

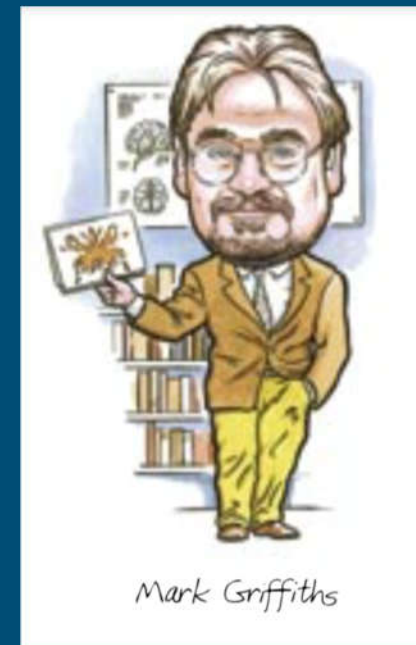
THE CONVERGENCE OF YOUTH GAMBLING AND VIDEO GAMING: PSYCHOSOCIAL IMPACTS

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BRIEF OVERVIEW OF PRESENTATION

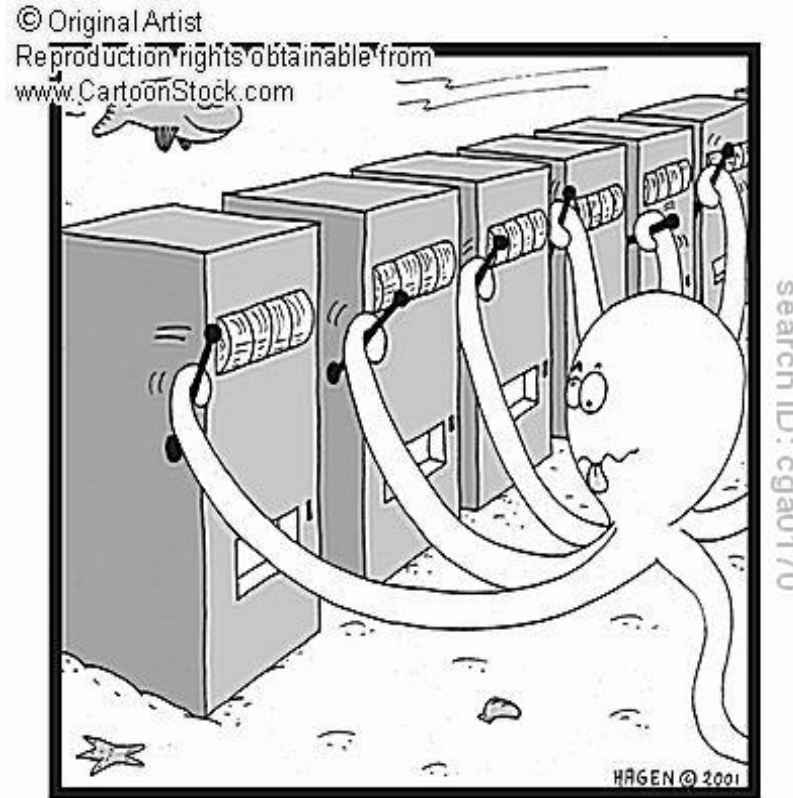
- Gambling addiction and addiction components
- Gambling/gaming similarities
- Observations about online behaviour
- Increase in gambling convergence/cross fertilization of technologies
- Psychology of esports
- Psychology of loot boxes
- Conclusions

No I am NOT addicted!!!



GAMBLING ADDICTION HAS CHANGED THE THINKING ABOUT THE NATURE OF ADDICTION

- Gambling addiction is the 'breakthrough' addiction
- Now accepted in psychiatric and medical texts
- Pathological gambling has been re-classified as an 'impulse control disorder' to a behavioural addiction
- No theoretical reason why other behavioural addictions cannot exist



Compulsive gambling

ADDICTION COMPONENTS MODEL

(Griffiths, 1995; 1996; 2005; 2009)

- **Saliency**
- **Mood modification**
- **Tolerance**
- **Withdrawal**
- **Conflict**
- **Relapse**



SALIENCE (EXTRACT 1): 'TONY'

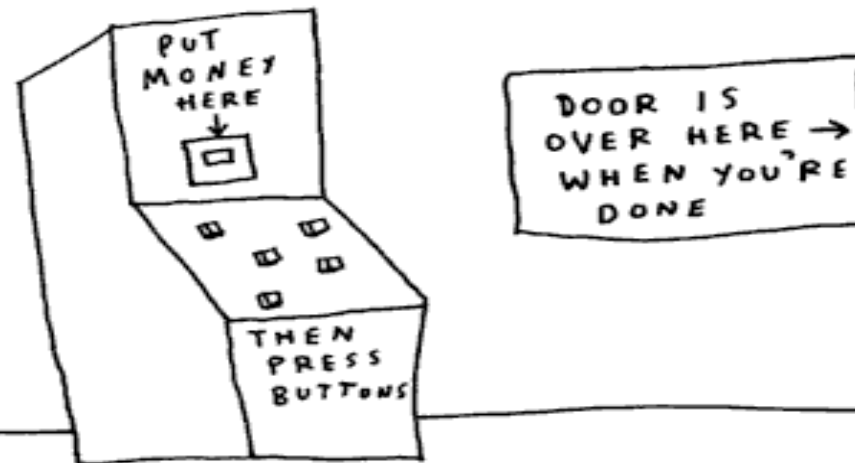
"If I wasn't actually gambling I was spending the rest of my time working out clever little schemes to obtain money to feed my habit. These two activities literally took up all my time"



SALIENCE (EXTRACT 2): 'BRIAN'

"Gamble, gamble, gamble your life away..you might as well have put it down the drain. You've got to face the truth that you're having a love affair, and it's with a machine whose lights flash, takes your money and kills your soul"

CartoonChurch.com



SALIENCE (EXTRACT 3): 'DAVID'

"During four or five years of compulsive gambling I think I missed about six or seven days of playing fruit machines - keeping in mind that about four or five of those days were Christmas days where it was impossible to gain access to a gambling machine...As you have probably gathered, I ate, slept and breathed gambling machines...I couldn't even find time to spend with the people I loved...The machines were more important than anything or anyone else"

(from Griffiths, 2002)

'REVERSE' SALIENCE



13/12/2018

Journal of Substance Use, August 2005; 10(4): 191–197



CURRENT OPINION PIECE

A 'components' model of addiction within a biopsychosocial framework

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Abstract

There is now a growing movement that views a number of behaviours as potentially addictive including many that do not involve the ingestion of a drug (such as gambling, sex, exercise, videogame playing and Internet use). This paper argues that all addictions consist of a number of distinct common components (salience, mood modification, tolerance, withdrawal, conflict and relapse). The paper argues that addictions are a part of a biopsychosocial process and evidence is growing that excessive behaviours of all types do seem to have many commonalities. It is argued that an eclectic approach to the studying of addictive behaviour appears to be the most pragmatic way forward in the field. Such commonalities may have implications not only for treatment of such behaviours but also for how the general public perceive such behaviours.

Introduction

Certain individuals use certain substances in certain ways, thought at certain times to be unacceptable by certain other individuals for reasons both certain and uncertain. (Burglass, & Shaffer, 1984, p. 19)

Conceptualizing addiction has been a matter of great debate for decades. Although the opening quote is not recent, it still holds true despite the enormous amount of research into addictive behaviours. Any conceptualization of addiction has implications for several groups of people (e.g. addicts, their families, researchers, practitioners, policy makers, etc.). Obviously, the needs of these groups may not be equally well served by certain models, and in some cases there will be absolute incompatibility. Any framework for the conceptualization of addiction must allow for the bottom-up development and integration of theory by each of these groups – that is, it must be flexible, accountable, integrative and reflexive.

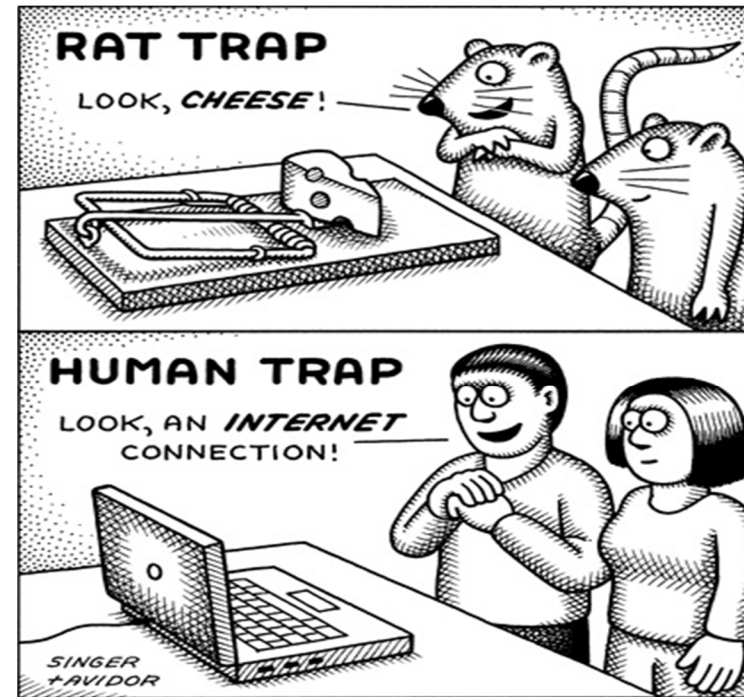
For many people the concept of addiction involves taking of drugs (e.g. Rachlin, 1990; Walker, 1989). Therefore it is perhaps unsurprising that most official definitions

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ADDICTION COMPONENTS MODEL

(Griffiths, 1995; 1996; 2005; 2009)

- **Salience**
- **Mood modification**
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- **Conflict**
- **Relapse**



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The Role of Context in Online Gaming Excess and Addiction: Some Case Study Evidence

Mark D. Griffiths

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Abstract Research into online gaming addiction is a relatively new area of psychological study. Furthermore, there are studies that have claimed that online gaming addiction may be addictive because of self-report accounts of very excessive use of up to 80 h a week. This study uses data from two case studies to highlight the role of context in distinguishing excessive gaming from addictive gaming. Both of the gamers in this study claimed to be playing for up to 14 h a day yet and although they were behaviorally identical in terms of their game playing, they were very different in terms of psychological motivation and the meaning and experience of gaming within their lives. It is argued that one of the players appears to be genuinely addicted to online gaming but that the other player is not based on context and consequences. The two cases outlined highlight the importance of context in the life of a gamer and demonstrates that excessive gaming does not necessarily mean that a person is addicted. It is argued that online gaming addiction should be characterized by the extent to which excessive gaming impacts negatively on other areas of the gamers' lives rather than the amount of time spent playing. It is also concluded that an activity cannot be described as an addiction if there are few (or no) negative consequences in the player's life even if the gamer is playing 14 h a day.

Keywords Addiction · Gaming addiction · Online gaming · Online video games · Case study

Introduction

Research into online gaming addiction is a relatively new area of psychological study. There have been an increasing number of studies in this area although most studies have used ad hoc addiction criteria and/or addiction scales adapted from other areas like gambling addiction and exercise addiction (Wan and Chiou 2006a, b; Smahel et al. 2008; Ng and Wiener-Hastings 2005; Hussain and Griffiths 2009). There are also studies that have claimed that online gaming addiction may be addictive because of self-report accounts



ADDICTION COMPONENTS MODEL

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- **Relapse**



ADOLESCENT GAMBLING PREVALENCE

(Calado & Griffiths, 2017)

Country/Area	Past year gambling prevalence rate	Past year problem gambling prevalence rate
US (National)	67%	1.3%
US (Individual states)	20%-86%	0.9%-5.7%
Canada (National)	61%	2.2%
Canada (Individual provinces)	24%-90%	2.2%-8.1%
Europe*	33%-82%	0.2%-5.6%
Australia (Individual territories)	41%-89%	1.0%-4.4%
New Zealand (National)	65%-68%	1.0%-4.4%

*Albania, Belgium, Croatia, Denmark, Estonia, Finland, Germany, Great Britain, Iceland, Lithuania, Italy, Norway, Romania, Serbia, Slovakia, Spain, Switzerland Sweden

GAMBLING/GAMING SIMILARITIES

[SLOT MACHINES vs. VIDEOGAMES]

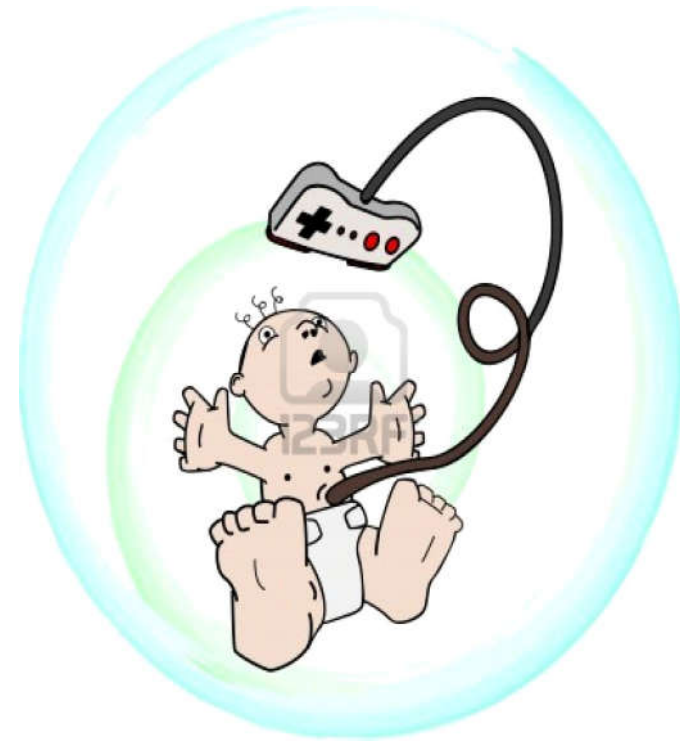
(Griffiths, 1991; 1995; Griffiths, King & Delfabbro, 2014)

- Many psychological, behavioural and socio-demographic similarities
- Similar structural characteristics (high event frequency, near misses, variable ratio reinforcement schedules, etc.)
- Rapid span of play negotiable to some extent by the skill or perceived skill of the player (more marked in video games).
- The provision of aural and visual rewards for a winning move (e.g. flashing lights, electronic jingles).
- The requirement of total concentration and hand-eye coordination.
- The provision of an incremental reward for a winning move (points or cash) that reinforce behaviour.
- The opportunity for peer group attention and approval through competition.

TECHNOLOGICAL ADDICTIONS

(Griffiths, 1995; 2008)

- Technological addictions are operationally defined as non-chemical (behavioural) addictions that involve excessive human-machine interaction
- Usually contain inducing and reinforcing features which may contribute to the promotion of addictive tendencies
- Feature all the core components of addiction



INTERNET GAMING DISORDER CRITERIA

(DSM-5; APA 2013; Griffiths et al, 2014)

- (1) *Preoccupation with internet games* [**salience**]
- (2) *Withdrawal symptoms when internet gaming is taken away* [**withdrawal**]
- (3) *The need to spend increasing amounts of time engaged in internet gaming* [**tolerance**]
- (4) *Unsuccessful attempts to control participation in internet gaming* [**relapse/loss of control**]
- (5) *Loss of interest in hobbies and entertainment as a result of, and with the exception of, internet gaming* [**conflict**]

- (6) *continued excessive use of internet games despite knowledge of psychosocial problems*
[conflict]
- (7) *deception of family members, therapists, or others regarding the amount of internet gaming*
[conflict]
- (8) *use of the internet gaming to escape or relieve a negative mood* **[mood modification]**
- (9) *loss of a significant relationship, job, or educational or career opportunity because of participation in internet games* **[conflict]**

GAMING DISORDER

(World Health Organization, ICD-11, 2018)

- Gaming disorder is defined as a pattern of gaming behaviour (“digital-gaming” or “video-gaming”) characterized by impaired control over gaming, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and continuation or escalation of gaming despite the occurrence of negative consequences.



- A decision on inclusion of gaming disorder in ICD-11 is based on reviews of available evidence
- The inclusion reflects a consensus of experts from different disciplines and geographical regions that were involved in the process of technical consultations undertaken by WHO in the process of ICD-11 development.



- The inclusion of gaming disorder in ICD-11 follows the development of treatment programmes for people with health conditions identical to those characteristic of gaming disorder in many parts of the world.
- This will result in the increased attention of health professionals to the risks of development of this disorder and, accordingly, to relevant prevention and treatment measures.



GENERIC RISK FACTORS THAT MAY FACILITATE ONLINE ADDICTIONS

(Griffiths, 2003)

- Access
- Affordability
- Anonymity
- Convenience
- Disinhibition
- Escape
- Social acceptability



ONLINE GAMING ADDICTION

(Kuss & Griffiths, 2012a; 2012b; Pontes & Griffiths, 2015)

- Reviewed over 100 empirical studies on internet gaming addiction
- Argued that gaming addiction follows a continuum
- Antecedents in etiology and risk factors, through to the development of an addiction
- Gaming addiction associated with various personality traits (e.g., introversion, sensation-seeking, neuroticism, state/trait anxiety, low emotional intelligence, social inhibition)



- Terminologies and assessment of addiction was variable (e.g., problem video game playing, problematic online game use, video game addiction, online gaming addiction)
- Excessive (problematic) engagement found in approx. 8-12% of young persons, whereas addiction seems to be present in 2-5% of children, teenagers and students.

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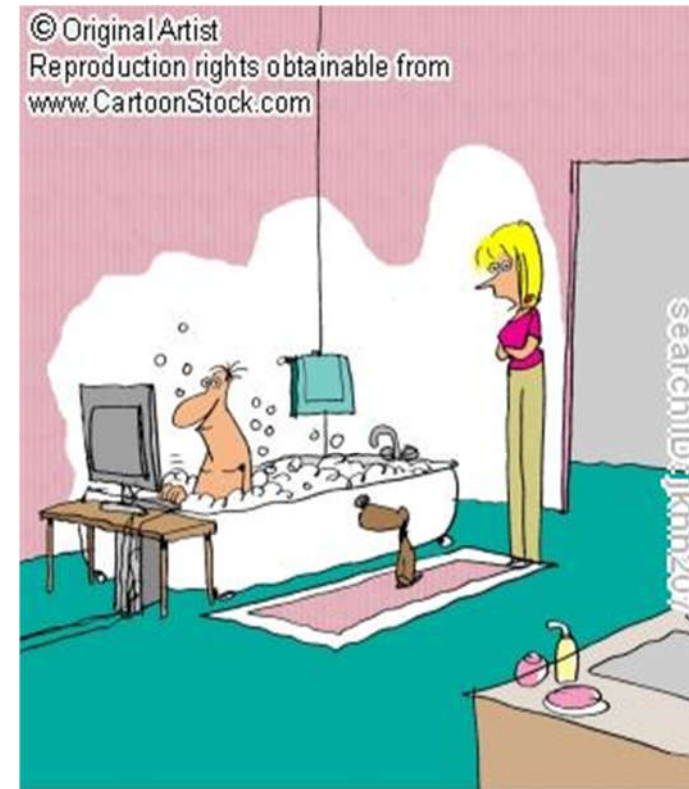
"You're right, it is too nice outside to play inside. Could you help me carry the TV and PlayStation out to the deck?"

NATIONAL GAMING ADDICTION SURVEYS

- Nationally representative samples have reported IGD rates:
- 8.5% in **American** youth aged 8-18 years (Gentile, 2009)
- 1.2% in **German** adolescents aged 13-18 years (Rehbein et al, 2015)
- 5.5% in **Dutch** adolescents aged 13-20 years and 5.4% in Dutch adults (Lemmens et al, 2015)
- 4.3% in **Hungarian** adolescents aged 15-16 years (Kiraly et al, 2014)
- 1.4% in **Norwegian** gamers (Wittek et al, 2016)
- 1.6% in youth from **seven European countries** aged 14-17 years (Muller et al, 2015)
- 2.5% in **Slovenian** adolescents aged 12-16 years (Pontes et al, 2016)
- 5.9% in **South Korean** adolescents aged 13 to 15 years (Yu et al, 2016)
- 4% in **South Korean** adults (Park et al, 2017)
- 1.3% **Dutch** adolescents aged 14 years (Carras et al, 2017)
- 3.6% in **German** adolescents aged 13-19 years (Rosenkranz et al, 2015)

OBSERVATIONS ABOUT ONLINE BEHAVIOUR

- Many day-to-day activities have become more technologized (gambling, gaming, shopping, sex, work, etc.)
- Technology has facilitated easy access and convenience of such activities that can be done anywhere, anytime 24/7
- Technology makes these activities more anonymous and "asocial"
- Technology convergence has led to hybrid behaviours (gambling and gaming, gaming and social networking, etc.)



“Gambling while taking a bath? Have you lost your mind?”

INCREASE IN GAMBLING CONVERGENCE/CROSS FERTILIZATION OF TECHNOLOGIES

- Technology hardware is becoming increasingly convergent and there is increasing multi-media integration (*De Freitas & Griffiths, 2008; Griffiths, 2008; King, Delfabbro & Griffiths, 2010*).
- People of all ages are spending more time interacting with technology (Internet, VGs, interactive television, mobile phones)



- There is also convergent content. Gambling including video game elements
- Video games including gambling elements / eSports
- Gambling via social networking sites
- Television programming with gambling-like elements
- Online penny auctions that have gambling elements



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THE PSYCHOLOGY OF ESPORTS

- As a result of a systematic literature search, eight studies were identified that had investigate three topics:
- (1) The process of becoming an esports player
- (2) The characteristics of esports players such as mental skills and motivations
- (3) The motivations of esports spectators

J Gambl Stud
<https://doi.org/10.1007/s10899-018-9763-1>



REVIEW PAPER

The Psychology of Esports: A Systematic Literature Review

Fanni Bányai^{1,2} · Mark D. Griffiths³ · Orsolya Király¹ · Zsolt Demetrovics¹

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Abstract Recently, the skill involved in playing and mastering video games has led to the professionalization of the activity in the form of ‘esports’ (electronic sports). The aim of the present paper was to review the main topics of psychological interest about esports and then to examine the similarities of esports to professional and problem gambling. As a result of a systematic literature search, eight studies were identified that had investigated three topics: (1) the process of becoming an esports player, (2) the characteristics of esports players such as mental skills and motivations, and (3) the motivations of esports spectators. These findings draw attention to the new research field of professional video game playing and provides some preliminary insight into the psychology of esports players. The paper also examines the similarities between esports players and professional gamblers (and more specifically poker players). It is suggested that future research should focus on esports players’ psychological vulnerability because some studies have begun to investigate the difference between problematic and professional gambling and this might provide insights into whether the playing of esports could also be potentially problematic for some players.



- Becoming a professional esports player appears to be similar to the process of becoming a professional athlete in any given sport.
- The paper also examines the similarities between esports players and professional gamblers (and more specifically poker players).
- Professional video gamers and professional gamblers (i.e., poker players) similarities of the excessive time they can spend on playing which can be either practicing and/or competing.



- Many similarities between gambling and gaming (e.g., similar reinforcement schedules, similar potential for 'near miss' opportunities, similar structural characteristics, similarities in skill perception, and similarities in the effects of excessive play.
- Gaming as a "non-financial form of gambling" and that gamblers (particularly those with problems) use money to 'keep score'



- Studies have also reported that professional poker players can suffer from both problematic and addictive play simultaneously
- Professional gaming has questioned whether professional gamers that spend 10 h or more a day practicing and competing are addicted to gaming or work



"This is the most realistic sports game ever!
It has all the players and coaches and even
a bail bondsman to get them out of jail."

INCREASE IN GAMBLING AND GAMING CONVERGENCE

- There is convergent content. This includes:
- Gambling including video game elements
- Video games including gambling elements
- Gambling via social networking sites
- Television programming with gambling-like elements



LOOT BOXES

- The buying of loot boxes are (in essence) virtual games of chance.
- Players use real money to buy virtual in-game items and can redeem such items by buying keys to open the boxes where they receive a chance selection of further virtual items.

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Articles

Are Mini-games Within RuneScape Gambling or Gaming?

Mark D. Griffiths and Rosie King

SINCE THE BEGINNING OF THE 1990s until the present day, many scholars have observed that there are psychological and behavioral similarities between gambling and video game playing—particularly in relation to slot machines and video games.¹ Arguably, the main difference between gambling and video gaming is that video gamers try to accumulate as many points as possible, whereas gamblers try to accumulate as much money as possible. In fact, almost 25 years ago, Griffiths² suggested that playing video games could be considered as a non-financial form of gambling. One reason for this is that video games share many of the same structural characteristics as recognized forms of gambling—most notably, gaming machines. The term “structural characteristics” refers to those elements of an activity that either induce the person to play or are inducements to continue playing (i.e., characteristics that are responsible for reinforcement, may satisfy a player’s needs, and may actually facilitate playing).

Given these similarities, it has also been observed that over the last decade, gambling and gaming technologies have begun to converge, with video games featuring gambling-like elements and gambling games featuring video gaming-like elements.³ Many of the newer convergent gambling-gaming forms include such activities as online penny auctions⁴ and gambling-type activities on social networking sites (i.e., “social gaming”).⁵ With regard to video gaming including gambling-like elements, King, Delfabbro, Derevensky, and Griffiths⁶ noted that simulated gambling activities and gambling themes have a substantial presence in many modern video games. According to King and colleagues,⁷

gambling content in video games may be categorized according to the following three categories:

- *Standard gambling simulation*, a digitally simulated interactive gambling activity that is structurally identical to the standard format of an established gambling activity, such as blackjack or roulette;
- *Non-standard gambling simulation*, an interactive gambling activity that involves the

¹S.E. Fisher, *Identifying Video Game Addiction in Children and Adolescents*, 19 ADDICTIVE BEHAV. 545–553 (1994); M.D. Griffiths, *Amusement Machine Playing in Childhood and Adolescence: A Comparative Analysis of Video Games and Fruit Machines*, 14 J. ADOLESCENCE 53–73 (1991); M.D. Griffiths, *The Relationship Between Gambling and Videogame Playing: A Response to Johansson and Gotestam*, 96 PSYCHOL. REP. 644–646 (2005); M.D. Griffiths, D.L. King, and P.H. Delfabbro, *Adolescent Gambling-like Experiences: Are They a Cause for Concern?*, 27 EDUC. AND HEALTH 27–30 (2009); M.D. Griffiths, D.L. King, and P.H. Delfabbro, *The Technological Convergence of Gambling and Gaming Practices*, in THE WILEY-BLACKWELL HANDBOOK OF DISORDERED GAMBLING 327–346 (D.C.S. Richard, A. Blaszczynski, and L. Nower eds., 2014); A. Johansson and K.G. Gotestam, *Problems With Computer Games Without Monetary Reward: Similarity to Pathological Gambling*, 95 PSYCHOL. REP. 641–650 (2004); D.L. King, P.H. Delfabbro, and M.D. Griffiths, *Video Game Structural Characteristics: A New Psychological Taxonomy*, 8 INT’L J. MENTAL HEALTH AND ADDICTION 90–106 (2010); D.L. King, P.H. Delfabbro, and M.D. Griffiths, *The Convergence of Gambling and Digital Media: Implications for Gambling in Young People*, 26 J. GAMBLING STUD. 175–187 (2010).

²Griffiths, *Amusement Machine Playing in Childhood and Adolescence*, *supra* note 1.

³Griffiths, King, and Delfabbro, *Adolescent Gambling-like Experiences*, *supra* note 1.

⁴M.D. Griffiths and M. Carran, *Are Online Penny Auctions a Form of Gambling?*, 19 GAMING L. REV. AND ECON. 190–196 (2015).

⁵M.D. Griffiths, *Adolescent Gambling via Social Networking Sites: A Brief Overview*, 31 EDUC. AND HEALTH 84–87 (2013).

⁶D.L. King, P.H. Delfabbro, J. Derevensky, and M.D. Griffiths, *A Review of Australian Classification Practices for Commercial Video Games Featuring Simulated Gambling*, 12 INT’L GAMBLING STUD. 231–242 (2012).

⁷*Id.*

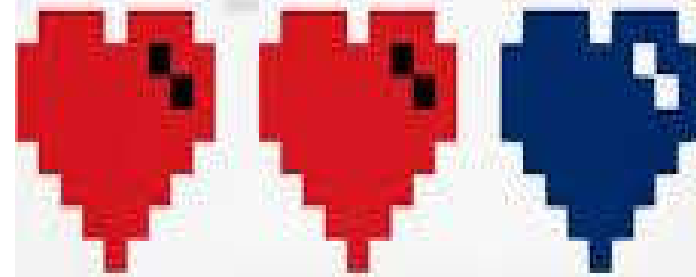
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- Virtual items that can be 'won' can comprise basic customization (i.e., cosmetic) options for a player's in-game character (avatar) to in-game assets that can help players progress more effectively in the game (e.g., gameplay improvement).
- All players hope that they can win 'rare' items and are often encouraged to spend more money to do so because the chances of winning such items are minimal.
- In short, all of these require the paying of real money in exchange for a completely random in-game item.



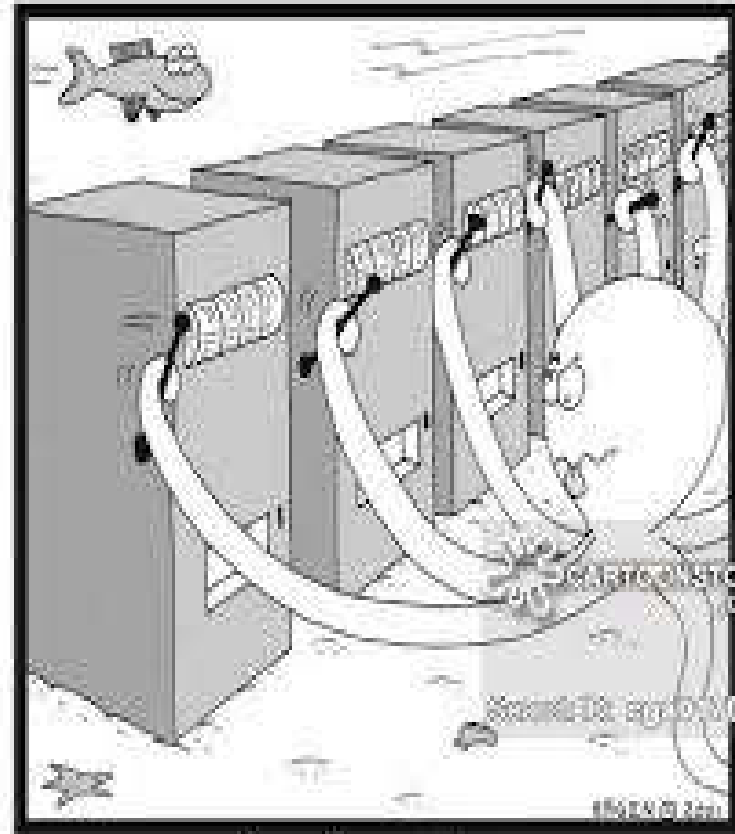
- "Whenever you open a loot box you may get something awesome (or you may get trash). This **randomness** taps into some of the very fundamental ways our brains work when **trying to predict** whether or not a good thing will happen. We are particularly excited by **unexpected pleasures** like an epic skin for our character. This is because **our brains are trying to pay attention** to and trying to figure out such awesome rewards. But unlike in the real world, these **rewards can be completely random** and we can't predict randomness. But the **reward system in your brain doesn't know that**" [Madigan, 2017]

Video games
ruined my life.
Good thing I have
two extra lives.



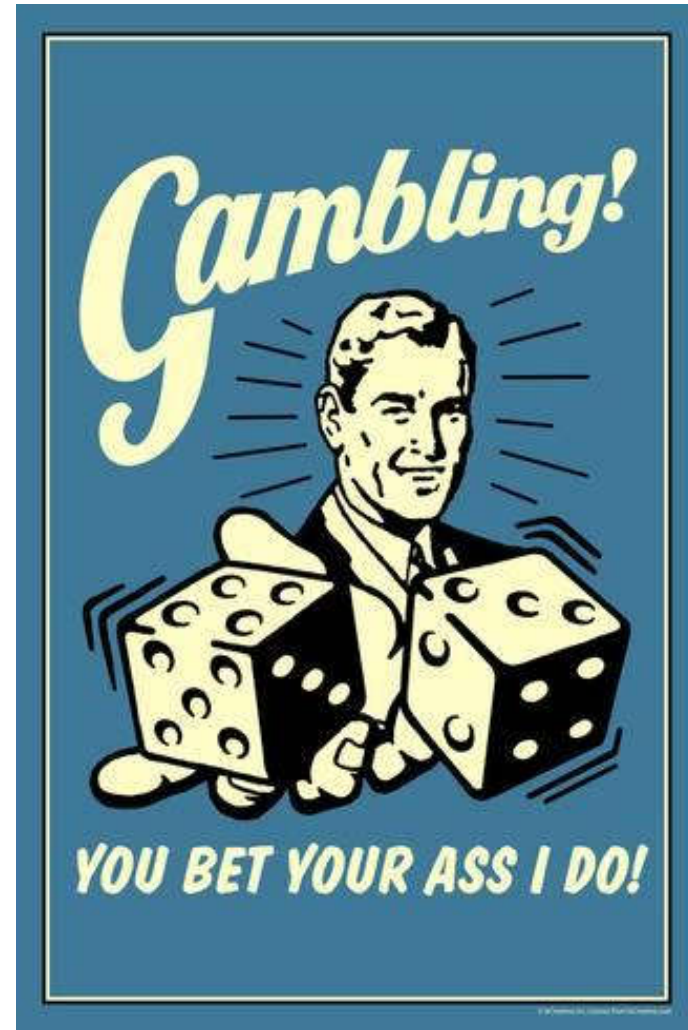
DEFINING 'GAMBLING'

- Many definitions but a number of common elements that occur in the majority of gambling instances:
- (i) exchange is determined by a future event, which at the time of staking money (or something of financial value) the outcome is unknown,
- (ii) the result is determined (at least partly or wholly) by chance



Compulsive gambling

- (iii) losses incurred can be avoided by simply not taking part in the activity in the first place
- Added to this it could be argued that the money or prize to be won should be of greater financial value than the money staked in the first place.
- Based on these elements, the buying of loot boxes (or equivalents) would be classed as a form of gambling, as would other activities such as the *Treasure Hunter* and *Squeal of Fortune* games within the *Runescape* videogame



GAMBLING COMMISSION

Virtual currencies, eSports and social casino gaming – position paper

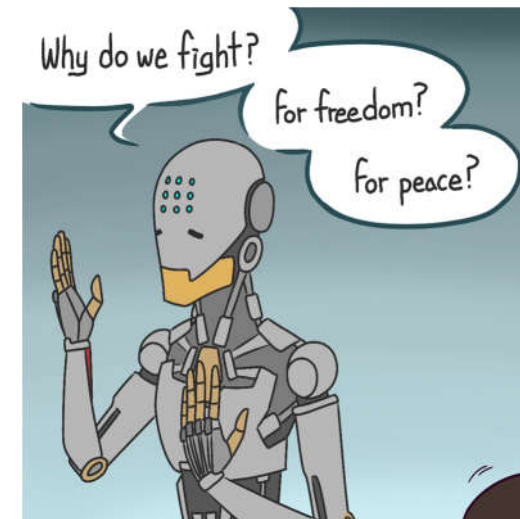
March 2017

1 Executive summary

- 1.1 The Gambling Act 2005 sets out the framework for the provision of gambling in Great Britain. The regulatory framework in the Act is based on the concept that it is unlawful to provide facilities for gambling unless an operating licence is in place, or a specific exemption applies. The Gambling Commission is the national regulator for gambling in Great Britain.
- 1.2 Gambling is defined as betting, gaming or participating in a lottery. Those definitions distinguish the activities which need to be licensed and other activities which, although they combine expenditure and the influence of chance, do not fall within our regulatory remit.
- 1.3 This position paper summarises the conclusions from our engagement exercise undertaken in late 2016. That exercise included the publication of a [discussion paper](#) to promote debate on a number of issues which have emerged from the development of interactive entertainment products such as video games.
- 1.4 The interpretation of legislation is ultimately a matter for the courts, and in developing our response we have noted the lack of contemporary and directly applicable case law in some of these areas. This paper therefore seeks to balance an interpretation of the legal framework governing remote gambling in Great Britain with an assessment of where interactive entertainment **has crossed**, or is **in danger** of crossing boundaries into licensable gambling activities. We set out the following conclusions:
- Applying the existing regulatory framework allows for proportionate control of the risks associated with betting on eSports.
 - Maintaining public confidence in the integrity of eSports as an entertainment and betting event relies upon those seeking to benefit commercially from it, applying the best practice available from other sports.
 - Where in-game items or currencies which can be won, traded or sold can be converted into cash or exchanged for items of value, under gambling legislation they are considered money or money's worth.
 - Whether participation in a video game for a prize requires a gambling licence will be determined by reference to a number of factors including how the outcome is determined and how the facilities for participation are arranged.
 - We will focus on those activities which blur the lines between video/social games and gambling and present a risk to the licensing objectives. In particular, we will prioritise those made available to children, those involving expenditure and those presented as gambling or associated with traditional gambling.
- 1.5 We will keep this policy framework under review and continue to monitor developments in the market.

- *"The payment of a stake for the opportunity to win a prize (in-game items) determined at random bears a **close resemblance to the playing of a gaming machine.** Where there are readily accessible opportunities to cash in or exchange those **awarded in-game items for money or money's worth** those elements of the game are likely to be considered licensable gambling activities... Where prizes are successfully restricted for use **solely within the game**, such in-game features would not be licensable gambling, notwithstanding the **elements of expenditure and chance**" [UK Gambling Commission, 2017]*

- Consequently, the UK Gambling Commission does not consider loot boxes as a form of gambling because (they claim) the in-game items have no real-life value outside of the game.
- However, this is not the case because there are many websites that allow players to trade in-game items and/or virtual currency for real money.
- UKGC appear to acknowledge this point and claim that the buying of in-game loot boxes (and their equivalents) are not gambling but if third party sites become involved (by allowing the buying and selling of in-game items), the activity does become a form of gambling.



- *"Loot crates are currently not considered gambling: you always get something when you purchase them, even if it's not what you hoped for. For that reason, a loot crate system does not trigger the gambling content descriptor... Therefore, the games that get a PEGI gambling content descriptor either contain content that simulates what is considered gambling or they contain actual gambling with cash payout" [Dirk Bosmans, PEGI]*



- This appears hard line given that PEGI's descriptor of gambling content is used whenever any videogame "teaches or encourages" gambling.
- Such a descriptor would arguably cover gambling-like games or activities and the buying of loot boxes is 'gambling-like'
- A number of countries (mainly in South East Asia – China, Japan) view the buying of loot boxes as a form of gambling and have incorporated such activities into their gambling regulation.



- Most countries have either not considered regulating the buying of loot boxes at all
- UK have ruled buying loot boxes does not currently meet their regulatory definition of gambling.
- Little published in academic journals on loot boxes
- Number of trade press articles claim that the buying of loot boxes can be problematic and/or addictive because they are designed using highly similar reward schedules to those used in the design of slot machines.

13/12/2018

[2018] • GLR • GRIFFITHS • LOOT BOXES IN VIDEOGAMES

IS THE BUYING OF LOOT BOXES IN VIDEO GAMES A FORM OF GAMBLING OR GAMING?

MARK D. GRIFFITHS

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“The novelty of [Las Vegas] can hide its true intentions. [Its] seediness might be hard to detect on the surface of many video games, but replace the roulette table with a Candy Crush wheel and the similarities become clearer. Think about how many times you’ve paid real-life money in a game for the chance to win an item you really wanted. Was it a nice Overwatch skin? Perhaps it was a coveted Hearthstone card. How many times did you not get the item you wanted, then immediately bought in for another chance to hit the big time?”¹

The buying of loot boxes takes place within online videogames and are (in essence) virtual games of chance. Players use real money to buy virtual in-game items and can redeem such items by buying keys to open the boxes where they receive a chance selection of further virtual items. Other types of equivalent in-game virtual assets that can be bought include crates, cases, chests, bundles, and card packs. The virtual items that can be “won” can comprise basic

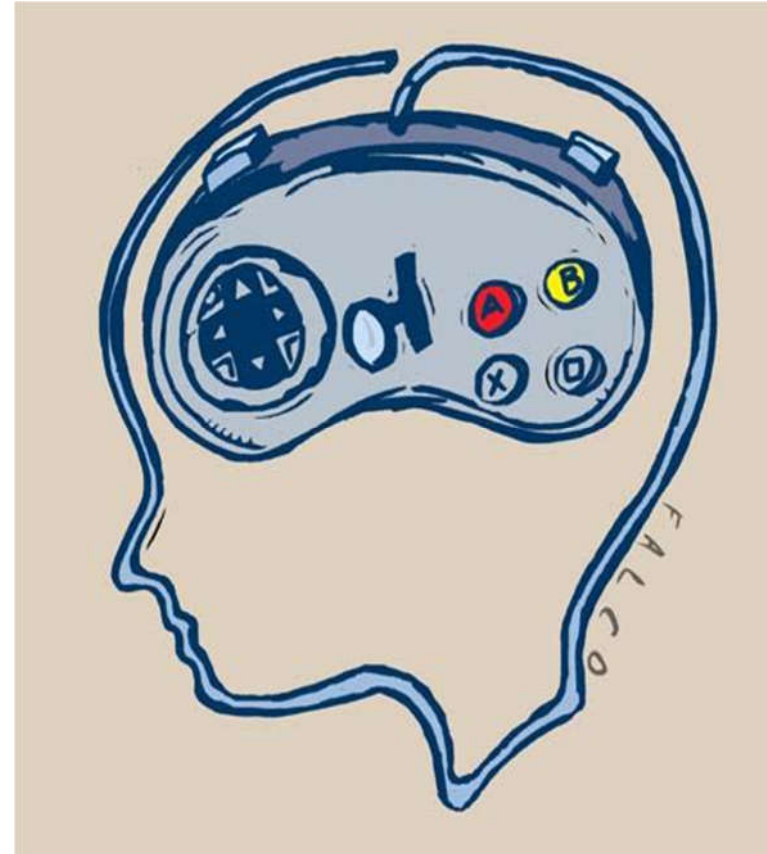
customization (i.e., cosmetic) options for a player’s in-game character (avatar) or in-game assets that can help players progress more effectively in the game (e.g., gameplay improvement items such as weapons, armor).² All players hope that they can win “rare” items and are often encouraged to spend more money to do so because the chances of winning such items are minimal. Many popular videogames now feature loot boxes (or equivalents) including *Overwatch*, *Middle-earth: Shadow of War*, *Star Wars Battlefront 2*, *FIFA Ultimate Team*, *Mass Effect: Andromeda*, *Fortress 2*, *Injustice 2*, *Lawbreakers*, *Forza Motorsport 7*, and *For Honor*.³ In short, all of these require the paying of real money in exchange for a completely random in-game item. In an interview with *Eurogamer*, psychologist Jamie Madigan said:

“Whenever you open [a loot box], you may get something awesome (or you may get trash). This randomness taps into some of the very fundamental ways our brains work when trying to predict whether or not a good thing will happen. We are particularly excited by unexpected pleasures like a patch of wild berries or an epic skin for our character. This is because our brains are trying to pay attention to and trying to figure out such awesome rewards. But unlike in the real world, these rewards can be completely random (or close enough not to matter) and we can’t predict randomness. But the reward system in your brain doesn’t know that. Buying [loot boxes] puts them into the same category of packs of Pokémon cards or baseball cards. Unlike gambling in a casino, you’re going to get something out of that pack. Maybe just not the thing you wanted.”⁴

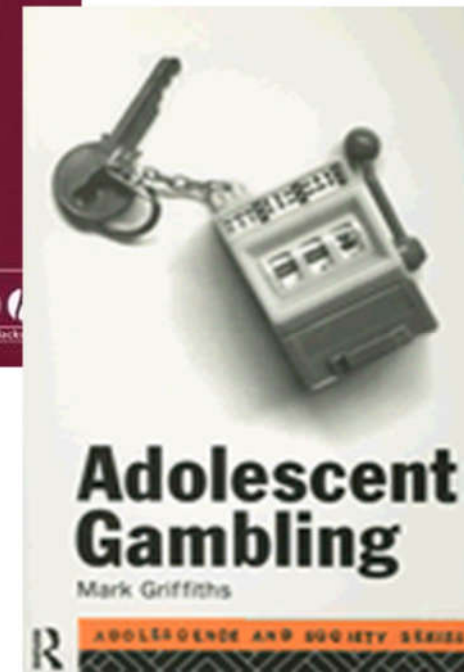
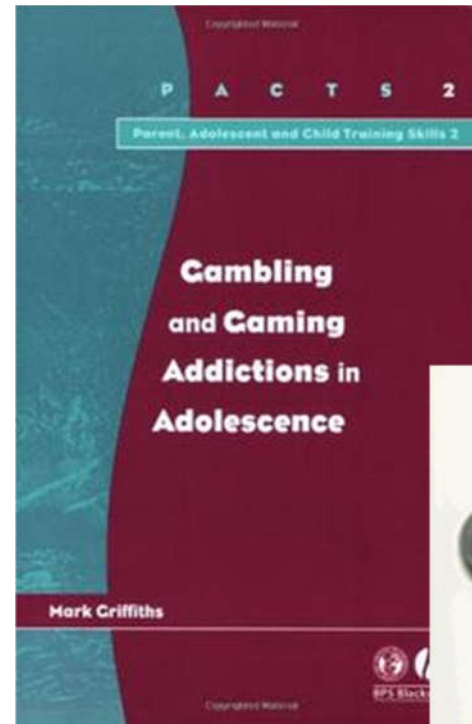
Although there are many definitions of gambling in many disciplines, there are a number of common elements that occur in the majority of gambling instances that distinguish “true” gambling from mere risk taking.⁵ These include: (1) the exchange is

CONCLUSIONS

- Addictions to gambling and gaming are very similar
- Gambling has changed the way we are beginning to view addictive behaviour
- Technology has the potential to facilitate problematic behaviour
- Technological addictions appear to exist
- Reputable bodies are now accepting the existence of gaming disorder



- A small minority of adolescents have problems with gambling and/or gaming
- The line between gambling and gaming is blurring.
- There are many behavioural and psychological similarities between gambling and gaming
- Loot boxes are – at the very least – ‘gambling-like’



THANK YOU FOR LISTENING!

