



## Blurred Lines: Loot Boxes in Video Games

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In recent years, parts of the video game industry have introduced a shift in how games generate income. Historically, games were purchased for a fixed price, and the customer was then provided with the complete and finished product to enjoy. While many games still follow this model, it is now commonplace that customers can purchase additional content within games. Some games are partly financed by these additional purchases, others completely. In games like the wildly popular Fortnite, access to the game is provided free of charge, and revenue is generated entirely from in-game purchases.

There is a wide variety of content for sale across different games. In some cases, access to new areas, stories or characters can be bought. Other times, new costumes, emotes or weapon skins – all of which are cosmetic and do not affect the gameplay, are purchased. An important distinction is between a purchase of a specific item or piece of content selected by the customer, and a purchase of an item where the outcome is not known in advance. That is, an element of randomness is involved in determining what the customer ends up getting. This latter phenomenon is what is colloquially referred to as loot boxes. Internationally, there is an ongoing discussion about the degree to which loot boxes represent a form of gambling, in that they can be regarded as a lottery where the customer purchases a “ticket” in hopes of obtaining rare in-game items as prizes.

### A Case Example: FIFA Ultimate Team

In order to provide information to decision makers, consumers and other interested parties, I conducted a project investigating a game well known for its heavy reliance on loot boxes: EA’s FIFA 18. The FIFA series are hugely popular soccer games released annually, with several game modes of which the most popular is Ultimate Team. In Ultimate Team, the gamer collects digital cards representing actual real-life soccer players, and then uses the cards to build a team, controlling this team in competitive matches against other gamers around the world. Crucially, the cards have attributes that mimic those of their real-life counterparts. That is, the in-game version of Lionel Messi will be easier to control, more likely to find a teammate when performing a pass, and more likely to convert a shot into a goal than any player from my beloved local team SK Brann Bergen. This also means that the cards with the best attributes are very attractive to gamers, as they directly influence the chance of winning games and climbing the ranks of FIFA gamers worldwide. Importantly, these top rated cards are very hard to obtain. The in-game currency earned from playing matches will for most players never approximate what the best cards cost from the in-game transfer market. Consequently, the only hope most gamers have of obtaining these cards is from purchasing loot boxes in the form of digital card packs, for real money.

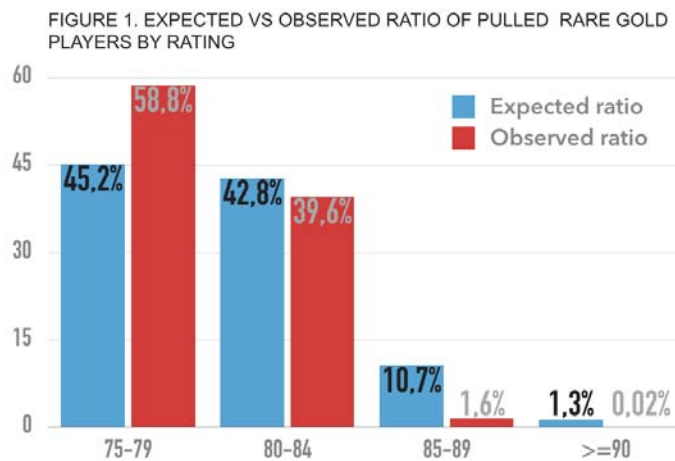
In my project, I spent the equivalent of about \$3,300 USD on card packs (i.e., loot boxes) in FIFA 18, detailing the contents of every opened pack. A short write-up of this project is included in a report about games in the gray area between gaming and gambling, from the Forum for Gaming Trends, commissioned by the Norwegian Ministry of Culture (full report available in English at [bit.ly/greygamesrep](http://bit.ly/greygamesrep)). In total, I opened about 650 packs, containing approximately 10,000 cards. I manually checked the in-game value of each card using the online database [Futbin.com](http://Futbin.com). The resulting dataset is available online at [bit.ly/FUTdata](http://bit.ly/FUTdata).

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I wanted to see if the \$3,300 USD spent would enable me to purchase the most expensive team available when I started the project (11 players and 5 substitutes). It did not. In fact, assuming my luck did not change, I would have to spend approximately \$10,000 USD to get access to these cards. At this point, it is probably worth reiterating that FIFA games are released annually and to note that items owned in one version do not carry over to the next. That is to say, had I spent the \$10,000 USD needed to get the best team possible, I would have to start all over again when the next version of the game was released.

Another aspect I wanted to investigate was if the obtained cards were drawn at random. That is, did the cards available in the game have an equal chance of ending up in the packs I bought. It is worth noting that in FIFA 18, no information about this was provided to the customer, so consumers could not know what their chances of obtaining their desired cards were. I looked at the category of “rare gold cards”, and the data provided a clear picture. These cards have an in-game rating ranging from 75 (worst) to 99 (best). Of these, 45 % of the cards available in the game are rated from 75 – 79, whereas 11 % are rated 85 – 89, and 1 % at 90 or above. If the cards obtained from packs were drawn at random, the cards I got should have the same distribution. However, of the cards I got, 59% were in the 75 – 79 rating, 2 % were in the 85 – 89 range, and the single 90 rated card I obtained meant that the category representing ratings of 90 or above constituted 0.02 % of the cards (see Figure 1).



Out of curiosity, I also identified three highly-rated players (Romelu Lukaku 86, Paul Pogba 88, and Eden Hazard, 91) who all have younger brothers who are also professional soccer players, but lower rated in FIFA (Jordan Lukaku 77, Florentin Pogba 77, and Thorgan Hazard 82). The lower rated brothers occurred in packs a total of 14 times, the higher rated brothers occurred exactly once (perhaps not surprisingly, this was Romelu Lukaku – the lowest rated of the three). Clearly, the cards I obtained were not drawn at random, but skewed towards lower rated, less valuable cards.

Interestingly, a feature of FIFA 18 on the platform used conducting this project (Playstation 4) was the introduction of a brand new category of players – the so-called Icons. These are all high rated cards representing soccer legends who have now retired, such as Maradona and Pelé. In FIFA 18, there were about 100 different cards of this type, marketed as available in packs throughout the game. Due to their high ratings and in-game abilities, these cards are very attractive to players. From the 650 packs opened, and \$3,300 USD spent, I obtained exactly 0 of these cards.

### Are Loot Boxes Gambling?

Three core characteristics are typically required by legal definitions for something to be considered gambling. A stake (money in), an outcome determined at least partly by chance, and a prize of monetary or material value. When purchased for real money, loot boxes clearly meet two of these requirements (money in and outcome determined by chance). However, the third criterion has sparked debate. In Europe, the authorities from two countries, The Netherlands and Belgium, have made their position clear and arrived at different conclusions. The Netherlands regard loot boxes containing items that can be transferred from the game and onto other platforms, or sold for money within the game, as gambling. An example of this is the game Counter Strike: Global Offensive, where cosmetic items obtained from loot boxes could be sold for real money through an in-game marketplace. Thus, the items hold a direct monetary value. Consequently, Valve (the game developer and publisher) withdrew the option of purchasing loot boxes for money from the game in The Netherlands.

Belgium went further, deciding that items holding a subjective value to players were sufficient to qualify as a prize. Consequently, loot boxes from games such as FIFA were also classified as gambling. In FIFA, items obtained from loot boxes only exist within the game, cannot be transferred to other platforms and cannot be sold for money (at least not without breaking EA's terms of agreement and entering a black market, thereby risking a ban from the game). The fact that some people spend large amounts of money attempting to acquire the most desirable items from games was considered evidence that the items hold a significant subjective value that should not be disregarded. Consequently, all major game publishers (including EA), removed the option of purchasing loot boxes for money from their games.

In my opinion, Belgium's approach is the most sensible. Requiring direct monetary value appears old fashioned, a criterion that perhaps made sense in a world where "virtual items" were not a thing that could hold any serious value to people, but not in a world where many people regard games and in-game items as their major interest, sometimes even a part of their identity. Clearly, many people are willing to spend a lot of money or exert serious effort in order to obtain these items, and I believe that lotteries where these items are prizes can justifiably be defined as gambling.

In the near future, we should see more jurisdictions make clear decisions on the regulatory status of loot boxes. I would like to encourage the video game industry to get ahead of the game and engage in collaborations with researchers in order to establish and implement harm minimization strategies. If done responsibly, loot boxes can be offered in a way that keeps things fun and prevents overspending among vulnerable gamers.

## Centre Fundraising Campaign

The Centre's ongoing fundraising campaign continues to grow with the support of corporate and private sponsors. Due to restricted government infrastructure funding, we have initiated a fundraising campaign to help us maintain our ability to develop and deploy empirically-based prevention and harm-minimization programs. The Centre is housed on McGill University's main campus in the heart of Montreal, Canada. McGill University is a public university and recognized charitable organization.

Donations can be made to:

The International Centre for Youth Gambling Problems  
McGill University  
3724 McTavish Street  
Montreal, Quebec H3A 1Y2

Official letters of contributions and tax receipts will be forwarded



# National Council on Problem Gambling (NCPG) Perspective on Loot Boxes

The National Council on Problem Gambling (NCPG) has issued the following perspective on Loot Boxes

The NCPG believes that many loot box systems already meet criteria for gambling.

A loot crate system may still have negative impacts, including gambling problems.

Some loot boxes that have the same or similar characteristics of slot machines may not meet legal definitions of gambling but carry the same risks for addiction.

A legal definition of gambling is not required for a feature like a loot box to cause harm.

DSM and ICD clinical criteria for gambling disorder do not require that rewards be “real money” or preclude a diagnosis if the client played with virtual coins or received several free plays before spending excessive amounts of time and money purchasing loot boxes.

Factors common to many loot boxes and slot machines:

- random distribution of prizes
- variable value of the prizes
- visual and sound cues associated with participation and reward
- trigger urges to play along with increased excitement and faster play

Consequences of gambling problems:

- financial harm
- emotional difficulties
- poor work or school performance
- poor mental and physical health
- higher rates of depression and substance abuse

Strong regulation is important, but it cannot be effective at reducing harm unless accompanied by equally robust prevention, education, treatment, recovery, and research services.

NCPG recommends addressing concerns around loot boxes and addiction with a multi-layered approach to users, parents, and communities to ensure an appropriate range of protections is put into place for youth and other vulnerable populations. Key initiatives should include:

- better inform consumers
- prevent gambling-related problems
- facilitate treatment-seeking
- support recovery
- increase research to enable evidence-based solutions

To read the NCPG Loot Box Statement to the Federal Trade Commission, [click here](#).



Photo Credit: Blizzard Entertainment

# The 2019 Holiday Campaign



Each year, McGill University's International Centre for Youth Gambling Problems and the National Council on Problem Gambling (NCPG) ask lottery corporations to support our responsible gambling campaign and help raise awareness regarding the risks of underage lottery play during the holiday season.

Whether or not it is legal for minors to participate in lottery games in your area, a responsible gaming message during the holidays is always welcomed. The 2019 campaign is endorsed by the European Lotteries (EL), World Lottery Association (WLA), and the North American Association of State and Provincial Lotteries (NASPL).

Over the past twelve years, participation has continued to grow exponentially. In 2018, 100% of Canadian and American lotteries participated in the campaign along with numerous international lotteries and non-lottery organizations.

Participation in the Holiday Campaign is FREE! All participants have access to campaign resources. The International Centre for Youth Gambling Problems and the NCPG will issue an official press release regarding the campaign on December 10, 2019.



# Centre News

## Student Awards

- Émilie Fletcher won the Virtual Poster Award at the Université de Sherbrooke's New Critical Directions in Gambling Studies Conference.
- Émilie Fletcher has been awarded a Social Sciences and Humanities Research Council (SSHRC) Masters Scholarship
- Jeremie Richard has been awarded Fonds de recherche du Québec – Société et culture (FRQSC) and Social Sciences and Humanities Research Council (SSHRC) funding. Jeremie's Ph.D dissertation will evaluate the pathways involved in the development of problem gambling and problematic video game playing in adolescents and young adults with a focus on early externalizing and internalizing problems.



(Photo Credit: John Kenney, Montreal Gazette)

## Dr. Derevensky in the News

Over the last month, Dr. Derevensky has conducted numerous interviews related to video gaming and class-action litigation that has been launched in Quebec against Fortnite developer Epic Games. Interviews locally included:

- Montreal Gazette: Hundreds of Quebec parents flock to Fortnite lawsuit
- Global News-Montreal law firm seeks permission for legal action against video game creator
- CTV News - Montreal parents seek class action against makers of 'addictive' Fortnite

Most recently, Dr. Derevensky was featured on a national CBC broadcast regarding gaming behavior and youth.

## Prevention Initiative

In October, Lynette Gilbeau, our Research Coordinator, participated in the Alcohol and Drug Awareness Day at John Abbott College. Using a newly designed game, incorporating a digital spin wheel and printed question cards, participants played the interactive game to learn about gambling/gaming facts, misconceptions, and probability. Participant interest was very high with numerous students stating that the game was really entertaining and informative.



## 2020 Durand Jacobs Award Call for Papers

The International Centre for Youth Gambling Problems and High-Risk Behaviors at McGill University invites submissions to the 2020 Durand Jacobs Award competition, to be awarded to the best graduate student paper related to the psychology of addictive behaviors. This annual award is dedicated to Dr. Durand Jacobs' lifelong desire to help mentor students. Published and/or publishable papers will be considered by the selection committee, comprised of an international panel of experts in the field. The recipient will receive an award plaque and their work will be featured in the Youth Gambling International newsletter. Graduate students from all related disciplines are encouraged to submit their papers by April 30, 2020.

Please submit all entries electronically in Word format to [lynette.gilbeau@mcgill.ca](mailto:lynette.gilbeau@mcgill.ca).

If you have any questions, please direct them to:  
Lynette Gilbeau by email, or telephone: (514) 398-4438.

# Recent Publications and Presentations

## REFEREED PUBLICATIONS

Marchica, L., Mills, D., Derevensky, J. & Montreuil, T. (in press). The role of emotion regulation in the etiology of video game and gambling disorders: A systematic review. *Canadian Journal of Addiction*.

Mills, D., Marchica, L., Keough, M. & Derevensky, J. (in press). Exploring differences among video gamers with and without depression: Contrasting emotion regulation and mindfulness. *Cyberpsychology, Behavior and Social Networking*.

Mills, D., Marchica, L., Keough, M. & Derevensky, J. (in press). Exploring differences in substance use among emerging adults at risk for problem gambling and/or problem video gaming. *International Gambling Studies*.

Winters, K. & Derevensky, J. (in press). A review of sports wagering: Prevalence, characteristics of sports bettors, and association with problem gambling. *Journal of Gambling Issues*.

Derevensky, J. (2019). Behavioral addictions: Some developmental considerations. *Current Addictions Report*, 6, 313-322.

Derevensky, J., Hayman, V. & Gilbeau, L. (2019). Behavioral addictions: Excessive gambling, gaming, Internet and smartphone use among children and adolescents. *Pediatric Clinics of North America*, 66, 1163-1182.

Derevensky, J. & Griffiths, M. D. (2019). The convergence between gambling and gaming: Does the gambling and gaming industry have a responsibility in protecting the consumer? *Gambling Law Review*, 1-7.

Grande-Gosende, A., Richard, J., Ivoska, W. & Derevensky, J. (2019). The relationship between bullying victimization and gambling problems among adolescents. *International Gambling Studies*, 1-17.

Derevensky, J. & Richard, J. (2019). The future of gaming disorder research and player protection: What role should the video gaming industry and researchers play? A response to commentary by Griffiths and Pontes (2019). *International Journal of Mental Health and Addiction*.

Richard, J., Martin-Storey, A., Derevensky, J., Wilkie, E. & Temcheff, C. (2019). Variations in gambling disorder symptomatology across sexual identity among college student-athletes. *Journal of Gambling Studies*.

Grande-Gosende, A., López-Núñez, C., García-Fernández, G., Derevensky, J., & Fernández-Hermida, J. R. (2019). Systematic review of preventive programs for reducing problem gambling behaviors among young adults. *Journal of Gambling Studies*.

## REFEREED PUBLICATIONS (CONT'D)

Marchica, L., Mills, D., Keough, M., Montreuil, T. & Derevensky, J. (2019). Emotion regulation in emerging adult gamblers and its mediating role with depressive symptomology. *Journal of Affective Disorders*, 258, 74-82.

Richard, J., Potenza, M., Ivoska, W. & Derevensky, J. (2019). The stimulating nature of gambling behaviors: Relationships between stimulant use and gambling amongst adolescents. *Journal of Gambling Studies*, 35, 47-62.

Potenza, M. N., Balodis, I., Derevensky, J., Grant, J. Petry, N., Verdejo-Garcia, A. & Yip, S. (2019). Gambling disorder. *Nature Reviews Disease Primer*, 5(51), 1-21.

## BOOK CHAPTERS

Derevensky, J. (in press). The prevention and treatment of gambling disorders: Some art, some science. In S. Sussman (Ed.), *Cambridge handbook of substance and behavioral addictions*. New York: Cambridge University Press.

Marchica, L., Temcheff, C., Bowden-Jones, H. & Derevensky, J. (in press). Addiction, an overview. In A.C. Michalos (Ed.). *Encyclopedia of quality of life research*. Revised. Netherlands: Springer Dordrecht Publishing.

## INVITED ADDRESSES

Derevensky, J. (2019). Video game and online addictions: Cause for concern. Invited presentation to the Canadian Paediatric Society and Canadian Academy of Child and Adolescent Psychiatry meeting on Lifelong Learning in Paediatrics, King City, Ontario, October.

Derevensky, J. (2019). Youth gambling and gaming: Should we really be concerned and do we need more regulation? Invited address presented at the Inaugural Responsibility in Gaming Conference, Brussels, October.

Derevensky, J. (2019). Understanding youth gambling and gaming: The good, the bad, the ugly. Invited keynote address presented at the Annual New Jersey Statewide Conference on Disordered Gambling, Princeton, NJ, September.

## News Briefs

### Brain Connections Website and Video Launch

The Brain Connections project began in 2015 as a partnership between Iris Balodis (Assistant Professor from McMaster University) and Deirdre Querney (Problem Gambling Counselor at the Alcohol, Drug & Gambling Services City of Hamilton) with the purpose of developing understandable, evidence-based information about how problem gambling affects the brain.

When people have a gambling problem, they often wonder about the impact on their brains. How has the brain changed? Are those changes permanent? How will it feel to quit or cut back their gambling?

Through funding from the Gambling Research Exchange of Ontario (GREO), Brain Connections has launched a website ([www.brainconnections.ca](http://www.brainconnections.ca)) and has developed five handouts and an accompanying video.

It is National Addictions Awareness Week! Many people suffer with gambling addiction. Check out this short animated video showing how the brain is affected by problem gambling. For more information, visit Brain Connections.

### Some U.K. Teens Spending Half Their Pocket Money on Gambling

According to the 2019 U.K. Gambling Commission *Young People and Gambling Survey*, those youth aged 11-16 years old who had gambled in the past 7 days spent on average £17 per week on games such as fruit machines and online loot boxes. This amount represents roughly half of their pocket money. According to the study sports bets, fruit machines play and lottery tickets are the most common types of gambling engaged in by youth.

### Alcohol Consumption Linked to Chasing Behavior

A recent study published by the Centre for Gambling Research at the University of British Columbia confirms that inebriated gamblers are more likely to engage in chasing behaviors to recoup gambling losses.

In this study, participants were divided into two groups with one group receiving drinks containing enough alcohol to cause mild intoxication and the other group getting beverages without alcohol.

The study involved both groups playing digital roulette. The alcohol group placed higher bets after losses compared to wins, which may indicate an effort to recoup losses. Additionally, alcohol consumption also correlated with an increase in Gambler's Fallacy, a belief that a win is overdue and likely to occur despite the inherent randomness of gambling activities.

According to Dr. Luke Clark, Director of the UBC Centre, "these findings strengthen the case for paying attention to alcohol availability in gambling venues, and monitoring alcohol consumption in people who are gambling. And given the rise of online and smartphone gambling, the public also needs to be aware of the risks of alcohol use when gambling in the home."

## Upcoming Events

- **National Association for Gambling Studies (NAGS) 29th Annual Conference**  
December 4-6, 2019  
Hobart, Tasmania
- **New Horizons**  
March 10-12, 2020  
Vancouver, British Columbia
- **Alberta Gambling Research Institute Annual Conference**  
March 26-28, 2020  
Banff, Alberta, Canada
- **Discovery**  
April 14-16, 2020  
Toronto, Ontario
- **International Gambling Conference**  
**June 24-26, 2020**  
Auckland, New Zealand
- **National Council on Problem Gambling – 34th Annual Conference**  
July 24-25, 2020  
Washington, D.C.



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