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THE TEMPORAL, FINANCIAL, AND EMOTIONAL INVESTMENT IN LOOTBOX
GAMES

By

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A capstone project submitted for Graduation with University Honors

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University Honors
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ABSTRACT

The video game industry is one of the most popular sources of satisfying the desire to cultivate unique experiences and interactions, from gameplay to storytelling and characters. Companies can take advantage of this demand for media consumption by adding transactions within their games, forcing players to spend money to satisfy themselves as the companies profit from gamers' time and money. Although playing through these games without spending may be possible, games typically incentivize players to pay for the most optimal experience. As such, this project examines how interactions within the virtual world of lootbox gaming may lead to gambling addiction. Previous studies of video game psychology focused on video game habits and the rise of lootbox gaming and gambling. Recently, there has been a rise in research regarding the psychological aspects of engaging with the lootbox system. By observing eight lootbox opening videos from three Western games and four Eastern games, this qualitative study aims to explore the predatory nature of the lootbox system, why players invest in these titles (and what compels them to spend), and the financial, temporal, and emotional consequences of addiction. Preliminary findings suggest the exploitative qualities of lootbox games causes players to become immensely devoted to obtaining their desired outcome regardless of the costs; once they feel satiated, players may push to spend even more for a chance at going beyond their expectations, leaving them more susceptible to stress, extreme dissatisfaction and decreasing psychological awareness on their usage of time and money.

ACKNOWLEDGMENTS

Of course, this project wouldn't have been made possible without the help of those who paved the way. I thank my faculty mentor, Rebekah Richert, for supporting me these past few years, from being patient during our meetings to advising me on sufficient changes for this project to thrive. Without your suggestions, I would have no idea what to do with everything I had in mind. Because of people like you, I felt comfortable opening beyond the classroom. On that note, I thank the honors faculty for aiding my project and overall college experience. Most notably, I thank Professor Richard Cardullo for his charisma whenever we passed by and his courteous nature in managing issues that arrived during the Spring quarter.

I thank everyone in the Veterans' Resource Center for giving me a home away from home. From the coordinator, Tami Thacker, to the VASCO staff (including my bosses,) all of you made me feel welcomed in a world where I believed otherwise. I struggled with finding and forming connections due to my eccentric nature and distinct background, but you proved that goodness exists in this world where you least expect it. Even though my brain constantly belittled me or stated not to ask for help every time, you were all so kind in assisting when I needed it. I cannot emphasize your impact enough; you made me laugh and smile when I needed it the most, rekindling my hope in humanity as a result.

I thank my most beloved family, friends, and God for giving me the strength to continue despite the endlessly late nights and sudden situations that held me back. My friends gave me their experiences and inspiration to pursue this topic, so I commend them for their endeavors. Above all else, I thank you for taking the time to read this paper.

Please, live long and continue to grow beautifully despite your imperfections.

Introduction

As modern society continues to evolve, technology and the media skyrocket alongside it to an immensely high degree. Of these forms of technical media, the video game industry underwent massive changes, becoming more commercialized and striving for more accessibility within various consoles and companies. Although video game sales were sufficient pre-2019, there was a switch to a more digital marketplace during the COVID-19 pandemic, leading to skyrocketing sales. Most notably, a Statista survey detailing the video game market worldwide revenue showcased around 265.21 billion dollars in 2019, jumping to 321.61 billion dollars a year later. These sales increased even further in 2021, from 321.61 to 369.97 billion dollars, before decreasing slightly to 361.76 in 2022 (Statista, 2024). One significant factor regarding these shifts relates to the health crisis shutting everything down, leaving individuals dependent on technology for their formal everyday needs to casual, informal entertainment; once the government lifted regulations, people devoted less time and money to playing video games as their daily routines returned to normal. (Reliable and up-to-date sources are arduous to find due to the growing informational field, though they are close enough to hold a degree of certainty.)

Three motivations were focused on when analyzing the motivations of playing video games for this research: keeping the mind engaged, escapism through fantasies, and loyalty to a brand. Cognitively demanding tasks exhaust the brain as the structure uses its cognitive resources, and this mental fatigue increases the lengthier and more strenuous the task is, more so if it requires using physical abilities as well (Aitken and MacMahon, 2019). Because of these issues, video games provide opportunities for the brain to properly stretch itself as the player partakes in activities that may lack material goals in real life but reward them with satisfaction (Hulaj et al., 2015). One of these concepts is the idea of flow in video games, where the most

optimal experience enhances "concentration, loss of time perception, a balance between the player's skills and the game's demands, and loss of self-awareness" in parts that are formidable yet gratifying (Michailidis et al., 2018). Instead of the player devoting their attention to their daily rituals, they can look into a game that stimulates their mind through various segments. These range from boss battles to articulate puzzles; in particular, they can also attempt to obtain a rare item or character that may benefit the user's gameplay, giving a fair amount of thrills and fulfillment when ideal.

Even though the idea of engagement and escapism sound similar, the latter is what makes the former so enticing in the first place. As the name suggests, the notion of escapism uses imagination or media to mentally divert from how uncontrollable reality is. Despite its connections with the adverse outcomes of life, escapism can also contribute to more positive means, yet both are potential factors in media addiction (Jouhki et al., 2022). In a meta-analytic literature review examining Western and non-Western societies, video game escapism had a greater mean value and higher association with negative outcomes within Western countries. Players would use this medium to satiate a psychological or somatic need, such as combatting the growing levels of loneliness or stress. Video game escapism in non-Western cultural contexts correlates to positive outcomes, such as elements of fantasy, enjoyment, and achievement (Hussain et al., 2021). These characteristics matter because corporations can utilize them to make video games the most effective and fulfilling they can be, even if it is addiction and sacrificing real-life resources.

Some people *must* play their favorite game or spend on it because they are compelled to out of loyalty. Balakrishnan's and Griffith's (2018) study was one of the first to analyze potential connections between video game addiction and loyalty to in-game purchases within apps. In this

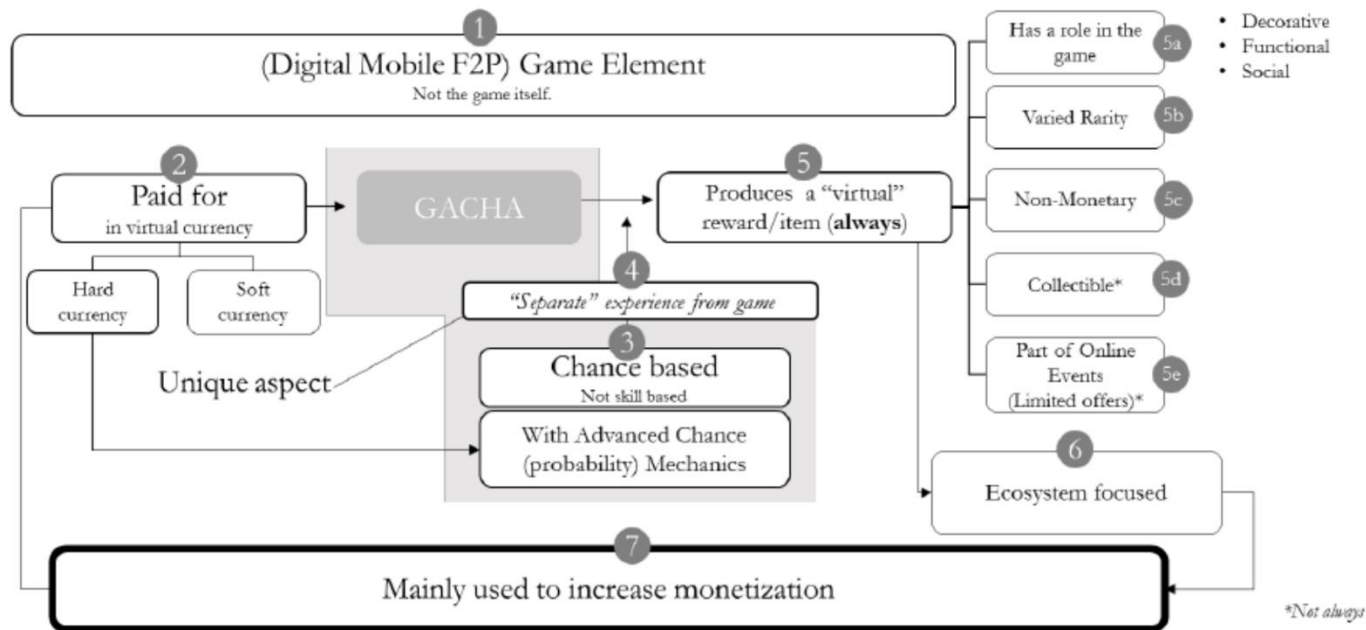
case, they describe loyalty as the satisfaction players attain when engaging with their video game, and video game addiction is the compulsive desire to sustain that gratification even when something is unenjoyable. The researchers gathered 430 students from two significant Indian universities to complete a 28-item survey focusing on these variables and their reasoning for buying in-game features online (Balakrishnan and Griffith, 2018). The results of this qualitative study showed strong evidence of deep loyalty to a game, video game addiction, and the instilled urge to go through with the microtransaction. These elements of engagement, escapism, and loyalty (or EEL for short) are what makes video games so interesting, but they can also be taken advantage of for more predatory reasons.

Defining Lootbox and Gacha Games

One of the more controversial genres in video games is lootbox games since they have an innocent appearance before revealing a darker, tempting, and deeply resource-consuming side. According to the ESRB, "'loot boxes' are like locked treasure chests that contain an array of random virtual items that can be used in the game once unlocked. 'Loot box' is a catch-all term that can refer to a number of similar randomized purchases, such as item packs, card packs, prize wheels, treasure chests, etc." (esrb.org, 2023). A player can obtain some of these rewards through in-game currency earned by gameplay; the results are hidden from the player until their reveal, meaning if the players fail to get what they desire, they may be inclined to spend more time or money to achieve their goals. More specifically, if they run out of currency, they can use real money and exchange it for the funds needed to get a lootbox. These continuous losses and prizes create the compulsion loop, a feedback loop composed of multiple parts: anticipation, reward, habitual effort, and withdrawal. In that sense, players have expectations for a specific reward that interests them (such as cosmetics,) so they commit to habitual actions in the game

until they have it; the greater their materialistic need is, the more difficult it becomes to withdraw from the task (or the more affected the player is when they eventually do.)

Lootboxes are well-known in the West, but recently, another comparable genre called gacha games has grown in popularity in the video game industry. Although they have similar mechanics with random chance, minor differences exist to make them stand out. For instance, unlike the gritty, hardcore aesthetics of many lootbox games, the gacha genre has a more Eastern animesque aesthetic with mechanics that tie back to the Japanese gachapon machine. To be more specific, the gachapon is a vending machine that lets people use their money for tokens, and it dispenses a random capsule toy after they turn the knob (hence, the onomatopoeia name of gacha, the sounds the machine makes.) Moreover, another difference is that the importance of free-to-play users and gameplay is much more significant in gacha games compared to Western lootboxes. In general, "the lucky draw experience for Lootboxes is also often separated from the actual gameplay and uses special animation for visualization and as Gacha always provides a (virtual) reward in form of virtual items, characters, etc. which play a role in the game (decorative, functional, social)" (Koeder et al., 2018). Gacha genres range from music-based to single-player RPGs or trading card games, and even though it may be possible to play without spending currency, the incentive to go through the gacha increases when the player wishes to enhance their gameplay experience, whether it is for decorative means or gameplay-related reasons.



Note. Outline of Gacha elements in Japanese mobile F2P games. From "Lootboxes" in digital games - A gamble with consumers in need of regulation? An evaluation based on learnings from Japan by K. Marco et al., 2018, ITS Seoul.

Methods

This video review focused on the temporal, financial, and emotional investment of lootbox games and how they may contribute to being potential signs of gambling addiction. Not only does it look into existing research, but to better understand these concepts, this paper observed eight YouTube videos from seven games. Three are Western lootbox games: *Counter-Strike: Global Offensive*, *Apex Legends*, and *World of Tanks*. The other four consisted of gacha games: *Genshin Impact*, *Honkai: Star Rail*, *Fate/Grand Order*, and *Project Sekai Colorful Stage feat. Hatsune Miku*. While some of these choices (particularly the lootbox section) may not fit the most popular games, the idea was to see how much streamers put their time and money into their games, their reaction, and the audience's interactions. These videos were chosen because of

how much they can showcase lootbox or gacha potential; these content creators can show off more than users who do not spend as much time or money in these microtransacted games. In a sense, it is a glimpse of the highest or most optimal gameplay experience when the lootbox or gacha gives them the most rewards, enticing viewers to continue watching their content or expend more funds.

Variable-wise, this review focuses on the video's time length, how much money was spent, and the players' and audiences' reactions. Time is measured through the minutes in the video's duration, and money is calculated through the amount spent in the game for opening lootboxes or rolling the gacha in United States dollars. Any visible instance of the player showing intense emotions (anger, impatience, sadness, etc.), whether through their facial expressions, actions, the player's choice of wording, or phrasing, goes towards significant reactions related to the lootbox or gacha game. From there, the number is divided by the total reactions and made into a percentage. Outside of what's in the video, this measurement includes the thumbnail, the title (if applicable,) and live comments when looking at the lootbox or gacha game's emotional investment. These measures examine the weight of these games' impact as their players engage with its randomized system.

Time

It should be noted that all but one of these videos are cut from Twitch live streams, but none of the channels list the source, which means the amount of time spent is calculated by the duration of the video. For lootbox games, the two *Counter-Strike: Global Offensive* videos were 34:96, the *Apex Legends* video was 39:49, and *World of Tanks* had 41:41, totaling 115:86 minutes (or 1 hour and 56 minutes.) Most of the footage was spent on using the lootbox system, but the *Apex Legends* and *World of Tanks* videos went more in-depth with gameplay potential for

each obtained resource. For gacha games, the *Genshin Impact* video was for 15:58 minutes, *Honkai: Star Rail's* duration was at 13:11, *Fate/Grand Order* was for 7:30, and *Project Sekai* was at 19:07, totaling 55:06 minutes. Most gameplay potential was focused on the gacha, which makes sense considering the people rolling for them did so for gameplay reasons.

Financial Investment

The financial spending on these games is very high, though there are several aspects to point out. First of all, these are YouTube content creators with over 100K subs, and of the seven observed, only two of them in the gacha game category (*Fate/Grand Order* and *Project Sekai*) had less than that total. With that said, the channels for the lootbox game videos had sponsors labeled in their descriptions or opened them because they were sponsored by the game's creators directly. For instance, QuickyBaby's video is opening 250 seasonal and limited-time themed boxes gifted by the developers; using his own Microsoft Excel calculations, he spent around \$310.61 in opening these lootboxes, but he also states that these funds will be donated to cancer research despite the steep amount. In the *Apex Legends* video, The Gaming Merchant spent \$350 for these limited-time lootboxes. Regardless, the number of subscribers and content produced are indications that they can spend more than the usual viewer, so seeing them highlight the amount they used is both a reminder of this information and a point of attention.

Counter-Strike: Global Offensive is infamous for its wildly fluctuating marketplace for skins and weapons, one where actual monetary value is tied to its resources; since players can earn hundreds to thousands of dollars for their collectibles (more so if they are in mint condition,) the act itself becomes very predatory yet also eye-catching if the player spends a significant amount (Wolfarth, 2019). Most notably, the 5.33M sub-channel TimTheTatman makes the amount of money he spent very clear, down to having it in his thumbnails to attract

viewers. The first video has him spend \$1,000 for a pair of gloves worth \$21,000 in factory-new condition, along with using other people's donations to continue opening lootboxes (he makes comments about this, saying their money is going to the activity itself.) The streamer failed to achieve his goal, but he obtained a \$500 pair of gloves from the lootbox case in the end. This idea of highlighting the amount of money spent becomes even more egregious as the risks become prominent. On a brand new account, TimTheTatman emphasizes that he used \$10,000 in opening lootbox cases for a sticker worth \$751 and a cosmetic weapon skin with the cheapest version worth \$55,000. While this may be true for the most part, the number becomes \$11,000 in the end when he desperately attempts to obtain this weapon skin after a potentially lucky exchange, but he fails again.

For the gacha game videos, the amount of money spent altogether is unclear. The *Genshin Impact* and *Fate/Grand Order* videos use viewers' donations to roll on their accounts, and neptune's *Project Sekai* video also used the player's stored funds, making the exact spending ambiguous. That said, Tenha's video on *Honkai: Star Rail* uses \$1,700 for maxing out a limited-time character and her signature "light cone" (the equivalent of *Genshin Impact's* weapon.) Regardless, all four videos spend out of hype for a character or how they significantly enhance gameplay potential.

Figure 1

Information about the reviewed videos

Games	Videos	Channel	Subscriber Count	Upload Date	View Count	Time	Money	Emotional Reactions	Total Reactions
<i>Counter-Strike: Global Offensive</i>	https://www.youtube.com/watch?v=Jg657djhEPk	TimTheTatman	5.33M	3/12/2023	489,281	00:19	\$1,000	6	10
	https://www.youtube.com/watch?v=XNpKKoa1ZVI	TimTheTatman	5.33M	8/19/2023	327,772	00:15	\$11,000	13	23
<i>Apex Legends</i>	https://www.youtube.com/watch?v=Zy0iFVVgAgU	The Gaming Merchant	909K	1/29/2023	936,303	00:39:49	\$350	6	15
<i>World of Tanks</i>	https://www.youtube.com/watch?v=x19oag8TGKg	QuicklyBaby	679K	12/1/2023	140,409	00:41:41	\$310.61	19	36
						00:115:86	\$12,660.61	44	84
Games	Videos	Channel	Subscriber Count	Upload Date	View Count	Time	Money	Emotional Reactions	Total Reactions
<i>Genshin Impact</i>	https://www.youtube.com/watch?v=umFt1IKAEYU	Doro44	539K	2/18/2023	209,804	00:15:58	Unclear, uses donations	11	34
<i>Honkai: Star Rail</i>	https://www.youtube.com/watch?v=Y4ZaC3s9bA	Tenha	472K	12/27/2023	59,186	00:13:11	\$1,700	13	29
<i>Fate/Grand Order</i>	https://www.youtube.com/watch?v=40BXeoalMqW	Myst	90.8K	4/19/2023	29,414	00:07:30	Approx. \$107.63	8	10
<i>Project Sekai Colorful Stage Feat. Hatsune Miku</i>	https://www.youtube.com/watch?v=Tx7_BgMaPig	neptune	2.1K	3/30/2023	134,302	00:19:07	Unclear	13	26
						0:55:06		45	99

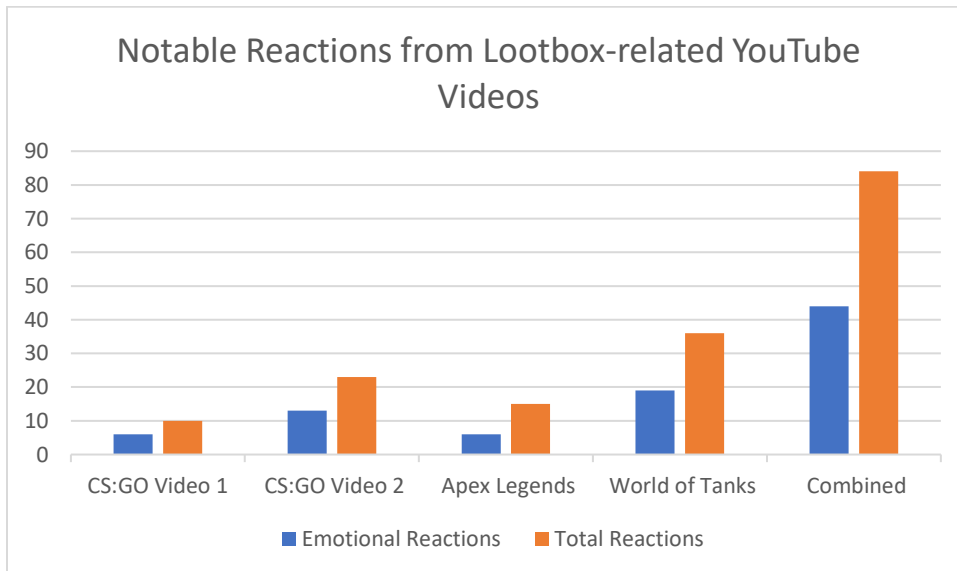
Note. Tables with information about the videos used in this review. Own work.

Emotional Impact (Lootbox Games)

Out of these three findings, the emotional impact of engaging with the lootbox and gacha systems is the most noticeable when watching these videos. The first video of *Counter-Strike: Global Offensive* had 6 significant reactions out of 10, while the second had 13 out of 23, which calculates to 60% and a rounded number of 57%. The *Apex Legends* one had 6 out of 15, and the *World of Tanks* video contained 19 out of 36 reactions, or 40% and approximately 53%. Out of 84 notable total reactions in the lootbox game video viewing, around 44 had the player exhibit some form of extreme emotion. As such, 52% of the players' reactions related to anger, frustration, disappointment, or elation as they opened a randomized lootbox and thought of its potential contents.

Figure 2

Emotional Reactions and Total Reactions Calculated



Note. Bar graph of emotional reactions and total reactions side-by-side. Own work.

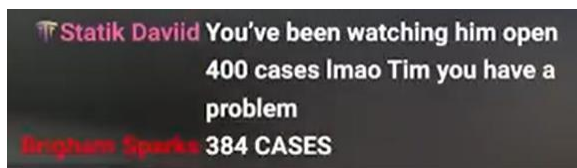
These are not limited to the footage themselves, as the selected lootbox game videos have thumbnails that depict the player or someone else with a shocked or indifferent emotion, all meant to interest the viewer as they open everything. One such example is TimTheTatman's *Counter-Strike: Global Offensive* videos, particularly his second one, which depicts the streamer with his hands wide open and his mouth agape in shock as he stares at the massive number of Bravo (one of, if not the highest rarity) boxes, the shining golden mystery question mark symbols for opening cases (particularly gloves or knives,) and the text that has the words "\$10,000 case opening" in all-caps and bolded green letters. Even though it may appear to be his final spending total, watching the video reveals he used \$11,000 at the end in a desperate attempt to get his ideal weapon with the cheapest market price of around \$55,000, making this thumbnail and the title of *\$10,000 CSGO CASES* bait-like in appearance and false in what it is publicizing.



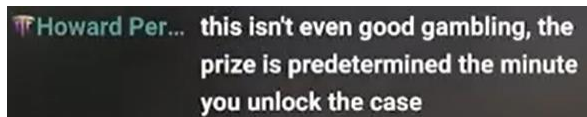
Note. Thumbnail. From *\$10,000 CSGO CASES* [Video], by TimTheTatman, 2023, YouTube (<https://www.youtube.com/watch?v=XNpKKoa1ZVI>).

Speaking of which, the predatory skin market system in this game elicits reactions akin to gambling in a casino. These signs are apparent throughout the video, yet they are especially

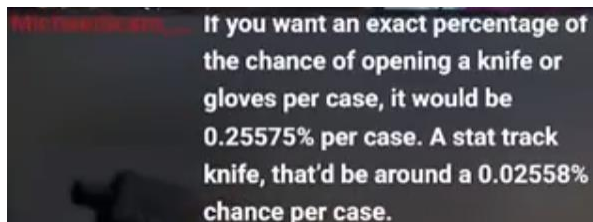
noticeable around the 7-8 minute mark. At around 7:24, the streamer starts begging for the game to give him what he wants, using phrasing such as "please be kind to me" while acting irrationally; he isn't fond of his results by 8:45 to 8:52, so he angrily exclaims that the game is emotionally messing with him (TimTheTatman, 2023). On a side note, his audience seems to recognize the volatility of these reactions, so much so that some of them bring it up in his first video; ironically, this does not stop the viewers from donating as he boasts about using their money to continue opening cases.



Statik David You've been watching him open 400 cases lmao Tim you have a problem
Brigham Sparks 384 CASES



Howard Per... this isn't even good gambling, the prize is predetermined the minute you unlock the case



Mike... If you want an exact percentage of the chance of opening a knife or gloves per case, it would be 0.25575% per case. A stat track knife, that'd be around a 0.02558% chance per case.

Note. Twitch comments from the viewers. From *OPENING \$1000 CSGO CASES* [Video] by TimTheTatman, 2023, YouTube (<https://www.youtube.com/watch?v=Jg657djhEPk>).

The *Apex Legends* and *World of Tanks* videos stand out for being unique among the media selection for this study. The *Apex Legends* video begins with *The Gaming Merchant* grabbing the viewers' attention and their curiosity on seeing past skins, something he does moments later as he saves Apex Packs from past or discontinued events and does live demonstrations of Legendary (or the rarest) skins before opening another pack once he felt like it. The Gaming Merchant notes the aesthetic value of his loot as he states the developers "got

really crazy with the epic skins over the past year.” Likewise, the audience is more receptive to the packs' content in this video as the streamer receives a donation after his first Legendary skin at 0:59 and a Twitch Prime subscription before his next skin at 22:49 (The Gaming Merchant, 2023). Even though it is apparent the loot is intriguing, this video demonstrates the fatigue that occurs after repeated openings. From 32:00 onward, he decides to mass-open the rest of the packs since “they’re not going to have a featured Legendary character or weapon.” Since the game automatically opens the most important packs (the ones with skins and emotes) first before stickers in gameplay, the content creator acknowledges that it is boring and a bit of a letdown.



Note. The descriptive caption is shown at around 38:23. From *I Saved My Apex Event Packs for 229 Days, Here's What Was Inside* [Video] by The Gaming Merchant, 2023, YouTube (<https://www.youtube.com/watch?v=Zy0iFVVqAqU>).

Conversely, the *World of Tanks* video is the only one in this review that features sponsored lootboxes gifted to a popular content creator from the developers themselves. At the

beginning of the video, QuickyBaby admits that the developers gifted him 250 boxes from the premium store to show people what they can get, but adds that the amount of money that costs to buy these boxes will be donated to cancer research in a special stream scheduled after this one (QuickyBaby, 2023). Although it is clear he enjoys the game, the streamer openly states throughout the video that he is against the concept of lootboxes as they are immensely steep in price; additionally, their contents should be available for all players so they know what they are getting. (There are situations where the contents of one lootbox are available through non-paid means, but the requirements to obtain specific resources are immensely difficult for players who do not pay, looping back to the incentive to buy so everything is easier and more accessible.) That said, he showcases an Excel sheet used to count the boxes needed to obtain a specific tank skin to be transparent for viewers before describing each item's gameplay potential, making the video similar to the *Apex Legends* one. This clarity is evident as the streamer gets the best rewards early throughout the video, and he makes it clear that it is all based on luck. On the other hand, he remarks that this achievement makes his later rolls much less satisfying, as his streak of "bad luck" (or less-than-appealing loot for a seasoned player) begins from 24:00 onward. This disappointment with obtained loot makes this video similar to The Gaming Merchant's as both players obtained favorable outcomes, thus building higher expectations.

	A		A	B	C	D
1		250	1	200 BOXES	PER BOX	£205.33
2	TOTAL GOLD		2	TOTAL GOLD	116,750	583.75
3	TOTAL CREDITS	13,	3	TOTAL CREDITS	6,300,000	31500
4	TOTAL PREM		4	TOTAL PREM	138	0.69
5			5			Boxes Till F
6	Vickers 6 ton		6	Pz.Kpfw. 38H 735 (f)	6	3.00%
7	A7E3		7	M3 Light	7	3.50%
8	IT-3		8	A25 Harry Hopkins I	8	4.00%
9	M24 Chaffee		9	Pz.Kpfw. KW I (r)	3	1.50%
10	ARMT		10	SU-2-122	2	1.00%
11	Chance of T5		11	Chance of T5	26	13.00%
12	Tiger-Maus		12	M47 Iron Arnie	3	1.50%
13	Object 752		13	BZ-176	1	0.50%
14	Type 63		14	Char Mle. 75	1	0.50%
15	XM66F		15	Vipera	0	0.00%
16	GSOR 1010 FB		16	AMBT	1	0.50%
17	Chance of T8		17	Chance of T8	6	3.00%
18			18			
19	33 Boxes to get all the skins		19	150 Boxes to get all the skins		

Note. QuickyBaby’s Microsoft Excel sheet calculates how many resources were in each box, their chances through percentages, and how many boxes it took to obtain all skins. From *Opening 250 Large Boxes! Holiday Ops 2024 in World of Tanks!* [Video], by QuickyBaby, YouTube (https://www.youtube.com/watch?v=x19oag8TGKg&ab_channel=QuickyBaby).

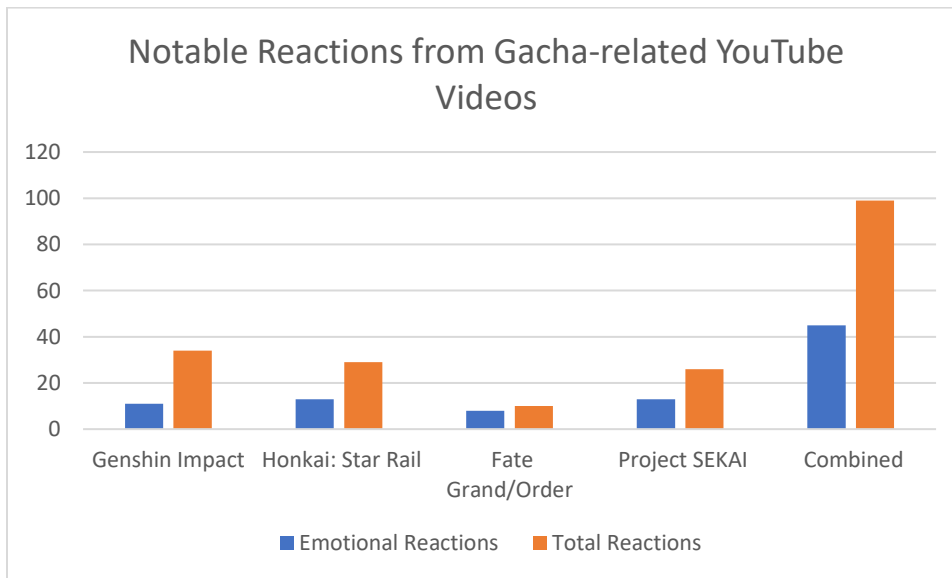
Emotional Impact (Gacha Games)

Genshin Impact's video had 11 significant reactions out of 34, while *Honkai: Star Rail's* had 13 out of 39, making them 32% and 33%. On the other hand, the video related to *Fate/Grand Order* had 8 out of 10 reactions, and the *Project Sekai Colorful Stage Feat. Hatsune Miku* (or *Project Sekai*) video had 13 meaningful reactions out of 26, making them 80% and 50%

respectively. Out of 99 notable total reactions in the gacha game video viewing, around 45 had the player exhibit some form of extreme emotion. Altogether, 45% of the players' reactions relate to frustration from mediocre rolls, impatience from subverted expectations, surprise caused by luck and RNG mechanics, and joy from obtaining what they want.

Figure 3

Emotional Reactions and Total Reactions Calculated



Note. Bar graph of emotional reactions and total reactions side-by-side. Own work.

Like the lootbox games, most of the videos' thumbnails strive to strike the viewer's interest as they show the streamer looking surprised and the limited-time character they're rolling for. For example, Doro44's thumbnail shows him with a shocked expression similar to TimTheTatman's Counter-Strike videos, the characters he rolled for, and the text "my luckiest pulls ever" in all-caps, bolded white and gold font, and three exclamation marks. This thumbnail may appear to be bait-y and false advertising, but one reason why the image is effective in garnering views is because of how much rolls matter in gacha games; while it is possible to obtain a resource through a game's pity system, it may not be available for all cases, and since it

guarantees the resource after a steep number of rolls, many players prefer having not to use pity for what they want because of how much it costs. These videos highlight the value of the characters and their gameplay potential, and one of these reasons is due to the games' genres. Unlike the weapon-heavy lootbox games covered in this video review, three of the gacha games selected here lean towards the RPG genre, with some being for single players while others allowing for multiplayer, and one of them being a rhythm game that can be played alone or with others.



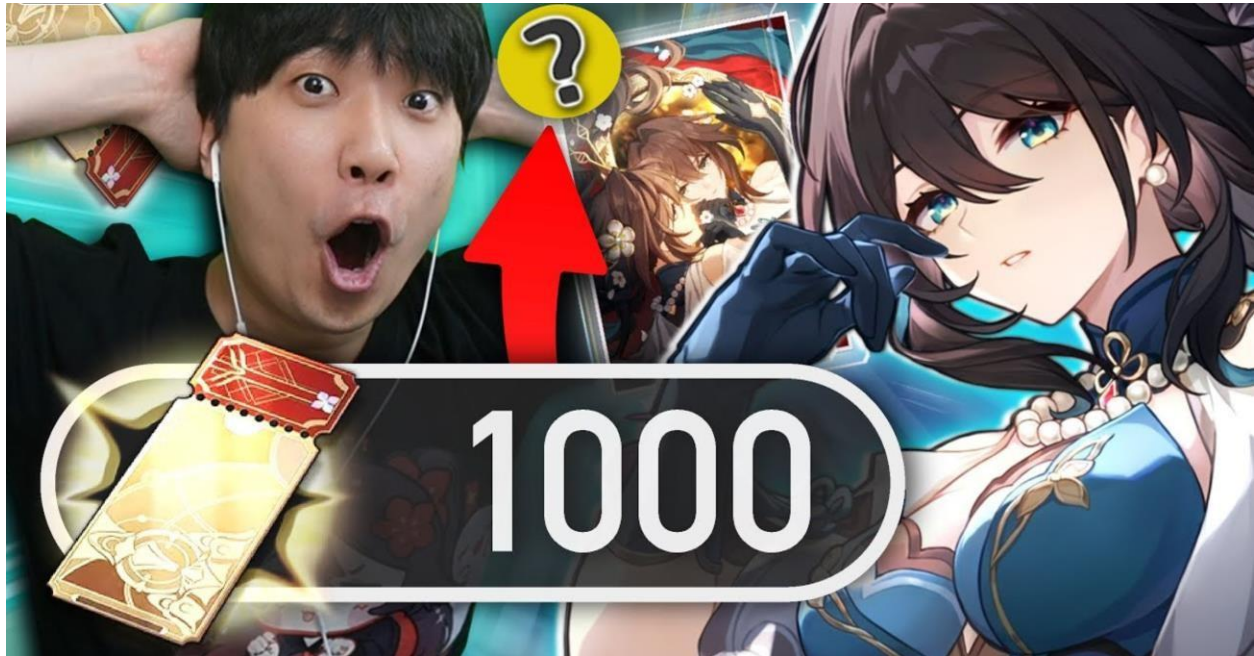
Note. Thumbnail. From *You've NEVER Seen This Many Doubles In Your Life* [Video], by Doro44, YouTube (<https://www.youtube.com/watch?v=umFt11KAEYU>).

Case in point, this video has the streamer use the viewers' donations to roll on their accounts for Hu Tao, Yelan, and their signature weapons if requested. He makes it very clear at the beginning that he aims for more copies of the character to enhance their battle potential if the original account owner requests it and has the funds to afford doing so. These limitations affect the emotional impact of the gacha's outcomes; the best leads to the streamer verbally bragging

about his luck, winning his pities, or moving around to overcome the surprised feeling of getting an ideal roll. Conversely, the worst has him pretending to be sad in an attempt to somehow alter the gacha's results or outright begging for what he wants, as shown in 6:57 and 7:54. Doro44 seems to be self-aware of his reactions because of the gacha, as he admits at 11:31 that he loves these rolling sessions because of the adrenaline rush it gives him (Doro44, 2023). It just goes to show that while the gacha can be satisfying, rolling it can potentially be addicting, physically or emotionally.

Tenha's *Honkai: Star Rail* video also shows the constantly shifting nature of the gacha when he rolls for limited-time support unit Ruan Mei and her signature Light Cone (which can be the equivalent of Genshin's weapons.) This unpredictability yet value of her banner is displayed in the thumbnail, which has the content creator with a surprised look on his face as Ruan Mei and her signature Light Cone are shown on the right, along with the number of tickets (or funds) used. Another thing to note is his title, where he exaggerates the amount he spent as "breaking his bank account" and connects it with the value and presumably sexual charm of Ruan Mei "breaking him." Like Yelan and Hu Tao, Ruan Mei's effect on the game makes her potentially game-breaking to the point where she could be seen as one of the game's "universal supports," meaning she fits with almost any team composition due to how much she enhances their strength. Tenha briefly brings up her gameplay potential at the beginning, where he says he may roll for another character (a damage-dealer, to be exact) but is torn about it since that person is not as broken or meta as they used to be. Most notably, he brings up a tiered chart with the other support characters at 0:28, commenting that Ruan Mei is universally broken. It should be noted that the highest tier, which is ranked at S+, is made of two five-stars (one permanent, one limited) while the third is a four-star that becomes even stronger the more copies you roll for her.

While this may be beneficial considering the rarity of five stars, it can become problematic when the gacha does not give the four-star needed as it lacks a pity system for anything below five stars (the highest rarity.)



Note. Thumbnail. From *I RUINED My Bank Account Before Ruan Mei Could Ruin Me... (\$1700 Spent) Honkai: Star Rail Summons* [Video], by Tenha, 2023, YouTube (<https://www.youtube.com/watch?v=Y4ZzaC3s9bA>).

Many content creators (especially those focused on gameplay) freely spend as much as they want to max out a limited-time character, whether out of genuine love for them or to showcase their abilities at their highest level, making their expectations from the gacha even stricter. These affluent players are in the lootbox and gacha game communities and have much different and generally more beneficial gameplay experiences because of how much they pay and invest in the game; in this scenario, they are known as "gacha whales," a status that is above the average player who cannot spend as much in time or money (Balakrishnan and Griffith, 2018). With that in mind, Tenha anticipates getting two copies of Ruan Mei from his beginning

rolls. When it turns out otherwise, the streamer says he got too greedy and tells the game to give him Ruan Mei, the only five-star he cares about. His status as a content creator and a gacha whale becomes even clearer to viewers around the 4-5 minute mark when he starts getting duplicates of permanent five-star characters he already has. This anticipation of wanting ideal gacha rolls, combined with the frustration of already having specific characters (some of which he has not used or built,) results in Tenha rage-pulling and bemoaning his failed rolls of getting duplicates of them and not Ruan Mei or her Light Cone (Tenha, 2023.)

Like *Honkai: Star Rail*, *Fate/Grand Order* (or *F/GO* for short) is a single-player RPG, yet it is also one of the oldest, dating back to 2015. In this case, it is also one of the most noteworthy gacha games tied to the *Fate* IP; even though it may not be as popular as other titles, the most successful or intriguing banners make its sales skyrocket in Japan. In gacha games (and this one specifically), the profits of a character depend on multiple factors, such as gameplay, personality, design, or even something as niche as their voice actor. Most of the game's contents consist of battles, which can take longer than usual if the player does not have specific units or resources to speed up the process. Because of this emphasis on battles for rewards and story progression, gameplay is a substantial aspect of a character's value, more so if they are limited. Lastly, the game has various servers worldwide, with Japan being the most recent. These one to two-year gaps force some users to look for as much information as possible from the Japanese version to prepare for whichever server they play in, making the importance of content creators even more significant here.

The content creator in this video is one of the most famous in the game's community, and here, Myst rolls for a much-hyped limited-time character from last year's collab event. What makes Tiamat stand out is that she first appeared in one of the game's most renowned story

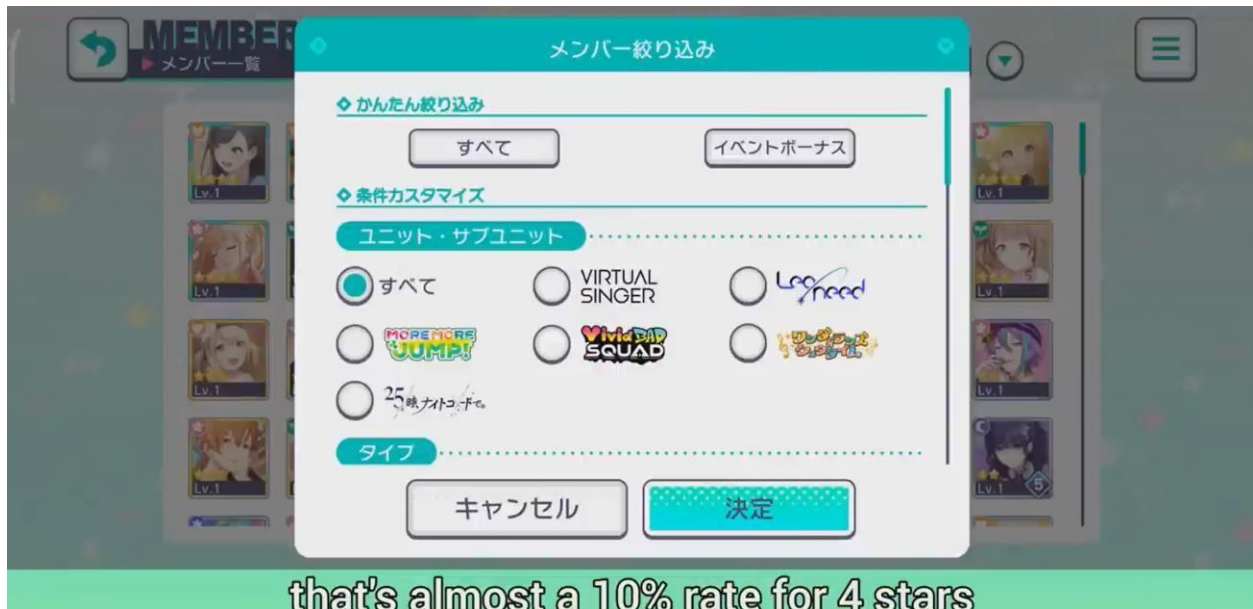
chapters, and the value of her character becomes even more powerful when considering her gameplay, which takes advantage of the current meta while adding a new spin on the game through her skills. This hype affected Myst to the point where he admitted that he was supposed to take a day off but was so excited for Tiamat that he had to sit down to record his rolls (and it shows through his thumbnail.) The man is anxious throughout his first few rolls; even though Myst compromises himself by saying he is okay with getting anything else for the time being, he starts begging for Tiamat at 3:53 and gets frustrated as the video continues, particularly at 5:59 before cheering as he gets her at 6:22. (Myst, 2023). Either way, this video demonstrates what happens when a content creator gets caught up with the eagerness to get a specific character, especially when they just debuted for the first time.

Project Sekai is the one gacha game in this video review that is not an RPG but rhythm-based, and it is one of the most well-known modern Japanese rhythm games because of its connection with Vocaloid, or characterized music synthesizer software. Players can do a solo live (a song by themselves,) a multi-live (a song with multiple people,) or a challenge live (play for the highest score once per day with only the same character cards allowed.) *Project Sekai* utilizes traditional rhythm game mechanics while mixing storylines and characters that interact with the Vocaloid cast, yet it also has a competitive side through its events. These last around 6-12 days, and have a scoreboard of all the players on a specific server, and exclusive gacha banners; the higher a player is on the scoreboard in points, the more rewards they get throughout the event and in the end. Each character card in this game has a special skill that helps the player in their live shows, so the higher the rarity, the stronger the skill is, making the new event cards especially useful for competing. Likewise, most four-star cards give an outfit when a player obtains them, but limited cards offer a new hairstyle for that character *if* they can get them to

Mastery Rank 2. Unlocking these aesthetics requires a player to get duplicates of SSRs they already own for enhancement materials.

Neptune aims for An and Ena, two of their favorite characters in the game's most popular groups, Vivid Bad Squad and 25-ji, Nightcord de. Something interesting to note is that this video is the only one that does not feature a streamer or their voice, so all of the player's thoughts are conveyed through text instead. The video starts with a disclaimer from the player saying they are using paid crystals to whale for their favorite characters in their favorite game, so viewers should be responsible with their money. Since they are rolling in a Colorfes (or celebratory) banner, they have a wishlist for characters that are *not* on rate-up; these banners are special in that past Colorfes cards could spook players. The player also states they are not tiering (competing) in the event, so they are more or less okay with any three or four stars. This state of acceptance and compromise makes their reactions much less extreme (though that may be due to most of the video having text commentary than a spoken one.) Even though they fail to get An until the end, they take commemorative pictures throughout the video as they get 23 cards from their pulls in return (Neptune, 2023).





Note. The amount of cards obtained in this gacha session. From [project sekai jp] 240 pulls for 2.5 anniversary colorful festival (INSANE LUCK STRIKES AGAIN???) [Video] by Neptune, 2023, YouTube (https://www.youtube.com/watch?v=Tx7_BgMaPIg)

Conclusion

This video review analyzed current research in lootbox gaming and observed eight videos from seven different titles (three Western lootboxes and four Eastern gacha games.) Although it was not a significant topic enough to be looked upon academically in the past, it is apparent that this genre is financially, temporally, and emotionally impactful to the players and the people around them.

Video games provide escapism that temporarily distracts from negative emotions while creating or reinforcing positive ones, and players experience flow when they invest in both. Admittedly, this may be fine on paper, but the thrill of randomized in-game resources (whether from in-game currency or real money) creates a sense of addiction as it develops the player's wants and needs in their experience. Admittedly, these videos from YouTube content creators with more than a thousand subscribers cannot generalize the sense of time for the average player.

Despite this flaw, if the player's outcomes are unfavorable, it can take an hour or more to fulfill their expectations of opening the loot box or rolling the gacha. If the loot box or gacha is limited in time or has a highly valued resource, it will create an expectation in unsuspecting or interested players that they want it sooner rather than later; because of this demand for instant gratification, even the action of opening multiple lootboxes or rolling the gacha can sink more time in along with the game's other activities.

In the two *Counter-Strike: Global Offensive* videos, the player spent \$1,000 and \$11,000 to obtain items highly-priced in the game's virtual economy, while the *Apex Legends* and *World of Tanks* videos had \$350 and \$310 spent in their lootboxes; even though the amounts in the gacha videos are unclear, *Honkai: Star Rail*'s video had \$1,700 for Ruan Mei's banner. These videos display content creators expending large sums of money on these games, but they also demonstrate these channels' higher status, unlike the average lootbox or gacha player. The predatory nature of these games rewards those who pay more through maximized resources. Unfortunately, it also hinders other players who are not like them, as the amount they spend varies depending on the lootbox or gacha's probabilities. This behavior creates potentially dangerous situations where individuals who do not have as much money may spend more than is necessary, and it becomes immensely troubling when said funds are for essential matters such as paying bills or buying necessities.

On the topic of YouTube videos, one can argue that the emotional impact of these videos is manufactured for their audience, particularly if their channel is monetized. Another way to look at it is their status as content creators, especially with the experience they have built, which creates expectations on their lootboxes or gacha rolls for themselves and the audience. Some of the videos, such as the one on *Apex Legends* and *World of Tanks*, had the streamers

finish their lootboxes without focusing on their contents because they were less than impressive compared to their beginning results. The gacha game videos, such as *Genshin Impact's* or *Honkai: Star Rail's*, have the player admit they enjoy the adrenaline rush from the gacha or rage-pull because of subverted expectations. Other elements to consider from these videos include thumbnails and titles; many share similar characteristics, such as surprised expressions, bright colors, or exaggerated text, all of which attract viewers because of how excessive they can be. These reinforce the concepts of good and bad luck in both genres, how they affect their emotions and expectations, and their status above others in the player base. Since they can provide information or an idealized form of gameplay, which users look for when they want to know more about the games they enjoy. The connection between these signs and gambling addiction is evident; since these lootbox openings were held in an online setting, the audience plays a significant role as the reactor and donator to their funds, making the exploitative nature of these games effective on both the player and the environment through the steep usage of their time, money, and emotions.

Limitations and Future Directions

This capstone project was originally supposed to be a survey sent to the UCR undergraduate population asking them about their knowledge of lootbox and gacha games. Not only would this project include specific questions asking about the three variables of time, money, and emotional impact, but it would have a larger selection of games (twenty total, ten for lootboxes and ten for the gacha genre) compared to having only eight. Due to real-life circumstances (mainly the International Review Board's limitations upon review) and time constraints, the methodology was altered to a video review with observation, though the measured concepts remained the same. YouTube's technical limitations as a platform, combined

with the lack of information from the channels led to some ambiguous parts of the findings; the data may have been less skewed and more fleshed out if other video platforms were included, particularly Twitch, along with more games. Additionally, it can be argued that traditional lootbox systems may be decreasing due to stricter legal regulations, a factor not analyzed in this project since it looked more into opening lootboxes, rolling the gacha, and its effects. That said, the concept of microtransactions, locking content behind paywalls or battle passes continues to increase revenue. This evolving trend can be seen in mobile games, particularly the gacha genre with its animesque influence. Lastly, although this study looks into a current topic, it can be arduous to find up-to-date or reliable sources of information since this field of research grows every day.

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