

Victorian Responsible Gambling Foundation submission to Parliament of Australia, Senate Environment and Communications References Committee, in relation to Gaming micro-transactions for chance based items

www.responsible.gambling.vic.gov.au

Submitted 27 July 2018

Introduction

The Victorian Responsible Gambling Foundation welcomes the opportunity to provide feedback to this inquiry by the Environment and Communications References Committee.

The Foundation's submission has a bearing on the Committee's second term of reference, *the adequacy of the current consumer protection and regulatory framework for in-game micro transactions for chance-based items, including international comparisons, age requirements and disclosure of odds*.

Any assessment of the adequacy of regulation must include an assessment of the degree to which regulation is needed. In gambling the rationale for much specific regulation, over and above the usual consumer protections, is the extent of harm that can be, and is, caused from gambling. In this submission the Foundation intends to assist the Committee in making an assessment of the risk of harm from loot boxes.

It is the Foundation's view that there is a case for stronger regulation than is currently the case.

The Foundation has a strong interest in the relationship between aspects of gaming and gambling. For example, both electronic gambling machines (pokies) and many social games are built on software that has features that stimulate continued use, which can have negative effects for some people. In addition, the Foundation is aware that a number of gambling companies have been acquiring manufacturers and suppliers of digital games. This potentially allows for more integration of forms or aspects of these risky features across the gambling and gaming platforms.¹

In this submission we will be drawing the Committee's attention to features of loot boxes that are similar in their form and effects to features used in some gambling products.

These features attract players to keep paying and playing. In the case of loot boxes they can occur frequently, appearing as both requested and unbidden offers to the player.

Prizes unlocked by loot boxes can be integral to game playing, such as supporting level progression. Alternatively, they can be adjuncts to game play but have value for players for how they look, or as parts of sets of goods. In particular, prizes acquire a hierarchy of value that relates to their rarity, difficulty to obtain. So how many loot boxes you have to open to get them becomes an important

¹ See for example, Toscano N. [Digital growth rockets at gambling giant](#) Aristocrat, *Sydney Morning Herald* 24 May 2018

question. However, it is one players are not usually given any answer to.

Thus, what is constant is that the player does not know what is in the loot box until it opens.² This means opening loot boxes provides a sequence of anticipatory stimulation around rewards and disappointments. For some players this stimulus of anticipation and intermittent reward may encourage or bring on a loss of control in relation to pursuing or purchasing more loot boxes. A loss of control that can result in increased expenditure and/or loss of time that is harmful.

However, while gambling is regulated in part in order address the risks of loss of control, gaming and the provision of loot boxes has almost no regulation. Of particular concern is that there are games with loot boxes that appeal to, and are played by, those under 18 years of age.³

In this submission the Foundation will recommend that the government introduce provisions to prevent or mitigate harm that may come from exposure to loot boxes.

About the Foundation,

The [Victorian Responsible Gambling Foundation](#) is a statutory authority established in 2012 with the bipartisan support of the Victorian Parliament.

Taking a public health approach, the Foundation strives to meet its mandate by acting across four key areas:

- 1) increasing community awareness about the risks of gambling and the help available, through public campaigns and community education
- 2) providing information and advice to the community on the Victorian gambling environment to promote discussion and participation in decisions about gambling
- 3) conducting research to better understand and address the negative consequences of gambling in our communities.
- 4) providing effective and accessible Gambler's Help counselling services

The foundation is firmly focused on identifying, understanding and ameliorating gambling harm.

The Case for reform

What are loot boxes?

There is considerable variation in the mechanics used for loot boxes. Some require purchases and some do not. Moreover, some virtual goods (eg. skins) can transferred to other players either in game or in secondary markets, including being used for gambling. In this submission our focus is on loot boxes that require purchases and the process of being offered and purchasing them. However, we would note that loot boxes that do not require money may still create harm by way of

² It is noted that loot boxes usually open in a way that prolongs that anticipation, creating cascades of spinning and whirling before finally revealing what has been won. See the following youtube videos, Logitech G [Why you can't resist opening loot boxes](#) 13 January 2018; Game theory [How loot boxes hack your brain](#) January 10 2018

³ This is also true of simulated gambling games on offer, see Krook J. [There are no age restrictions for gambling in video games, despite potential risks for children](#) *The Conversation* May 16 2018

supplementing other features of gaming that can result in obsessions or loss of time.⁴

Thus, a loot box is an in-game reward system many of which can be purchased repeatedly with real money to obtain virtual items. The probability of obtaining individual items is variable, with items generally graded by rarity, with the probability of receiving an item decreasing with each grade. Items may be cosmetic and have no function within a game or may be required to progress in the game. Depending on the particular game, items obtained from loot boxes may be traded or transferred to others.

The low probability of obtaining a desired item can mean that the player will have to purchase an indeterminate number of loot boxes to obtain the item. Items that are more desirable have been identified as having “higher prices” since the chances of receiving them are very low and so therefore will very likely require a significant number of purchases with no guarantee of a result.⁵

The Foundation does not know what form the randomisation of rewards in loot boxes generally takes. It may be some form of falling probability (the chances of the item being won go up as people opening boxes exhaust other possibilities) or is basically constant, as it is with pokies. In this case the probability effectively remains the same each time you play, eg. press a button or open a box.

What is true regardless, is that a form of intermittent (random) reinforcement is being experienced by those opening the boxes. The variability creates anticipation as well positive and negative stimulation for the person opening them. Intermittent (random) reinforcement has been identified as a powerful conditioning agent and associated with creating false cognitions around what is happening. In gambling research the most well-known of these is the gambler’s fallacy, the belief created in the gambler that a win is “due”, that there is actually a pattern in place that the gambler can unlock or benefit from.⁶

Loot boxes are an increasing feature of many digital games, many of which are classified as acceptable for under 18s by the Australian Classification Board or in the app stores.

The association of loot boxes with harm

While there is some conjecture about whether loot boxes should be considered as a form of gambling, the Foundation is most concerned with the features of loot boxes that are similar to those associated with risk of harm from gambling.

It should be noted that loot boxes occur within games that have many other features that have also raised concerns. In all cases concerns are around the ability of games to create or induce a loss of control by the player.⁷ A loss of control in terms of their being able to stop playing or, in aggravated

⁴ See Kuss J. et.al., Internet Gaming Addiction: A systematic review of empirical research, *International Journal of Mental Health and Addiction* online 26 March 2011, also Heaven D. The Obsessioners, *New Scientist* 31 May 2014, Evans-Thirwell E. [The game industry doesn't know how to cure its loot box addiction](#), *Wired* 7 June 2018

⁵ Naessens P. [Research Report on Loot Boxes](#), FPS Justice Gaming Commission, Brussels April 2018 p.10ff

⁶ Delfabbro P. *Australasian Gambling Review* 5th ed. June 2011 p.181. For association with loot boxes see Platinumparagon, [The Psychology of Loot Boxes and Microtransactions](#) November 16 2017,

⁷ Kuss 2011 op.cit., Milani L. et.al., Internet Gaming Addiction in Adolescence: Risk factors and maladjustment correlates, *International Journal of Mental Health and Addiction* online 20 March 2017;

cases, even stop thinking about playing.

Further, the gaming industry itself has been undergoing significant evolution over the last five years. In particular, it has been developing its business model to create new opportunities for revenue, apart from the sale of the software and subsequent upgrades. The creation of opportunities and incentives to spend money within the game are central to this development.

This broader strategy of monetization has been associated with the generation of harm. There have been news stories on teenagers spending thousands of dollars on micro-transactions, while individuals seeking treatment for internet gaming disorder (IGD) have reported large debts due to micro-transactions.⁸

Loot boxes should be seen and assessed within the context of this evolution and as part of it. Their development has been driven by an interest in enhancing the appeal of a game, providing additional rewards and now, as a product for purchase, providing an additional revenue stream.

This submission draws the attention of the Committee to some relevant observations of distinguished academics in the field.

The first item of relevance concentrates on the degree to which loot boxes can be associated with gambling, in the sense of giving the user a similar experience to gambling.

Drummond and Sauer investigated whether video game loot boxes were similar to gambling.⁹ They used criteria developed by Nottingham Trent University psychologist Mark Griffiths in his work on behavioural addictions and gambling disorder.

They posited that, to be considered similar to gambling from a psychological perspective, loot boxes must involve the following five criteria:

- an exchange of money or valuable goods takes place
- an unknown future event determines the exchange
- chance at least partly determining the outcome
- non-participation means avoiding incurring losses
- winners gaining at the sole expense of losers.

The research revealed that loot boxes in 45 per cent of the 22 games studied met all five of the criteria. The psychological experience of using these loot boxes could thus be considered akin to gambling.¹⁰ All of the loot boxes operated on a variable ratio reinforcement schedule, therefore

Krook J. [How video game companies are using gambling tactics to make customers addicted](#), *Business Insider Australia* September 18 2017

⁸ Daniel King, Predatory monetization schemes in video games (e.g. 'loot boxes') and internet gaming disorder *Addiction* 2018; Dreier M. et.al. Free to Play: About addicted whales, at risk Dolphins and healthy Minnows, Monetization design and Internet Gaming Disorder *Addictive Behaviors* January 2017

⁹ Aaron Drummond & James D. Sauer, [Video game loot boxes are psychologically akin to gambling](#), *Nature Human Behaviour* online 18 June 2018

¹⁰ Note that over three quarters of the games met four of the five criteria

providing intermittent reinforcement to players. They note that this type of reward schedule results in people quickly learning new behaviours (for example buying more loot boxes) and repeating the behaviour often. The strategy is effective because of the generation of a perception that the next time a box is opened it might be the “big win”. Several games in their sample were rated 13+ by the Entertainment Software Rating Board, a member of the International Age Rating Coalition.

Australian expert Daniel King, in an editorial in the academic journal *Addiction*,¹¹ referred to loot boxes as a ‘predatory monetization scheme’ that contributed to increasing similarity between gaming and gambling, including creating a potential for financial harm. Predatory monetization schemes were defined as “purchasing systems that disguise or withhold the long term cost of the activity until players are already financially or psychologically committed.”

For King, loot boxes encourage repeated player spending via limited disclosure of the product, intrusive and unavoidable solicitations and systems that manipulate reward outcomes to reinforce purchasing behaviours over skilful or strategic play.

King also notes evidence that individual player data is being collected and used to manipulate the nature and presentation of purchasing offers in ways that maximize the likelihood of the player spending money. In some cases, the prices and chances of obtaining virtual items can be adjusted depending on the player’s playing and spending habits in the game. These schemes may entice some players with access to credit cards to spend more money than they have or can afford. Younger players may be particularly less equipped to critically appraise the value proposition of these schemes.

Similarities between loot boxes and gambling

To the extent that loot boxes are a relatively new and still evolving product, empirical evidence about their effects is still thin on the ground. However, analysis can examine features of loot boxes that are found in other products where there has been extensive research. Such a comparison can provide information relevant to an assessment of loot boxes’ potential for harm. The Foundation has done this below, where it provides two tables that compare loot boxes with known risky features of two forms of gambling most associated with harm, pokies and wagering.

Table 1

Electronic gaming machines (pokies) and loot boxes – risk of harm generators comparison

NB coloured squares = lack of risk or abatement of risk, green does not occur, orange occurs but restricted

	Pokies	Loot boxes
Reinforcement through random rewards	Yes	Yes
Associated with chasing losses	Yes	Yes

¹¹ Daniel King, Predatory monetization schemes in video games (e.g. ‘loot boxes’) and internet gaming disorder *Addiction* 2018

or sunk costs (I've spent too much already to stop now)		
System of rewards are complex, hard to understand	Yes, but do have a designated return to player and in Victoria Player Information Displays	Yes
Gambler's fallacy (the more I play, eventually I will be due to win)	Yes	Yes
Accompanying visual and audio stimulation	Yes	Yes
Near misses built into presentation of result (shows possible wins apparently just going past before final result)	Yes	Yes
Non-random outcomes – tailor responses to specific types of play, increase perception of skill or return for investment	No	Yes
Tailor responses to specific player patterns of behaviour to encourage further play	No	Yes
Rewards can sometimes improve future results in the game	No	Yes
Immersion (zoning out, losing track of time and spending reported by those with issues, vulnerabilities)	Yes	Yes
High accessibility/availability	Yes	Yes, even higher 24/7
Appeal to children	Yes, and therefore strictly regulated in relation to where they can be located	Yes, and access relatively unrestricted
Self exclusion available	Yes	Unknown (but on available evidence no)
Ability to track expenditure and time	Yes (in Victoria via YourPlay system)	Unknown

Table 2

Wagering and loot boxes – risks of harm generators comparison

NB coloured squares = lack of risk or abatement of risk, green does not occur, orange occurs but restricted/modified

	Wagering	Loot Boxes
Push offers during sessions	Yes	Yes
Offers that are hard to understand in terms of return for investment, actual price (in wagering applies to particular inducements)	Yes	Yes
Ability to hide, play in private	Yes	Yes
Very high levels of access (weak structural barriers to playing)	Yes	Yes
Tokenisation – expenditure in an abstract form – accounts etc	Yes	Yes
Social interaction – may cause a competitive or reinforcement effect leading to more expenditure/obsession	Yes	Yes
Can be hard to keep track of expenditure	Yes, but most operators offer tracking of some type	Yes
Self-exclusion possible (this is a harm prevention factor)	Yes	Unknown (but on available evidence no)

Potential harm from loot boxes

Based on research on gaming and gambling the Foundation suggests harm from loot boxes might be divided into three categories:

- 1) Unhealthy obsessions – whereby from repetition within the game, possibly reinforced by promotions and peer groups, a player becomes focussed on the game in a way that results in negative outcomes or losses for themselves or others close to them

- 2) Spending more than they can afford – where they lose control or judgement to the extent that they suffer financial losses that incur negative consequences for themselves or others close to them
- 3) Spending more time than they can afford – as a product of immersion and obsession players thus affected lose track of time and thus incur negative consequences for themselves or others close to them.

Those most likely to be vulnerable to harm

Research on the effects of these features indicates that, with enough involvement, many people might be susceptible to adverse effects. This is because we are talking about strong conditioning effects that do their work via repetition. However, research would indicate the following are the most likely to be vulnerable/susceptible:

- Children – children are still developing their cognitions and their impulse control. They are therefore particularly vulnerable to conditioning effects and promotions generally. They are also highly attracted to games and in many cases these are games for which they are a specific audience. Even without random reinforcements there are many existing immersive features in games that already cause loss of time harms for children.
- People with impulse control issues – adults with impulse control issues are a significant group among those who experience gambling issues
- People with mental health issues – anxiety and to a lesser extent depression are significant among those with gambling issues. Research indicates that immersion (zoning out) is a condition certain types of gambling provide and that this can function as a psychological escape for some people with these issues. The time and money spent is actually likely to exacerbate their problems but their loss of control and cognitive reflection triggered by immersion in the game act to cloud or negate this realisation.

Foundation recommendations

1. Games containing loot boxes should be classified more stringently

Children are clearly a group with vulnerability to harm from using loot boxes, yet many occur in games marketed to teenagers. Moreover, the games and the marketing are also likely to appeal to some primary school children.

Regardless of rating, loot box mechanics and risks arising from them should be added to content warnings in order to give users and parents the information they need to properly assess whether particular games are appropriate for themselves or their children.

2. Games in which loot boxes are purchased must send notifications immediately to the account holder along with a note about the dangers they can create

It is suggested that whenever a player purchases a loot box, in a video game, a notification is sent immediately to the holder of the account used for the transaction(s). The notification would include a note about the dangers or risks of purchasing loot boxes in a game.

This would mean that parents or guardians who held the accounts would receive immediate messages about spending and frequency of loot box use by their children.

It would also provide a record for any user of the extent to which they had been using and spending on loot boxes. Tracking of activity is a recognised prevention tool for gamblers in low risk and non-problem categories.

3. Odds of loot boxes containing any prizes on offer should be available, visible and accessible

While not removing the random reinforcement features of the loot box, it would enable all players to make an assessment of the actual spending they might need to obtain an item.

4. Players should be able to put a limit on the number of loot boxes made available to them, the number that they open and the amount that can be spent over a given time period

Since loot boxes provide a risk of harm, players should be able to avoid or limit their exposure to them. One implication of this is that attention must be paid to whether loot box prizes that give advantages or abilities to progress in games should be acceptable? Since such prizes leverage off a player's psychological commitment to the game they become a 'must have' item despite unknown costs. The player needs to get into the intermittent reinforcement loop of opening loot boxes to have the item. Only the elimination of such prizes would practically allow players to reduce or cut off their exposure to loot boxes while still playing the game.

5. Self –exclusion, opt out

Players should be made aware and able to easily opt out of offers of loot boxes for a time they determine, including permanently. The points made above regarding recommendation five also apply here.

6. Advertising of loot boxes should be restricted

This should be particularly so in relation to misrepresentations of chances of winning high value rewards, eg. in Youtube videos showing opening of boxes. Promotions should also clearly provide consumer information as to odds and likely cost of winning rarer prizes. The importance of prizes from loot boxes to playing the game should also be clearly stated in promotions, instructions and home pages of games.

Bibliography

- Delfabbro P. *Australasian Gambling Review* 5th ed. June 2011
- Dreier M. et.al. Free to Play: About addicted whales, at risk Dolphins and healthy Minnows, Monetization design and Internet Gaming Disorder *Addictive Behaviors* January 2017
- Aaron Drummond & James D. Sauer, [Video game loot boxes are psychologically akin to gambling](#), *Nature Human Behaviour* online 18 June 2018
- Evans-Thirwell E. [The game industry doesn't know how to cure its loot box addiction](#), *Wired* 7 June 2018
- Game theory [How loot boxes hack your brain](#) January 10 2018
- Heaven D. The Obsessionees, *New Scientist* 31 May 2014
- King D. Predatory monetization schemes in video games (e.g. 'loot boxes') and internet gaming disorder *Addiction* 2018
- Krook J. [How video game companies are using gambling tactics to make customers addicted](#), *Business Insider Australia* September 18 2017
- Krook J. [There are no age restrictions for gambling in video games, despite potential risks for children](#) *The Conversation* May 16 2018
- Kuss J. et.al., Internet Gaming Addiction: A systematic review of empirical research, *International Journal of Mental Health and Addiction* online 26 March 2011
- Logitech G [Why you can't resist opening loot boxes](#) 13 January 2018
- Milani L. et.al., Internet Gaming Addiction in Adolescence: Risk factors and maladjustment correlates, *International Journal of Mental Health and Addiction* online 20 March 2017
- Naessens P. [Research Report on Loot Boxes](#), FPS Justice Gaming Commission, Brussels April 2018
- Platinumparagon, [The Psychology of Loot Boxes and Microtransactions](#) November 16 2017
- Toscano N. [Digital growth rockets at gambling giant](#) *Aristocrat, Sydney Morning Herald* 24 May 2018