

Dr David Zendle – Written evidence (GAM0022)

Statement regarding loot boxes, video game-related gambling practices, and problem gambling

Who I am

Dr. David Zendle

- Lecturer in Computer Science, University of York
- World-leading expert on the connections between video games and gambling
 - Lead author of the majority of the empirical literature on gambling-like mechanisms in video games (loot boxes), e.g. [1]–[7]
- Provided oral evidence to the DCMS Select Committee on Immersive and Addictive Technologies on video games and gambling
- Provided oral evidence to the Australian Government’s Senate Inquiry on this topic
- Provided oral evidence to the USA’s Federal Trade Commission public workshop on this topic
- Research regularly used by DCMS Select Committee on Immersive and Addictive Technologies in discussions of gambling with video-game industry stakeholders and relevant regulatory bodies (e.g. Electronic Arts, UK Gambling Commission).

Executive Summary

1. Loot boxes are gambling-like mechanisms in video games. They are very widespread in modern video games
2. Similarities between loot boxes and gambling have led researchers to theorise that loot boxes might cause problem gambling in gamers.
3. Our research reveals that loot box spending is linked to problem gambling in both adults and adolescents
4. Our research suggests that either loot boxes cause problem gambling, or they exploit problem gambling amongst gamers to generate massive profits
5. We believe that regulation of loot boxes is appropriate
6. Loot boxes are not the only way that video games and gambling are converging: A host of emergent practices combine elements of video games and gambling.
7. Whilst novel, these practices are widespread, linked to problem gambling, and often unregulated in the UK.

We provide a point-by-point expansion of our executive summary below.

1. Loot boxes are gambling-like mechanisms in video games. They are very widespread in modern video games

- Loot boxes are items in video games that can be paid for with real-world money but contain randomized contents whose value is unknown at the time of purchase.
- Loot boxes have mushroomed from a relatively obscure in-game mechanism to an industry that was predicted to generate up to \$30 billion in 2018 [8].

2. Similarities between loot boxes and gambling have led researchers to theorise that loot boxes might cause problem gambling in gamers.

- Problem gamblers are individuals whose spending on gambling is so excessive and disordered that it causes them significant problems in their personal and professional lives.
- Problem gambling is linked to factors such as depression, anxiety, bankruptcy, and suicide [9]–[11].
- Because loot boxes are so like gambling, there is concern that exposure to loot boxes in video games might lead to problem gambling amongst gamers.
- There is particular concern that loot boxes might lead to the development of problem gambling in children [12]. The UK Gambling Commission estimates that as many as a 31% of children aged 11-16 have opened a loot box in the past year[13].

3. Our research reveals that loot box spending is linked to problem gambling in both adults and adolescents

- We are the lead authors of a wide variety of journal articles on the effects of this gambling-like mechanism, including the following:
 - *Video game loot boxes are linked to problem gambling: Results of a large-scale survey*[1]
 - *Loot boxes are again linked to problem gambling: Results of a replication study*[4]
 - *Paying for loot boxes is linked to problem gambling, regardless of specific features like cash-out and pay-to-win*[5]
 - *Adolescents and loot boxes: Links with problem gambling and motivations for purchase*[6]
- In every single one of these studies, we have found that spending money on loot boxes was linked to problem gambling. The more money individuals spent on loot boxes, the more severe their problem gambling was
- All effects observed were of a clinically important magnitude. In particular, the link between loot box spending and problem gambling was much stronger in adolescents than in adults.

4. Our research suggests that either loot boxes cause problem gambling, or they exploit problem gambling amongst gamers to generate massive profits

- The more money that individuals spend on loot boxes, the more severe their problem gambling is. This suggests that one of two things may be occurring.
- It may be the case that these things are linked because spending on loot boxes causes problem gambling
 - This is a credible explanation because loot boxes are very similar in many ways to gambling, and therefore may provide a gateway to it.
- However, it may alternatively be the case that this relationship exists because people who already have gambling problems are drawn to spend significantly more on loot boxes.
 - This also makes sense. Problem gambling is characterised by uncontrolled excessive spending on gambling. Loot boxes share many similarities with gambling. It therefore makes sense that this uncontrolled spending may transfer to loot boxes too.

- In either case, social harm is occurring
- In one situation, loot boxes would literally be causing problem gambling amongst gamers, many of whom are young or otherwise vulnerable.
- In the other situation, loot boxes would be allowing video game companies to exploit problem gambling amongst their customers for massive monetary gain.

5. We believe that regulation of loot boxes is appropriate

- Loot boxes are not currently regulated by the UK Gambling Commission as a form of gambling
- However, they share many features with gambling.
- Spending on them is linked to problem gambling in both adults and children
- We believe there is enough evidence to suggest that some future regulation of loot boxes is appropriate.

6. Loot boxes are not the only way that video games and gambling are converging: A host of emergent practices combine elements of video games and gambling.

- Loot boxes are probably the most prominent form of gambling-like video game practice.
- However, a broad range of other activities have recently emerged which are also related to both gambling and video games. These include:
 - esports betting
 - real-money video gaming
 - token wagering
 - social casino play

7. Whilst novel, these practices are widespread, linked to problem gambling, and often unregulated in the UK.

- These practices are widespread: Overall, we estimate that 16.3% - 20.9% of the adult population engages in one of these behaviours[14]
- Many of these practices share many features with traditional forms of gambling but are not regulated as gambling by the UK Gambling Commission.
- For example, when engaging in social casino play, individuals may wager real money on games of chance like roulette, or slot machine play.
- However, players may not 'cash out' money from these games. Instead, when they win, they merely receive more chips or in-game currency to use in further simulated gambling activities.
- This lack of an ability to extract 'money's worth' from the game means that these practices are not considered a form of gambling under UK regulations, and hence are available for children to play.
- However, our research shows that all of these practices are linked to problem gambling: The more frequently individuals spend money on social casino games, for example, the more severe their problem gambling tends to be[14].
- When considering the continued robustness of the 2005 Gambling Act, one must take into account the convergence of video games and gambling, and the potential inadequacy of the provisions in said act for addressing this convergence.

References

- [1] D. Zendle and P. Cairns, "Video game loot boxes are linked to problem gambling: Results of a large-scale survey," *PLoS One*, vol. 13, no. 11, p. e0206767, 2018.
- [2] D. Zendle, "Only problem gamblers spend less money when loot boxes are removed from a game: A before and after study of Heroes of the Storm," Jun. 2019.
- [3] D. Zendle and H. Bowden-Jones, "Loot boxes and the convergence of video games and gambling," *Lancet Psychiatry*, vol. 6, no. 9, pp. 724–725, 2019.
- [4] D. Zendle and P. Cairns, "Loot boxes are again linked to problem gambling: Results of a replication study," *PLoS One*, vol. 14, no. 3, p. e0213194, Mar. 2019.
- [5] D. Zendle, P. Cairns, H. Barnett, and C. McCall, "Paying for loot boxes is linked to problem gambling, regardless of specific features like cash-out and pay-to-win," *Comput. Hum. Behav.*, Jul. 2019.
- [6] D. Zendle, R. Meyer, and H. Over, "Adolescents and loot boxes: links with problem gambling and motivations for purchase," *R. Soc. Open Sci.*, vol. 6, no. 6, p. 190049, Jun. 2019.
- [7] D. Zendle, R. Meyer, S. Waters, and P. Cairns, "The prevalence of loot boxes in mobile and desktop games," May 2019.
- [8] Juniper Research, "In-Game Gambling ~ The Next Cash Cow for Publishers," Apr-2018. [Online]. Available: <https://www.juniperresearch.com/document-library/white-papers/in-game-gambling-~the-next-cash-cow>. [Accessed: 15-Jul-2018].
- [9] S. C. Newman and A. H. Thompson, "A population-based study of the association between pathological gambling and attempted suicide," *Suicide Life. Threat. Behav.*, vol. 33, no. 1, pp. 80–87, 2003.
- [10] F. K. Lorains, S. Cowlishaw, and S. A. Thomas, "Prevalence of comorbid disorders in problem and pathological gambling: Systematic review and meta-analysis of population surveys," *Addiction*, vol. 106, no. 3, pp. 490–498, 2011.
- [11] J. E. Grant, L. Schreiber, B. L. Odlaug, and S. W. Kim, "Pathological Gambling and Bankruptcy," *Compr. Psychiatry*, vol. 51, no. 2, pp. 115–120, 2010.
- [12] A. Drummond and J. D. Sauer, "Video game loot boxes are psychologically akin to gambling," *Nat. Hum. Behav.*, pp. 530–532, Jun. 2018.
- [13] UK Gambling Commission, "Young People and Gambling: 2018 Report," 2018. [Online]. Available: <https://www.gamblingcommission.gov.uk/PDF/survey-data/Young-People-and-Gambling-2018-Report.pdf>. [Accessed: 02-Jan-2019].
- [14] D. Zendle, "Gambling-like video game practices: Links with problem gambling and disordered gaming in a nationally representative sample," PsyArXiv, preprint, Sep. 2019.

5 September 2019