21 (h) Whether Google violated Civil Code §§ 1770(a)(14);
- 22 (i) Whether Google was unjustly enriched as a result of the conduct alleged
23 herein;
- 24 (j) Whether Google facilitated the sale of loot boxes;
- 25 (k) Whether Google’s conduct violated the other provisions of statutory and
26 common law outlined in this Complaint.

27 176. A class action is superior to all other available means for the fair and efficient
28 adjudication of this controversy. Individualized litigation would create the danger of inconsistent or

1 contradictory judgments arising from the same set of facts. Individualized litigation would also
2 increase the delay and expense to all parties and the court system from the issues raised by this
3 action. The burden and expense that would be entailed by individual litigation makes it
4 impracticable or impossible for Class members to prosecute their claims individually. Further, the
5 adjudication of this action presents no unusual management difficulties.

6 177. Unless a class is certified, Google will retain monies received as a result of its
7 improper conduct. Unless a classwide injunction is issued, Google will continue to commit the
8 violations alleged, and will continue to promote and engage in the unfair and unlawful gambling
9 activities discussed herein. Google has acted or refused to act on grounds that are generally
10 applicable to the Class so that injunctive and declaratory relief is appropriate to the Class as a whole.

11 **FIRST CAUSE OF ACTION**

12 **Violation of the “Unlawful Prong” of California’s Unfair Competition Law (“UCL”)** 13 **(Cal. Bus. & Prof. Code §§ 17200, *et seq.*)**

14 178. Plaintiffs reallege and incorporate by reference the allegations set forth in each of the
15 preceding paragraphs of this Complaint.

16 179. Plaintiffs and members of the Class may properly allege violations of the UCL.
17 Google’s Terms of Service provide that “California law will govern all disputes arising out of or
18 relating to these terms, service-specific additional terms, or any related services, regardless of
19 conflict of laws rules,” and that “[t]hese disputes will be resolved exclusively in the federal or state
20 courts of Santa Clara County, California, USA.”

21 180. Plaintiffs and Defendant are “persons” within the meaning of the UCL. Cal. Bus. &
22 Prof. Code § 17201.

23 181. The UCL defines unfair competition to include any “unlawful, unfair or fraudulent
24 business act or practice.” Cal. Bus. Prof. Code § 17200.

25 182. As a result of engaging in the conduct alleged in this Complaint, Google has violated
26 the UCL’s proscription against engaging in “unlawful” conduct by virtue of its violations of the
27 following laws:
28

1 (a) **California’s Gambling Control Act (Cal. Bus. & Prof. Code §§ 19800, *et***
2 ***seq.***): Sections 19801 and 19850 of the Gambling Control Act provide that unless licensed, state law
3 prohibits commercially operated gambling facilities; that no new gambling establishment may be
4 opened except upon affirmative vote of the electors; that all gambling operations and persons having
5 significant involvement therein shall be licensed, registered, and regulated; and that all persons who
6 deal, operate, carry on, conduct, maintain or expose for play any gambling game shall apply for and
7 obtain a valid state gambling license. As alleged herein, Google operates, carries on, conducts,
8 maintains, and exposes for play gambling activities. Google has not applied for or obtained any state
9 gambling license, and therefore violates California’s Gambling Control Act.

10 (b) **California Penal Code § 330a**: Titled “Possession or keeping of slot or card
11 machine or card dice,” section 330a declares that “[e]very person, who has in his or her possession
12 or under his or her control...or who permits to be placed, maintained, or kept in any room, space,
13 inclosure, or building owned, leased, or occupied by him or her, or under his or her management or
14 control, any slot or card machine, contrivance, appliance or mechanical device, upon the result of
15 action of which money or other valuable thing is staked or hazarded, and which is operated, or
16 played, by placing or depositing therein any coins, checks, slugs, balls, or other articles or device,
17 or in any other manner and by means whereof, or as a result of the operation of which any
18 merchandise, money, representative or articles of value, checks, or tokens, redeemable in or
19 exchangeable for money or any other thing of value, is won or lost, or taken from or obtained from
20 the machine, when the result of action or operation of the machine, contrivance, appliance, or
21 mechanical device is dependent upon hazard or chance...is guilty of a misdemeanor.” Google
22 violates section 330a because as alleged, Google possesses or permits illegal slot machines or
23 mechanical devices where money or things of value are won or lost upon chance.

24 (c) **California Penal Code § 330b**: Titled “Possession or keeping of slot
25 machines or devices,” section 330b declares that “[i]t is unlawful for any person to manufacture,
26 repair, own, store, possess, sell, rent, lease, let on shares, lend or give away, transport, or expose for
27 sale or lease, or to offer to repair, sell, rent, lease, let on shares, lend or give away, or permit the
28 operation, placement, maintenance, or keeping of, in any place, room, space, or building owned,

1 leased, or occupied, managed, or controlled by that person, any slot machine or device, as defined
2 in this section.” As alleged, Google permits the operation, placement, maintenance, or keeping of a
3 slot machine or device as defined by Penal Code § 330b(d).

4 (d) **California Penal Code § 330.1, et seq.**: Titled “Manufacture, possession, or
5 disposition of slot machines or device,” section 330.1(a) declares that “Every person who
6 manufactures, owns, stores, keeps, possesses, sells, rents, leases, lets on shares, lends or gives away,
7 transports, or exposes for sale or lease, or offers to sell, rent, lease, let on shares, lend or give away
8 or who permits the operation of or permits to be placed, maintained, used, or kept in any room,
9 space, or building owned, leased, or occupied by him or her or under his or her management or
10 control, any slot machine or device as hereinafter defined, and every person who makes or permits
11 to be made with any person any agreement with reference to any slot machine or device as
12 hereinafter defined, pursuant to which agreement the user thereof, as a result of any element of
13 hazard or chance, may become entitled to receive anything of value or additional chance or right to
14 use that slot machine or device, or to receive any check, slug, token, or memorandum, whether of
15 value or otherwise, entitling the holder to receive anything of value, is guilty of a misdemeanor.”
16 Google violates section 330.1 because as alleged, Google possesses or permits illegal slot machines
17 or devices where things of value are won as a result of chance “irrespective of whether it may, apart
18 from any element of hazard or chance, also sell, deliver, or present some...entertainment, or other
19 thing of value” (Cal Penal Code § 330.1(f)).

20 (e) **California Penal Code § 337j(a)(1)**: By “operat[ing], carry[ing] on,
21 conduct[ing], maintain[ing], or expos[ing] for play” unlicensed gambling in this state, Google
22 violates Penal Code § 337j(a)(1).

23 (f) **California Penal Code § 337j(a)(2)**: By “receiv[ing], directly or indirectly,
24 any compensation or reward or any percentage or share of the revenue, for keeping, running, or
25 carrying on any controlled game,” Google violates Penal Code § 337j(a)(2).

26 (g) **California Penal Code § 337j(a)(3)**: Through the “manufacture,
27 distribut[ion], or repair [of] any gambling equipment within the boundaries of this state” or
28 “receiv[ing], directly or indirectly, any compensation or reward for the manufacture, distribution,

1 or repair of any gambling equipment within the boundaries of this state” Google violates Penal Code
2 § 337j(a)(3).

3 (h) **The Illegal Gambling Business Act of 1970 (18 U.S.C. § 1955) (the**
4 **“IGBA”)**: The IGBA makes illegal gambling businesses. Google’s business involves five or more
5 persons, has been in continuous operation for more than thirty days, and violates California’s
6 gambling laws as alleged herein. By managing, directing, or controlling all or part of the conduct
7 alleged herein with respect to the Google Play Store, virtual currency and loot boxes, Google
8 violates 18 U.S.C. § 1955, which declares it a crime to “conduct, finance, manage, supervise, direct,
9 or own all of part” of an illegal gambling business.

10 (i) **The Unlawful Internet Gambling Enforcement Act of 2006 (31 U.S.C.**
11 **§§ 5361-5367) (the “UIGEA”)**: The UIGEA makes it illegal for a “person engaged in the business
12 of betting or wagering” to knowingly accept payments “in connection with the participation of
13 another person in unlawful Internet gambling.” 31 U.S.C. § 5633. “Unlawful Internet gambling” is
14 placing, receiving or transmitting a bet or wager through, at least in part, the Internet where such bet
15 or wager “is unlawful under any applicable Federal or State law in the State or Tribal lands in which
16 the bet or wager is initiated, received, or otherwise made.” 15 U.S.C. § 5362(10)(a). By accepting
17 payment in connection with unlawful loot box gambling, Google has violated the UIGEA.

18 (j) **Consumers Legal Remedies Act, California Civil Code § 1770(a)(14)**: As
19 alleged in Count IV below, Google’s conduct violates section 1770(a)(14) of the CLRA. Therefore,
20 this constitutes a violation of the UCL’s unlawful prong.

21 183. Plaintiffs reserve the right to allege other violations of law, which constitute other
22 unlawful business acts or practices. Such conduct is ongoing and continues to this date.

23 184. Google’s violations of the UCL continue to this day. Unless restrained and enjoined,
24 Google will continue to engage in the unfair conduct described herein.

25 185. Defendant’s conduct caused and continues to cause substantial injury to Plaintiffs
26 and the other Class members. As described herein, Google promotes, facilitates, and profits off the
27 purchases of loot boxes; indeed, Google ensures its position as the casino pit boss and takes a rake
28 from each wager. But for Google’s unlawful and unfair conduct, Plaintiffs and Class members

1 would not and could not have entered into the transactions to purchase loot box plays. Plaintiffs
2 have suffered injury in fact and have lost money and property as a result of Defendant's unfair
3 conduct.

4 186. Pursuant to Business & Professions Code sections 17203 and 17205, Plaintiffs and
5 the Class seek restitution of any money paid to purchase loot boxes, damages, an injunction
6 prohibiting Google from continuing to promote and facilitate gambling through loot boxes and the
7 sale of in-game currency for loot boxes, corrective advertising, all other relief this Court deems
8 appropriate, and to pay the attorney fees and costs incurred by counsel for Plaintiffs and the proposed
9 class in accordance with California Code of Civil Procedure § 1021.5.

10 SECOND CAUSE OF ACTION

11 Violation of the "Unfair Prong" of California's Unfair Competition Law ("UCL") 12 (Cal. Bus. & Prof. Code §§ 17200, *et seq.*)

13 187. Plaintiffs reallege and incorporate by reference the allegations set forth in each of the
14 preceding paragraphs of this Complaint.

15 188. Plaintiffs and members of the Class may properly allege violations of the UCL.
16 Google's Terms of Service provide that "California law will govern all disputes arising out of or
17 relating to these terms, service-specific additional terms, or any related services, regardless of
18 conflict of laws rules," and that "[t]hese disputes will be resolved exclusively in the federal or state
19 courts of Santa Clara County, California, USA."

20 189. Plaintiffs and Defendant are "persons" within the meaning of the UCL. Cal. Bus. &
21 Prof. Code § 17201.

22 190. The UCL defines unfair competition to include any "unlawful, unfair or fraudulent
23 business act or practice." Cal. Bus. Prof. Code § 17200.

24 191. As a result of engaging in the conduct alleged in this Complaint, Google has violated
25 the UCL's proscription against "unfair" business practices.

26 192. Google's unfair conduct alleged in this Complaint is illegal, immoral and
27 unscrupulous. Loot boxes develop compulsive and addictive behaviors as with gambling. They are
28 in essence slot machines or, in the alternative, from a psychological standpoint, are similar to slot

1 machines, with all of the same sophisticated gambling-like structural hooks, elements, and cognitive
2 traps that lead to addiction and the associated psychological and financial harms. Scientists have
3 concluded that loot boxes are linked to problem gambling by an order of magnitude larger than risk
4 factors such as alcohol dependence. However, because Google has prioritized profit over ethics,
5 Google makes loot boxes available to purchase by children and families at all hours, in any place,
6 and without any spending limitation whatsoever.

7 193. Google's unfair conduct also violates legislatively declared policies articulated in,
8 inter alia, California's Gambling Control Act (Cal. Bus. & Prof. Code §§ 19800, *et seq.*), California
9 Penal Code §§ 330, *et seq.*, the Illegal Gambling Business Act (18 U.S.C. § 1955), and the Unlawful
10 Internet Gambling Enforcement Act of 2006 (31 U.S.C. §§ 5361-5367) by conducting illegal and
11 unlicensed gambling business including at places not suitable for gambling activities, knowingly
12 accepting payments for unlawful gambling, and promoting predatory gambling as entertainment for
13 children and families.

14 194. California's Legislature found and declared that "Gambling can become addictive
15 and is not an activity to be promoted or legitimized as entertainment for children and families." Cal.
16 Bus. & Prof. Code § 19801(c). In violation of this public policy, Google's conduct as described in
17 this Complaint promotes, facilitates, legitimizes, and profits off addictive gambling activities
18 masqueraded as entertaining video games that are marketed, sold and made available to children
19 and families.

20 195. California's Legislature also found and declared that "Unregulated gambling
21 enterprises are inimical to the public health, safety, welfare, and good order. Accordingly, no person
22 in this state has a right to operate a gambling enterprise except as may be expressly permitted by the
23 laws of this state and by the ordinances of local governmental bodies." Cal. Bus. & Prof. Code
24 § 19801(d). In violation of this public policy, Defendant engages in unregulated gambling
25 enterprises that are inimical to the public health, safety, welfare, and good order. Defendant has not
26 been permitted by the laws of this State and by ordinances of local governmental bodies to engage
27 and operate the gambling enterprise described herein. California's Legislature also found and
28 declared that "no new gambling establishment may be opened in a city, county, or city and county

1 in which a gambling establishment was not operating on and before January 1, 1984, except upon
2 the affirmative vote of the electors of that city, county, or city and county.” Cal. Bus. & Prof. Code
3 § 19801(e). In violation of this Legislative finding and public policy, Defendant has opened a
4 gambling establishment through its Google Play Store without first receiving the affirmative vote
5 of the electors of any city or county in this State.

6 196. California’s Legislature also found and declared that “Public trust that permissible
7 gambling will not endanger public health, safety, or welfare requires that comprehensive measures
8 be enacted to ensure that gambling is free from criminal and corruptive elements, that it is conducted
9 honestly and competitively, and that it is conducted in suitable locations.” Cal. Bus. & Prof. Code
10 § 19801(g). In violation of this public policy, and undermining “public trust,” Google has brought
11 unregulated gambling into the homes and pockets of tens of millions of consumers, including
12 children – 24/7 locations which are not “suitable” to protect the public from the from the dangers of
13 gambling. California’s Legislature also found and declared that “All gambling operations, all
14 persons having a significant involvement in gambling operations, all establishments where gambling
15 is conducted, and all manufacturers, sellers, and distributors of gambling equipment must be
16 licensed and regulated to protect the public health, safety, and general welfare of the residents of
17 this state as an exercise of the police powers of the state.” Cal. Bus. & Prof. Code § 19801(g). In
18 violation of this public policy, Google is not licensed or regulated despite being significant involved
19 in the gambling operations described herein and operating an establishment where the gambling is
20 conducted.

21 197. Google’s unfair conduct also includes and arises from promoting, facilitating and
22 profiting from conduct designed to create and exploit addictive tendencies in vulnerable minors and
23 adults alike.

24 198. Google has omitted important information and mislead parents of vulnerable minors
25 and adolescents and others concerning the addictive, costly, and random chance nature of the loot
26 box mechanism and its use in Defendant’s Google Play Store games. According to psychologists,
27 loot boxes are a “predatory monetization scheme”:
28

1 Predatory monetization schemes in video games are purchasing systems that disguise
2 or withhold the long-term cost of the activity until players are already financially and
3 psychologically committed. Such schemes contribute to the increasing similarity of
gaming and gambling and the potential for financial harm for those with Internet
gaming disorder.⁸³

4 199. Google also has engaged in “unfair” business practices under the “balancing test.”
5 Google’s conduct offends established public policies and is immoral, unethical, oppressive,
6 unscrupulous, or substantially injurious to consumers. There is no utility to Google’s unethical
7 conduct, which creates a gateway to problem gambling, promotes and reinforces addictive behavior,
8 and markets and sells gambling as entertainment to families, children, and other vulnerable
9 populations. Meanwhile, the gravity of harm from Google’s unfair conduct is substantial – creating
10 and reinforcing addictive behavior to the financial, social, and psychological detriment of families,
11 children and other vulnerable populations.

12 200. Google has also engaged in “unfair” business practices under the “tethering” test.
13 Google’s unfair practices violate public policies that are tethered to specific constitutional, statutory,
14 or regulatory provisions and thereby “violate the policy or spirit” of those provisions. *Cel-Tech*
15 *Comms., Inc. v. Los Angeles Cellular Telephone Co.*, 20 Cal. 4th 163, 187 (1999). As alleged herein,
16 California’s Gambling Control Act (Cal. Bus. & Prof. Code §§ 19800, *et seq.*), California Penal
17 Code §§ 330, *et seq.*, the Illegal Gambling Business Act (18 U.S.C. § 1955), and the Unlawful
18 Internet Gambling Enforcement Act of 2006 (31 U.S.C. §§ 5361-5367) each declare that unlicensed
19 or unregulated gambling or gambling activities are inimical to the public health, safety, welfare, and
20 good order, and are not to be promoted or legitimized as entertainment for children or families.
21 Indeed, because even watching gambling take place acts as a gateway for youth, California’s
22 Gambling Control Act provides that no person under 21 years of age is permitted to enter a gambling
23 establishment. Cal. Bus. & Prof. Code § 19921. Google’s unfair conduct violates these legislatively-
24 tethered public policies.

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27 ⁸³ King DL, Delfabbro PH. *Predatory monetization schemes in video games (e.g. ‘loot boxes’) and internet gaming disorder*. *Addiction*. 2018 Nov;113(11):1967-1969. doi: 10.1111/add.14286.
28 Epub 2018 Jun 28. PMID: 29952052.

1 201. Google also engaged in “unfair” business practices under the “FTC Act” test. As
2 alleged, the injury to Plaintiffs and Class members is substantial, the injury is not outweighed by
3 any countervailing benefits to consumers or competition, and particularly given the predatory nature
4 of the conduct, the injury is such that it could not reasonably have been avoided.

5 202. There is no societal benefit from Google’s conduct which includes promoting and
6 facilitating addictive gambling as entertainment for children and families. There is only harm from
7 Google’s conduct. While Plaintiffs were harmed, Google was unjustly enriched by its deceptive,
8 predatory, and harmful conduct. As a result, Google’s conduct is “unfair” because it offended
9 established public policies. Further, Google engaged in immoral, unethical, oppressive, and
10 unscrupulous activities that are substantially injurious to consumers as the gravity of Google’s
11 conduct outweighs any alleged benefits attributable to such conduct.

12 203. There were reasonably available alternatives to further Google’s legitimate business
13 interests other than the conduct described herein.

14 204. Google’s violations of the UCL continue to this day. Unless restrained and enjoined,
15 Google will continue to engage in the unfair conduct described herein.

16 205. Defendant’s conduct caused and continues to cause substantial injury to Plaintiffs
17 and the other Class members. As described herein, Google promotes, facilitates, and profits from
18 the purchases of loot boxes; indeed, Google ensures its position as the casino pit boss and takes a
19 rake from each wager. But for Google’s unlawful and unfair conduct, Plaintiffs and Class members
20 would not and could not have entered into the transactions to purchase loot box plays. Plaintiffs
21 have suffered injury in fact and have lost money and property as a result of Defendant’s unfair
22 conduct.

23 206. Pursuant to Business & Professions Code sections 17203 and 17205, Plaintiffs and
24 the Class seek restitution of any money paid to purchase loot boxes, an injunction prohibiting
25 Google from continuing to promote and facilitate gambling through loot boxes and the sale of in-
26 game currency for loot boxes, corrective advertising, all other relief this Court deems appropriate,
27 and to pay the attorney fees and costs incurred by counsel for Plaintiffs and the proposed class in
28 accordance with California Code of Civil Procedure § 1021.5.

THIRD CAUSE OF ACTION

**Violation of the Consumers Legal Remedies Act
(Cal. Civ. Code §§ 1750, *et seq.*)**

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4 207. Plaintiffs reallege and incorporate by reference the allegations set forth in each of the
5 preceding paragraphs of this Complaint.

6 208. Plaintiffs and members of the Class may properly allege violations of the CLRA.
7 Google’s Terms of Service provide that “California law will govern all disputes arising out of or
8 relating to these terms, service-specific additional terms, or any related services, regardless of
9 conflict of laws rules,” and that “[t]hese disputes will be resolved exclusively in the federal or state
10 courts of Santa Clara County, California, USA.”

11 209. This claim for relief is brought pursuant to the CLRA. Plaintiffs and members of the
12 Class are “consumers,” as that term is defined by Civil Code § 1761(d), because they bought virtual
13 currency, loot boxes and Google Play Store services for personal, family, or household purposes.

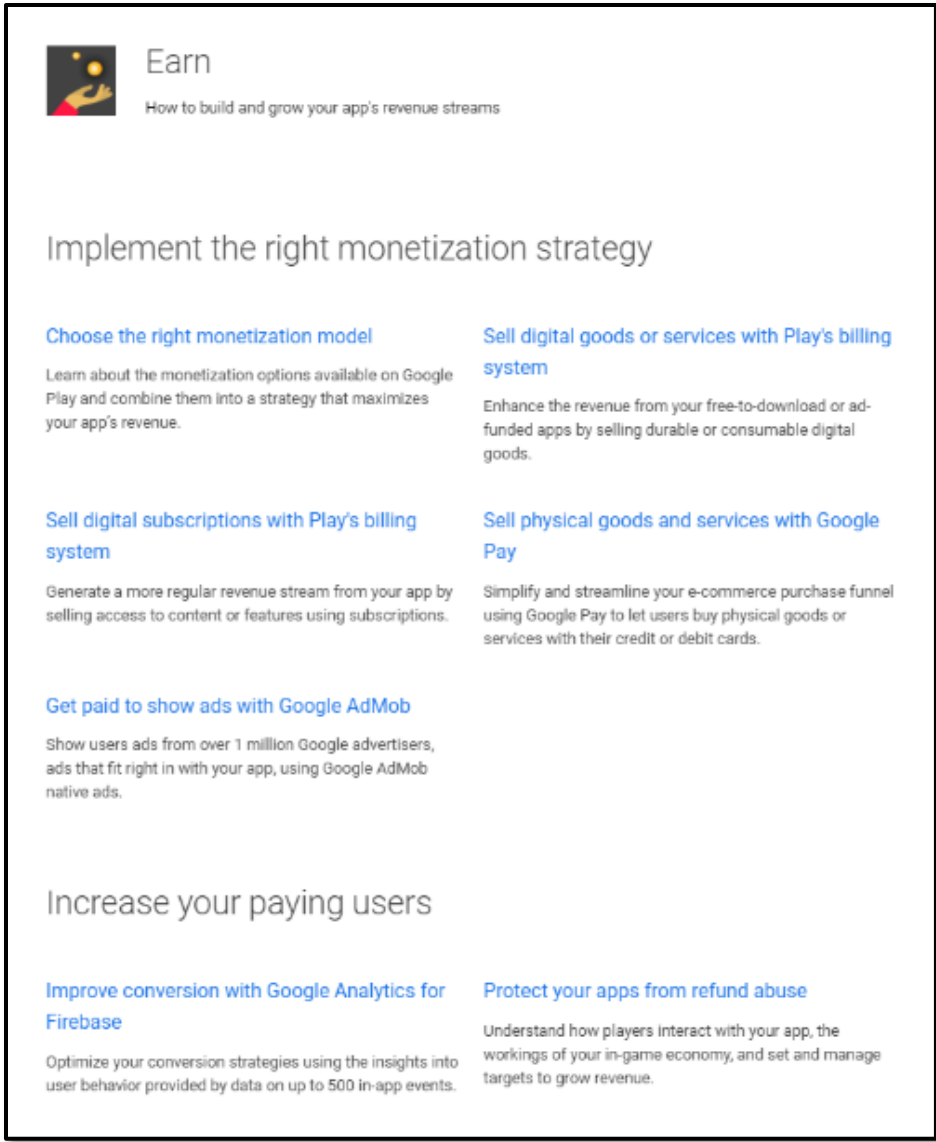
14 210. Plaintiffs and Class Members have engaged in a “transaction” with Google, as that
15 term is defined by Civil Code § 1761(e).

16 211. The conduct alleged in this Complaint constitutes unfair methods of competition and
17 unfair and deceptive acts and practices for the purposes of the CLRA and were undertaken by
18 Google in transactions intended to result in, and which resulted in, the sale of goods or services to
19 consumers; namely, the sale of virtual currency, loot boxes and Google Play Store services.

20 212. According to the Google Play Terms of Service, “Google Play is a service provided
21 by Google.” Further, “[i]n order to purchase Content through Google Play, you must have a Google
22 Payments account and agree to the Google Payments Terms of Service.” Plaintiffs and Class
23 members transacted directly with Google for the services that the Google Play platform provides.
24 Each time Plaintiffs and Class members made purchases of in-game content, they did so through
25 Google at the Google Play Store, and in so doing, also paid Google for its Google Play services
26 being furnished in connection with the sale of virtual currency and loot boxes.

27 213. Further, according to Google, the in-app content it sells through the Google Play
28 Store is “digital goods or services.” Below are screenshots from Google’s webpages where it

1 describes the in-app content as “digital goods or services.” According to Google, these goods are
 2 either “durables (once purchased, always available to the user)” or “consumables (items used a
 3 limited number of times or for a set period of time).” These so-called durable or consumable
 4 products purchased from the Google Play Store include the virtual currency and loot boxes, which
 5 are thus, according to Google, “goods or services.”⁸⁴





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25 ⁸⁴ See *Earn: How to build and grow your app's revenue streams*, Google Play Developers,
 26 <https://developer.android.com/distribute/best-practices/earn> (last visited Mar. 18, 2021); *Sell digital*
 27 *purchases with Google Play's billing system*, Google Play Developers,
 28 <https://developer.android.com/distribute/best-practices/earn/in-app-purchases> (last visited Mar. 18, 2021); *Choose a monetization model for your app*, Google Play Developers,
<https://developer.android.com/distribute/best-practices/earn/monetization-options> (last visited Mar. 18, 2021).

1 See *Earn: How to build and grow your app's revenue streams*, Google Play Developers,
 2 <https://developer.android.com/distribute/best-practices/earn> (last visited Mar. 18, 2021). Then click
 3 “Sell digital goods or services with Play’s billing system” to see:

4

5 Google Play > Guides Rate and review  

6 **Sell digital purchases with Google Play's billing system**

7 Earn Develop

8 Sell in-app purchases (or IAPs) in your app or game using Google Play's billing system.

9 **Note:** Use Google Play's billing system only for selling *digital goods or services*. If you're selling physical goods or services, you must instead use [Google Pay](#).

10 For more information on which monetization system to use, see [Choose a monetization model for your app](#).

11 **Why it works**

12 When you use Google Play In-app Billing to sell items, Google Play handles the checkout details so your app never has to process financial transactions. Your app will use the same checkout flow which is used for content purchases on Google Play, so users will get a familiar, reliable, and secure experience.

13 **How to do it:**

14

15 1. Determine what content or features you want to sell as digital goods.

16 2. Set-up a Google Wallet Merchant Account in the Google Play Console.

17 3. Define your in-app products in the Play Console, choosing between durables (once purchased, always available to the user) and consumables (items used a limited number of times or for a set period of time).

18 4. Add mechanisms to unlock features or deliver content to your app.

19 **Best practices:**

20



21 • **Make your app available as a free download** with limited features or full features for a limited time. Then use an in-app purchase to unlock the full, unlimited app.

22 • **Offer additional features or content items** through in-app purchases, such as new levels, special playing pieces, or other features in games.

23 • **Use subscriptions** where your app provides regularly updated or time-based content.



24 **Next steps**

25 • [Get started with Google Play's billing system](#)

26 Rate and review  

26 *Sell digital purchases with Google Play's billing system*, Google Play Developers,
 27 <https://developer.android.com/distribute/best-practices/earn/in-app-purchases> (last visited Mar. 18,
 28 2021).

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Google Play > Guides Rate and review  

Choose a monetization model for your app

Earn

To maximize your revenue, consider a flexible monetization strategy that adapts to your audiences and markets. Different audiences can have different preferences for paid apps, in-app purchases, subscriptions, ads, and other ecommerce.

Sell goods or services through your app

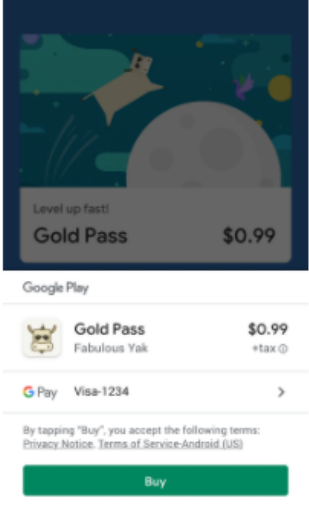
When you're developing a mobile application for Android and distributing it on Google Play, there are two primary ways you can accept payments: Google Play's billing system and Google Pay.

Sell digital goods or services with Google Play's billing system

Use Google Play's billing system to sell *digital goods or services* within an app on Google Play. Google Play's billing system makes it easy for users to consistently, securely, and seamlessly purchase your goods and services for your app. Once users save a payment method on Google Play, they can use that same payment method for all future purchases on Google Play with just a tap.

Developers who distribute their app through Google Play are required to use Google Play's billing system to sell in-app content. Items that require developers to use Google Play's billing system include the following:

- **Virtual game products**, such as coins, gems, extra lives or turns, special items or equipment, characters or avatars, additional levels or playtime.
- **App functionality or content**, such as an ad-free version of an app or new features not available in the free version.
- **Subscription services**, such as streaming media, digital publications, and social networking services.
- **Cloud software products**, including data storage services, business productivity software, and financial management software.



See *Choose a monetization model for your app*, Google Play Developers, <https://developer.android.com/distribute/best-practices/earn/monetization-options> (last visited Mar. 18, 2021).

214. As a result of Google's conduct, Plaintiffs and Class members purchased Google Play's goods or services, including the content available through it, to open and play loot boxes, which are prohibited by law.

215. By engaging in the conduct described herein, Google has violated subdivision (a)(14) of California Civil Code § 1770 by "Representing that a transaction confers or involves rights,

1 remedies, or obligations that it does not have or involve, or that are prohibited by law.” Under this
2 provision, omissions are actionable.

3 216. Defendant violated the CLRA by representing to or omitting from Plaintiffs and
4 Class members that the transactions involving loot boxes confer or involve rights to potentially
5 valuable prizes, when in fact these transactions constitute unlawful gambling transactions that are
6 prohibited by law, foster compulsive and addictive behavior, are not suitable for children, teenagers
7 and many adults, and are a predatory form of duplicitously profiting from others. These omissions
8 are material because a reasonable consumer would deem them important in determining how to act
9 in the transaction at issue and, if prohibited by law, should not have been permitted to purchase loot
10 box plays. Further, the omissions about loot boxes are misleading in light of other facts that Google
11 did disclose.

12 217. Defendant’s violations of the CLRA proximately caused injury in fact to Plaintiffs
13 and the Class.

14 218. Plaintiffs and the Class members transacted with Defendant on the belief that the
15 transaction was lawful. Indeed, a reasonable consumer believes in the lawfulness of his or her
16 transactions.

17 219. Pursuant to Cal. Civ. Code § 1782(d), Plaintiffs, individually and on behalf of the
18 other members of the Class, seek a Court order enjoining the above-described wrongful acts and
19 practices of Defendant and for restitution and disgorgement.

20 220. Pursuant to Cal. Civ. Code § 1782(a), Defendant was notified in writing by certified
21 mail of the particular violations of Section 1770 of the CLRA, which notification demanded that
22 Defendant rectify the problems associated with the actions detailed above and give notice to all
23 affected consumers of Defendant’s intent to so act. A copy of the letter is attached as Exhibit A to
24 the Complaint filed June 12, 2020. *See* ECF No. 1-1.

25 221. Defendant has failed to rectify or agree to rectify the problems associated with the
26 actions detailed above or give notice to all affected consumers within 30 days of the date of written
27 notice pursuant to § 1782 of the Act. Therefore, Plaintiffs further seek claims for actual, punitive
28 and statutory damages, as appropriate.

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PRAYER FOR RELIEF

WHEREFORE, Plaintiffs, on behalf of themselves and all others similarly situated, pray for relief in this Complaint as follows:

- (a) For an order certifying the Class as requested herein;
- (b) For restitution and disgorgement of the revenues wrongfully retained as a result of Google’s wrongful conduct;
- (c) For declaratory and injunctive relief as permitted by law or equity;
- (d) For an award of attorney fees, where applicable;
- (e) For an award of costs; and
- (f) For any and all other relief the Court deems just and appropriate.

DEMAND FOR JURY TRIAL

Based on the foregoing, Plaintiffs, on behalf of themselves, and all others similarly situated, hereby demand a jury trial for all claims so triable.

Respectfully submitted,

Dated: March 11, 2021

By: s/ Timothy G. Blood
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CERTIFICATE OF SERVICE

I hereby certify that on March 19, 2021, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which will send notification of such filing to the e-mail addresses denoted on the Electronic Mail Notice List, and I hereby certify that I have mailed the foregoing document or paper via the United States Postal Service to the non-CM/ECF participants indicated on the Electronic Mail Notice List.

I certify under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on March 19, 2021.

s/ Timothy G. Blood

TIMOTHY G. BLOOD