Loot boxes are increasingly prevalent in online social games and major video games. In order to understand how loot boxes function, it's useful to examine their history. Loot boxes are based on a specific micro-transaction strategy called gacha, which first gained popularity in mobile social games developed in Japan. Micro-transactions are a form of game monetization, where people purchase in-game digital/virtual items with real money. Gacha is not a virtual item purchase, but the purchase of a lottery-draw where you have the chance to win virtual items with differing levels of rarity.

Gacha functions similar to toy-vending machines, where players input money and get a random item/toy in return. While gacha can be free to play in video games (accesses to gacha is earned by playing the game for a certain amount of time, or by unlocking accomplishments in the game), rare and/or valuable gaming items often need to be obtained through special gacha with monetary purchasing. Since money is traded for the chance to win a random reward, there are many parallels to gambling. However, unlike gambling, real money is not a reward – only game-specific items.

Usually these items are in the forms of ‘skins’. These are items that make characters in the game look different. Some are extremely rare/special and, in response, a grey market has developed so that people can buy, sell, and trade these items with real money. Some sites even allow betting and gambling with these items in order to try to win additional or better items. This blurs the line between gacha and gambling.

The anticipation and thrill of obtaining a rare or special item through gacha can be similar to the sensation of a ‘big win’ in gambling. This is especially true if a player has spent increasing amounts on gacha in hope of winning the rarest or most special items (i.e., the jackpot). Gacha, therefore, represents a form of in-game lottery, and some refer to it as simulated gambling.

There are many different types of gacha:

1. Kompu gacha (or, “complete gacha”) provides players with opportunities to obtain especially rare and valuable items by collecting complete sets of other items. This form of gacha was banned in Japan, due to reports of players becoming extremely involved
in collecting all items, and spending a great deal of money doing so. This may be because it entices players to complete the set if they are close. This is a similar phenomenon to how ‘near wins’ work in slot machine and other forms of gambling.

2. Limited-time gacha provides players with a limited opportunity to collect especially rare and valuable items by playing the gacha in a specific timeframe. This type of gacha may be problematic, as people are motivated to pay large amounts of money during limited time periods in order to collect these items. A similar situation in gambling would be where people will gamble more when the jackpot is considered large.

3. Step-up gacha (or, “box or package gacha”) provides players with a chance to draw the gacha multiple times (e.g., 10 times) in order to for a guaranteed win of a rare and valuable item. While these type of gacha are usually limited time events, they encourage spending by ensuring a win.

Regardless of the type of gacha, they all share a similar function: the player pays a small amount to receive a random item (and hopes that it will be a valuable item).

---

**LOOT BOXES**

Loot boxes (also called loot packs/crates) are a type of gacha in which players open the box or crate to reveal a number of ‘won’ items. Since some items are valuable and/or rare and some are not, opening the box reveals ‘big wins’ and ‘little wins’. Although the items won in loot boxes were traditionally skins, research shows that they do not affect gameplay, and that “More and more games are featuring options that grant incremental gameplay bonuses (see: Star Wars: Battlefront II) or entire aspects of gameplay (see: Middle-earth: Shadow of War) that objectively advantage certain gamers over others, encouraging more "pay-to-win" scenarios, especially in competitive multiplayer settings”. This indicates that loot boxes are becoming increasingly central to the game experience, which is problematic because of their similarity to slot machines.

Harrigan, Collins, Dixon and Fugelsang outline a number of game design principles of slot machines that not only increase entertainment value, but also prolong gambling and expenditures. Of these features, loot boxes share a number of commonalities which include:

- **Reward Design**
  - Opening a loot box is visually rewarding and attractive, with sounds that amplify the sense of wins
  - Loot boxes contain regular small wins/items, with infrequent large wins/items
• **Reinforcement Schedule**
  - The variable reinforcement schedule helps maintain player interest
  - The regular small wins in loot boxes help to disguise losses (similar to the concept of losses disguised as wins in slot machines)

• **Near Misses**
  - Some loot boxes (e.g. Counter-Strike: Global Offensive) show the player what they could have won, mimicking a ‘near miss’ on a slot machine

• **Illusion of Control**
  - Some games (e.g., Rocket League) allow you to ‘choose’ the loot box you wish to open, thereby contributing to an illusion of control

• **Competition**
  - Loot boxes foster competition by use of a leaderboard and other forms of recognition (e.g., special skins) that help maintain player motivation

Loot boxes can also align with the gambler’s fallacy. The fact that big wins are rare and random adds to the perception that players are bound to win eventually. Thus, a player may think I’ve been unlucky in the last nine loot boxes, so I’m bound to win big soon and need to keep playing to win big. Loot boxes are also designed to appeal to big spenders, also known as whales. Although whales account for less than one percent of the gaming population, they are responsible for more than half of micro-transaction revenue. This is similar to gambling, where a small percentage of players is responsible for generating half of the gambling revenue. Again, this shows that loot boxes share many commonalities with gambling.

According to Koeder and Tanaka,² who drew upon the taxonomy of gambling and gaming by Gainsbury, Hing, Delfabbro and King,³ loot boxes do not qualify as gambling because:

• No real money can be won.
• It does not “simulate” casino gambling activities.
• A gambling theme is not a central part of the game.
• The main game outcome is determined by skill.
• It is not provided by a gambling provider.
Still, some of these points are beginning to change. For example:

- Third-party trading platforms allow players to sell virtual items for real money.
- Some loot box platforms function similarly to slot machines.
- Loot boxes are becoming increasingly central to the game, so that game outcomes are increasingly determined by chance.
- Gambling providers are beginning to acquire games that use loot boxes and gacha.

Unlike slot machines, the odds of winning ‘big’ are not static. The odds of acquiring a rare and/or special item can change at any time without the player’s knowledge. As a result, there has been a push by players and jurisdictions for transparency in loot boxes. For example, China has begun regulating loot boxes by requiring companies to clearly label and identify the chance of obtaining a rare and/or special item. The purpose of regulating is to help players make informed decisions. Similarly, the Computer Entertainment Suppliers Association in Japan has provided self-regulated guidelines on gacha which include displaying the probability of ‘winning’ specific loot box items so that consumers can better understand their chances.

There has been increased interest in examining the legal standing of loot boxes as gambling. Although no jurisdictions have classified loot boxes as a form of gambling, several organizations and jurisdictions have examined the issue. Some of the highlights are summarized below:

- The Belgium Gaming Commission has found that some loot boxes count as “games of chance” and could therefore face legal consequences under the country’s gaming legislation.⁶
- The Netherlands Gambling Authority has found that some loot boxes violate the Betting and Gaming Act, and have asked the gaming sector to adjust their offerings in order to comply with gambling regulations.⁷
- The North America games rating organization, the Entertainment Software Rating Board (ESRB), does not consider loot boxes to be gambling. They argue that “while there is an element of chance, the player is always guaranteed to receive some sort of in-game content”.⁸ In other words, they will always get something for their money; it just may not be the rare/special items that they want. The ESRB views loot boxes in a similar way to collectible card games: “…sometimes you’ll open a pack and get a brand new holographic card you’ve had your eye on for a while. But other times you’ll end up with a pack of cards you already have”.⁸
• The UK Gaming Commission states that loot boxes do not meet the UK’s criteria for unlawful gambling since the prizes unlocked are usable only in the games in which they are won, and can’t be cashed-out in the game.9

For more information, contact the author (travis@greo.ca) or info@greo.ca

REFERENCES


7. Study into loot boxes: A treasure or a burden? Netherlands Gaming Authority; 2018 Apr 25.
