The public health dimensions of digital game monetization

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EXCESSIVE GAMBLING:
PROMOTING AND PROTECTING HEALTH IN A DIGITALISED WORLD

COI Acknowledgements & Disclosures

- No industry funding or connections to declare

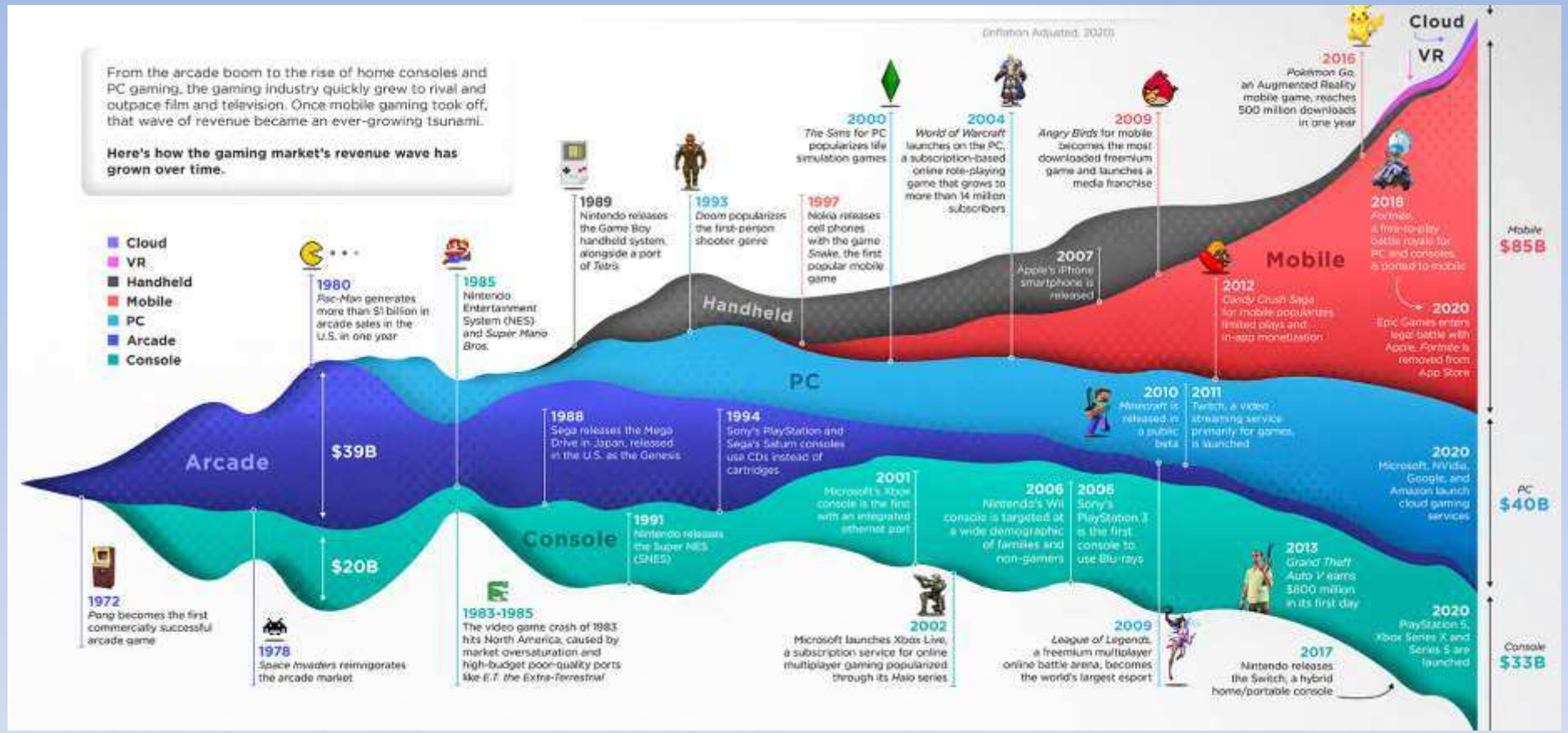
- My research has been supported by Australian Government fellowships including Discovery Early Career Researcher Award (DECRA) and NHRMC Investigator Grant (L1).

- Member of WHO Expert Group on GD


Are some video games
(e.g., those with
monetised elements)
more harmful/problematic
than others?

i. The scope of relevant activities

Growth and diversity of gaming



An **interactive** activity that involves **rules, goals, and challenge**, and has **winning and losing** outcomes…

SOURCE: https://www.visualcapitalist.com/50-years-gaming-history-revenue-stream/

BUT some games defy conventions and involve minimal interactivity or challenge, have **no definitive endpoint**, and focus on **storytelling, role-playing, and immersion**.

Changing business models in gaming

- **Games 'as a product'** to **Games 'as a service'**
  - "RPG-ification"
  - Constant updates
  - Never-ending
  - Complexity
  - Randomness
  - Social features
  - Monetisation ($$$)
  - Require consistent play
  - Penalty for not playing

Loot boxes: Definition

In July 2020, the European Parliament broadly defined loot boxes as:

"*Features in video games which are usually accessed through gameplay, or which may be optionally paid for with real-world money. They are 'mystery boxes' which contain randomised items, so players do not know what they will get before opening.*

- cosmetic items for game customisation (e.g. skins and new looks for the player's avatar)

- items affecting gameplay (e.g. tools, weapons, levels, maps, in-game currency)

Loot boxes are usually characterized by:

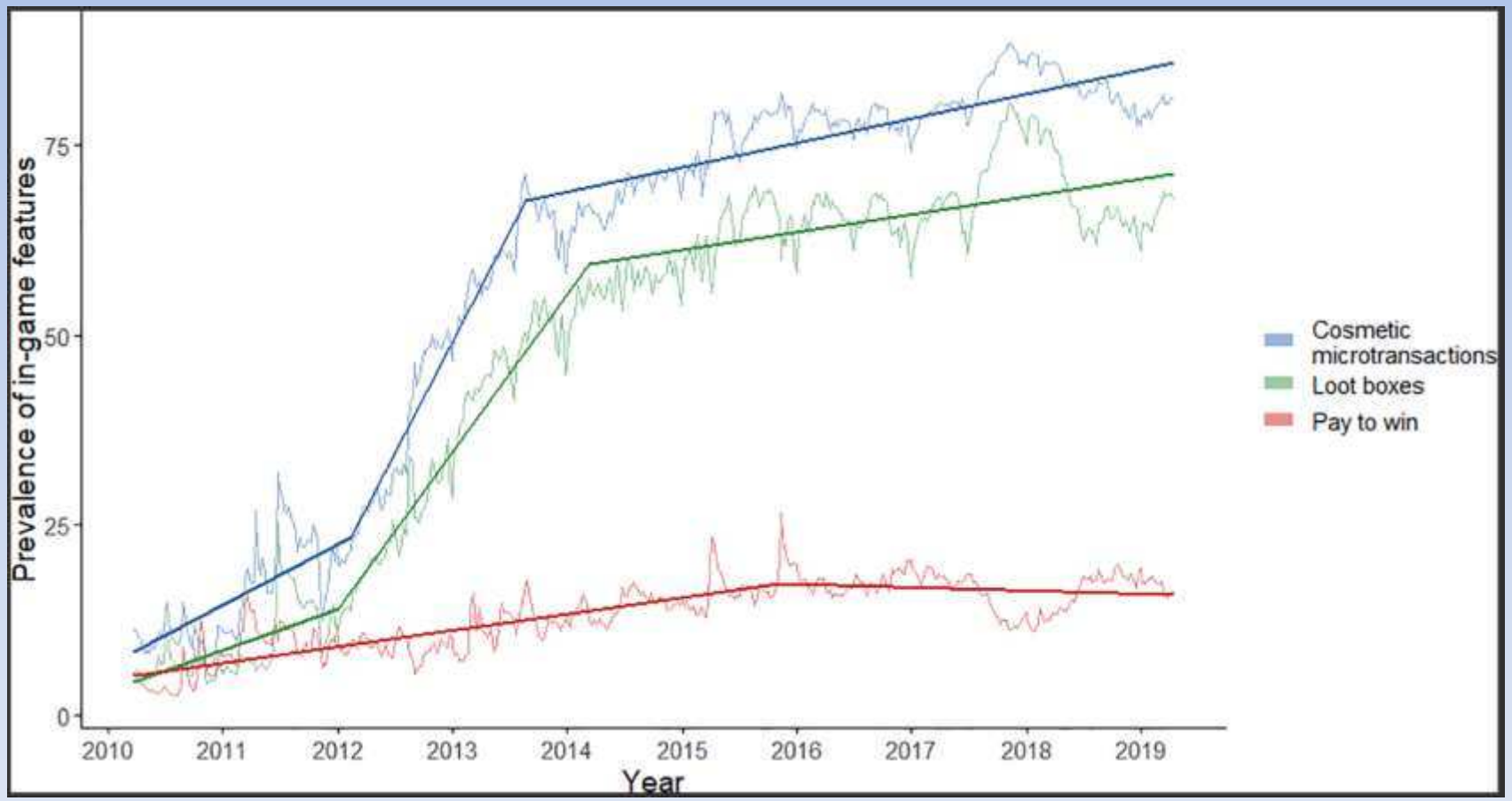
- **Access via payment** (real or virtual currency) or by playing a video game;
- The **probability** of winning is not always known;
- The items obtained from loot boxes may be **converted into real or virtual currency** or into items with value

Share similarities with gambling and may be a gateway OR contribute to problem play but not all loot boxes carry risk

The changing face of desktop video game monetisation: An exploration of exposure to loot boxes, pay to win, and cosmetic microtransactions in the most-played *Steam* games of 2010-2019

David Zendle, Rachel Meyer, Nick Ballou

PLOS One

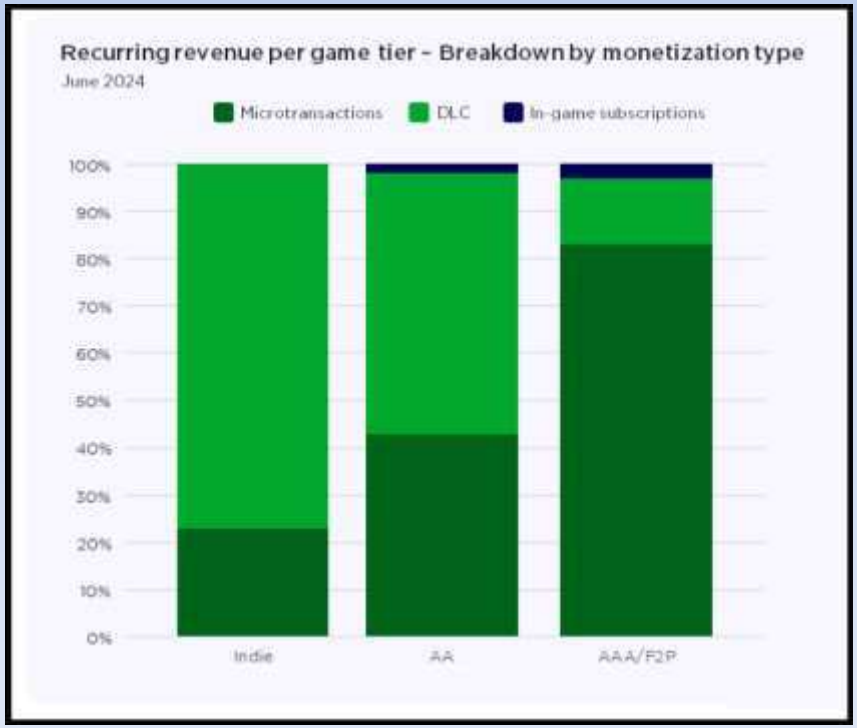


Zendle et al. (2020)

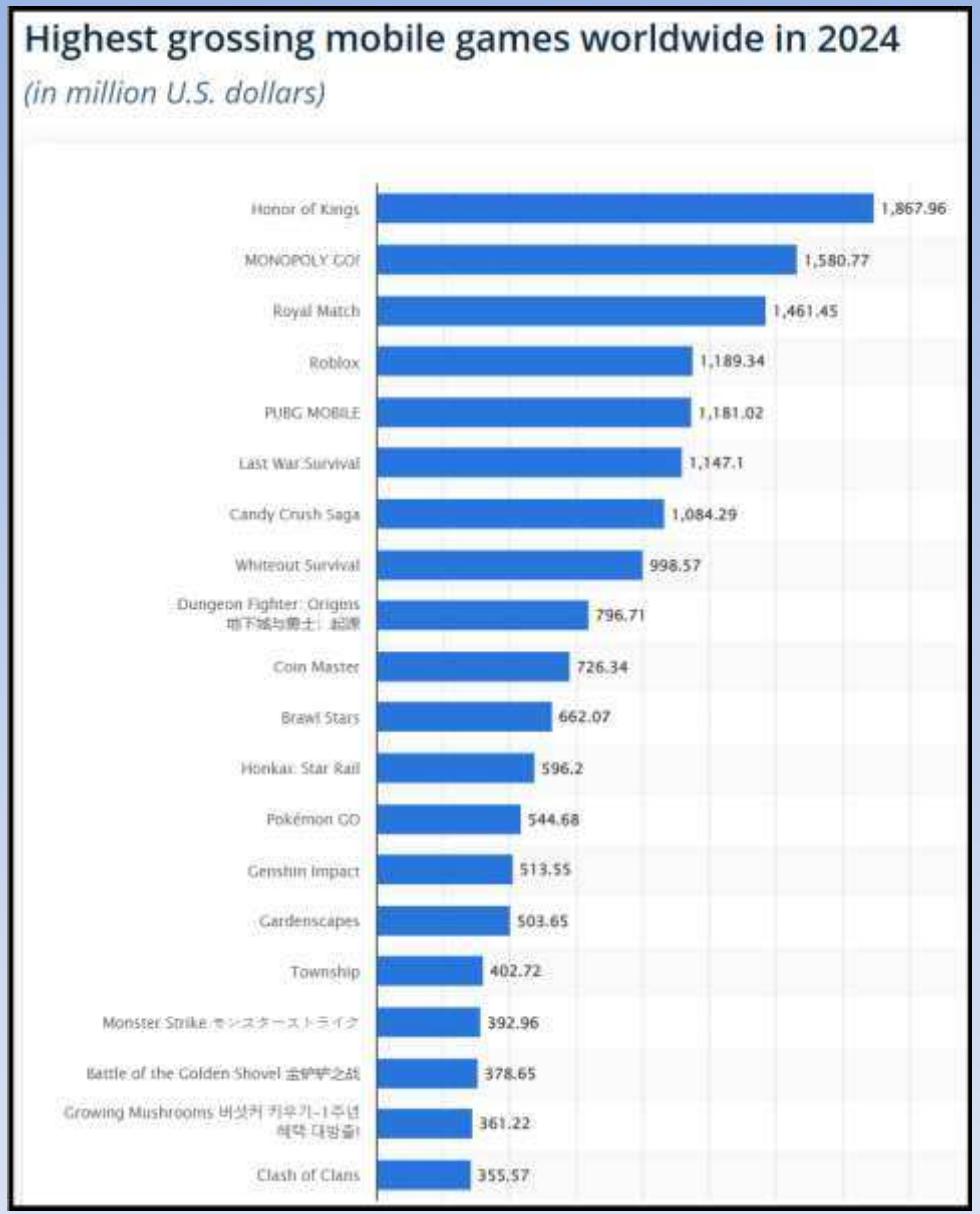
Case example: Spending in June 2024 (Newzoo analysis)

- Geography: France, Germany, Italy, Spain, the UK, and the US
- Revenue data: PC, PS, Xbox, and Switch

- Microtransactions accounted for 83% of AAA and F2P games in-game recurring revenue



SOURCE:
https://newzoo.com/resources/blog/how-in-game-spending-behaviors-differ-from-indie-to-aa-and-aaa-games



SOURCE: https://www.statista.com/statistics/1179913/highest-grossing-mobile-games/

Honor of Kings

Monopoly Go

Teen who spent $10k+ on microtransactions warns devs of the risk they pose

Nearly one in five Japanese gamers overspend on in-game purchases, straining basic living budgets

Runescape Player Spends Over $62,000 on Microtransactions

‘Parents’ own fault’: teen girl in China splurges US$64,000 on phone games in 4 months, depleting family savings

Kiwi gamer says he’s spent $16,000 on loot boxes in video games

Diablo Immortal player spends $100k on game, now can't find anyone suitable to matchmake with

Dad Gets Money Back After Daughter Spends $20,000 on Genshin Impact Microtransactions

Loot box consumption among adolescents

Addictive Behaviors

journal homepage

Loot box engagement and problem gambling among adolescent gamers: Findings from a national survey

Søren Kristiansen, Majbritt Christine Severin

HIGHLIGHTS

ARTICLE INFO

ABSTRACT

1. Introduction

Majority (93% of) male teens aged 12-16 yo had engaged in loot box activities vs. 15% of females.

SOURCE:
sciencedirect.com/science/article/pii/S0306460319310007

PeerJ

Loot box consumption by adolescents pre- and post- pandemic lockdown

Whitney DeCamp and Kevin Daly

ABSTRACT

Loot boxes are virtual items that can be redeemed to receive randomly selected other virtual items, and have been criticized for being similar to gambling. The presence of loot boxes in video games has dramatically increased since 2010, with little evidence available for the current prevalence rate of loot box purchasing in the general population, particularly during and following the COVID-19 pandemic lockdowns. This study uses data from representative samples of American youth to estimate prevalence rates for video game play and loot box consumption before the pandemic (2019) and after the pandemic lockdowns (2022) to examine whether the pandemic has affected loot box usage in the general population and among gamers. The results suggest that youth loot box consumption has increased, rising from 24.9% in 2019 to 31.6% in 2022 among 8th grade (age 13-14) youth. The increase over this time period was larger for girls, though boys are still more likely to purchase loot boxes overall.

Subjects Pediatrics, Psychiatry and Psychology, Human-Computer Interaction
Keywords Loot boxes, Video games, Adolescents, Gaming, Gambling

INTRODUCTION

Pandemic: Youth loot box consumption increased from 24.9% in 2019 (N=2126) to 31.6% in 2022 (N=3544).

SOURCE:
https://pmc.ncbi.nlm.nih.gov/articles/PMC10158757/

“Predatory” monetisation

Predatory monetisation schemes typically involve in-game purchasing systems that disguise or withhold the true long-term cost of the activity until players are already financially and psychologically committed. Such schemes are designed to encourage repeated player spending using tactics or elements that may involve, either singularly or in combination:

- limited disclosure of the product;
- false or misleading randomness of outcomes
- intrusive and unavoidable solicitations;
- systems that manipulate reward outcomes to reinforce purchasing over skilful or strategic play.

Such strategies may exploit inequalities in information between purchaser and provider such as when the industry uses knowledge of the player’s game-related preferences, available funds, and/or playing and spending habits, to present offers predetermined to maximize the likelihood of eliciting player spending.

SOURCE: sciencedirect.com/science/article/pii/S0747563219302602

Mystery boxes that adjust due to past spending behavior

US 20150335995 A1

ZUSAMMENFASSUNG

A system and method for varying the distribution probabilities of individual potential awards associated with probability item bundles depending on a purchase history of a user activating a probability item bundle.

Impact:

Potential to target and exploit big spenders

Game adjusts the likelihood of rewards based on past spending and how much credit the player has stored

Veröffentlichungsnummer	US20150335995 A1
Publikationstyp	Anmeldung
Anmeldenummer	US 14/282,788
Veröffentlichungsdatum	26. Nov. 2015
Eingetragen	20. Mai 2014
Prioritätsdatum ⓘ	20. Mai 2014
Auch veröffentlicht unter	US9744446
Erfinder	Sam McLellan, Luc Pieron, Dylan SWIFT, Stephanie Schultz
Ursprünglich Bevollmächtigter	Kabam, Inc.
Zitat exportieren	BiBTeX, EndNote, RefMan

Patentzitate (1), Referenziert von (22), Klassifizierungen (8), Juristische Ereignisse (3)

Externe Links: USPTO, USPTO-Zuordnung, Espacenet

Predatory Monetisation? A Categorisation of Unfair, Misleading and Aggressive Monetisation Techniques in Digital Games from the Player Perspective

Elena Petrovskaya[1] · David Zendle[1]

2022 survey of N=1104 gamers

35 techniques

Game dynamics designed to drive spending	Product not meeting expectations	Monetisation of basic quality of life	In-game currency	Pay to win	Predatory advertising	General presence of microtransactions	Other
Pay or grind	Sale of useless products or duplicates	'Core' aspects of game monetised	General existence of in-game currency	Advantage over other players	Unrealistic presentation of product	Microtransactions as a business model	Teasers
Pay or wait	Product does not incorporate everything player believes it to	Parts of game locked behind paywalls	In-game currency disguises actual price	Subscription features	Lack of information about conditions of transaction	Payment mechanisms in paid products	Limited time offers
The nerf cycle	Early access content - end up with something different	Limited inventory space without paying	Multiple currency types cause confusion	Boosts	Aggressive advertising	Overpricing	Battle passes
Game builds dependency on microtransactions	Buying something not wanted to get desired product	Game unplayable without spending money	Fixed purchase rates are unfair	Pay to play competitively			Dark interface design patterns
Unfair matchups	Separate re-release of product as free, cheaper, or easier to get						
Free game experience underpowered	Monetisation strategy changed partway through game life cycle						
Payment needed to avoid negative consequences							

Dark Interface Design Patterns

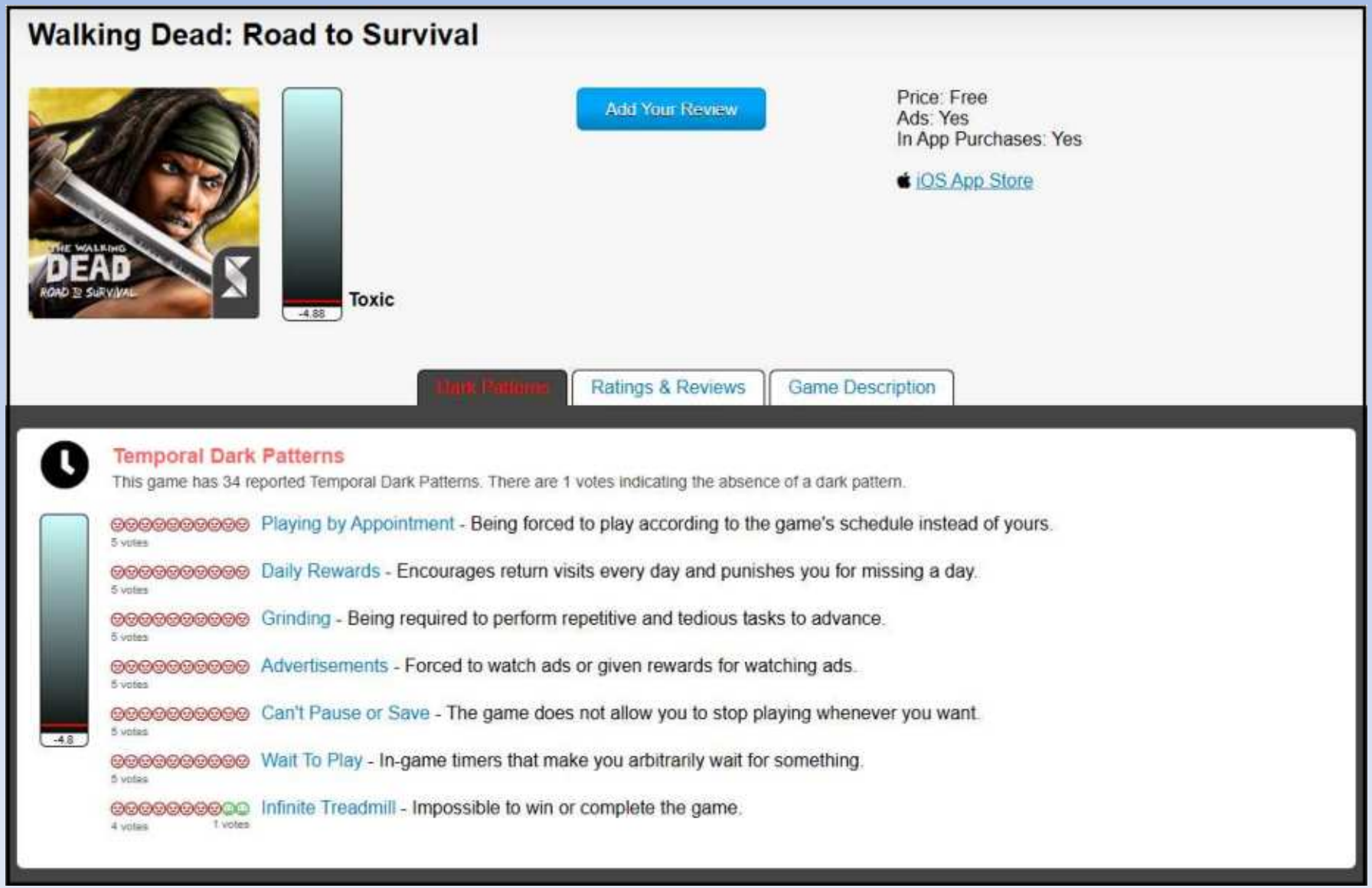
Makes it too easy to click - like putting the button to buy under a screen that you have to push ok to advance. I have my buy locks on because of this but if someone has them auto approved they might not even realize they made a purchase. (P444).

“Dark patterns” in gaming

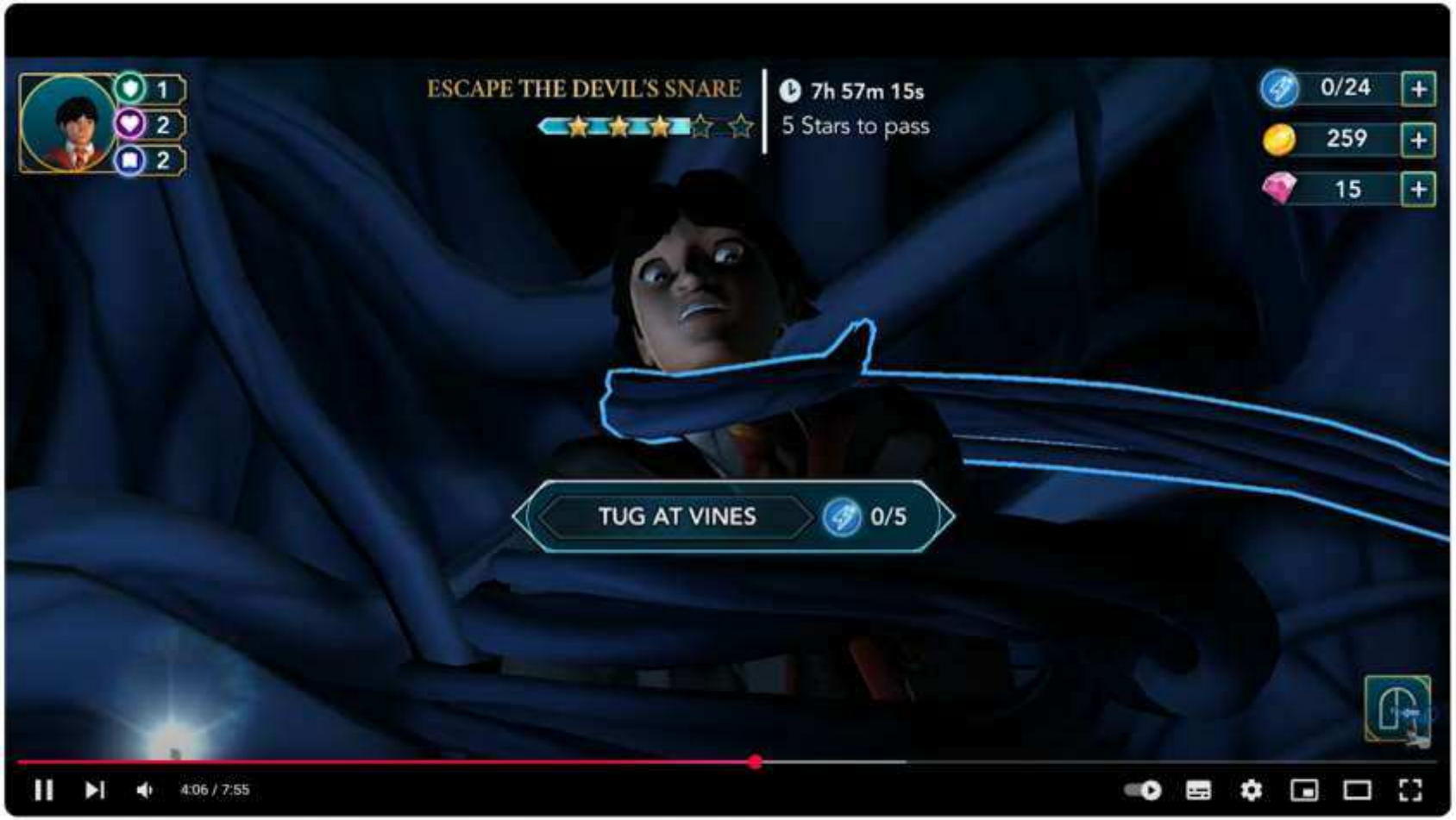
- Definition: Manipulative design techniques used to encourage players to engage with the product, often at the expense of well-being
  - *Temporal* (e.g., daily rewards)
  - *Social* (e.g., social pyramid scheme)
  - *Monetary* (e.g., pay to win)
  - *Psychological* (e.g., illusion of control)

https://www.darkpattern.games/

Example: User feedback system



Example: Harry Potter Hogwarts Mystery



Harry Potter Hogwarts Mystery Strangles Your Child Avatar Until You Pay Money or Wait

SOURCE:
https://www.youtube.com/watch?v=umUD1rwUaH4

Harry Potter: Hogwarts Mystery surpasses the $500 million revenue milestone

ii. Research evidence

Gaming disorder in the ICD-11

ICD-11 for Mortality and Morbidity Statistics 2025-01

gaming disorder

6C51 Gaming disorder

Foundation URI: http://id.who.int/icd/entity/1448597234

Code: 6C51

Description

Gaming disorder is characterised by a pattern of persistent or recurrent gaming behaviour ('digital gaming' or 'video-gaming'), which may be online (i.e., over the internet) or offline, manifested by: 1. impaired control over gaming (e.g., onset, frequency, intensity, duration, termination, context); 2. increasing priority given to gaming to the extent that gaming takes precedence over other life interests and daily activities; and 3. continuation or escalation of gaming despite the occurrence of negative consequences. The pattern of gaming behaviour may be continuous or episodic and recurrent. The pattern of gaming behaviour results in marked distress or significant impairment in personal, family, social, educational, occupational, or other important areas of functioning. The gaming behaviour and other features are normally evident over a period of at least 12 months in order for a diagnosis to be assigned, although the required duration may be shortened if all diagnostic requirements are met and symptoms are severe.

Exclusions

Hazardous gaming (QE22)
Bipolar type I disorder (6A60)
Bipolar type II disorder (6A61)

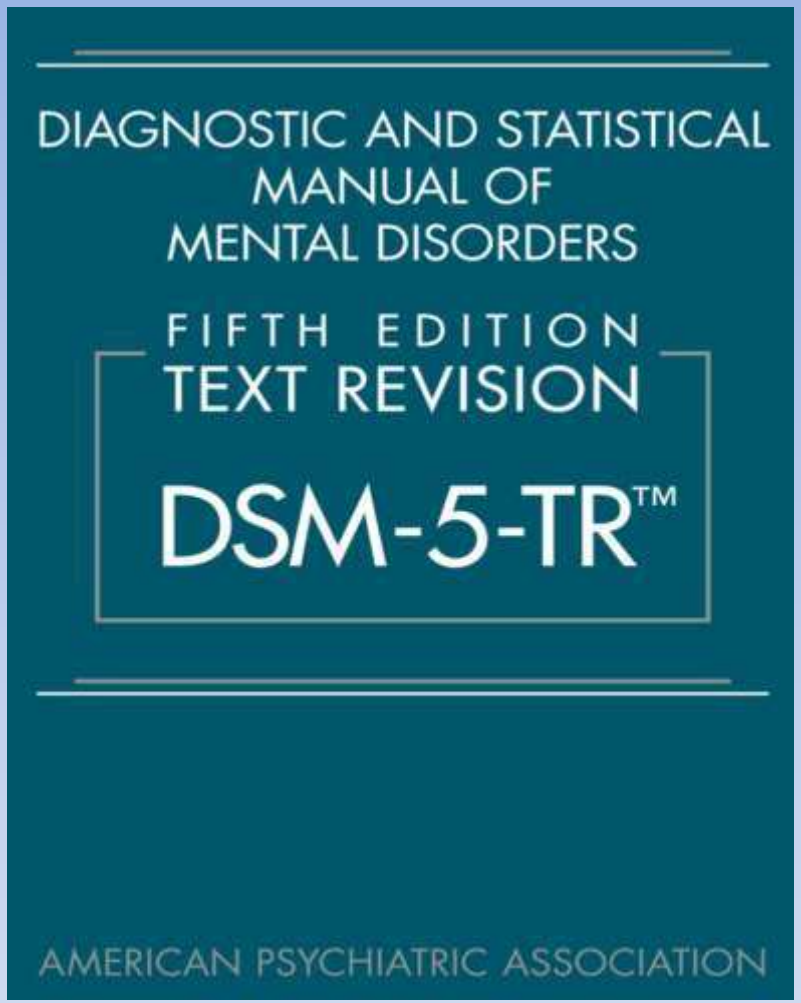
Exclusions from above levels Show all [4]

Diagnostic Requirements

Essential (Required) Features:

- A persistent pattern of gaming behaviour ('digital gaming' or 'video-gaming'), which may be predominantly online (i.e., over the internet or similar electronic networks) or offline, manifested by all of the following:
- Impaired control over gaming behaviour (e.g., onset, frequency, intensity, duration, termination, context);
- Increasing priority given to gaming behaviour to the extent that gaming takes precedence over other life interests and daily activities; and
- Continuation or escalation of gaming behaviour despite negative consequences (e.g., family conflict due to gaming behaviour, poor scholastic performance, negative impact on health).
- The pattern of gaming behaviour may be continuous or episodic and recurrent but is manifested over an extended period of time (e.g., 12 months).
- The gaming behaviour is not better accounted for by another mental disorder (e.g., Manic Episode) and is not due to the effects of a substance or medication.
- The pattern of gaming behaviour results in significant distress or impairment in personal, family, social, educational, occupational, or other important areas of functioning.

Estimated rates of about 1-2% of general population



"loot boxes or loot crates containing prizes determined by chance overlap with gambling behavior and may influence the course of gambling disorder"

Proposed Criteria

Persistent and recurrent use of the Internet to engage in games, often with other players, leading to clinically significant impairment or distress as indicated by five (or more) of the following in a 12-month period:

1. Preoccupation with Internet games. (The individual thinks about previous gaming activity or anticipates playing the next game; Internet gaming becomes the dominant activity in daily life.)

   Note: This disorder is distinct from Internet gambling, which is included under gambling disorder.
2. Withdrawal symptoms when Internet gaming is taken away. (These symptoms are typically described as irritability, anxiety, or sadness, but there are no physical signs of pharmacological withdrawal.)
3. Tolerance—the need to spend increasing amounts of time engaged in Internet games.
4. Unsuccessful attempts to control the participation in Internet games.
5. Loss of interests in previous hobbies and entertainment as a result of, and with the exception of, Internet games.

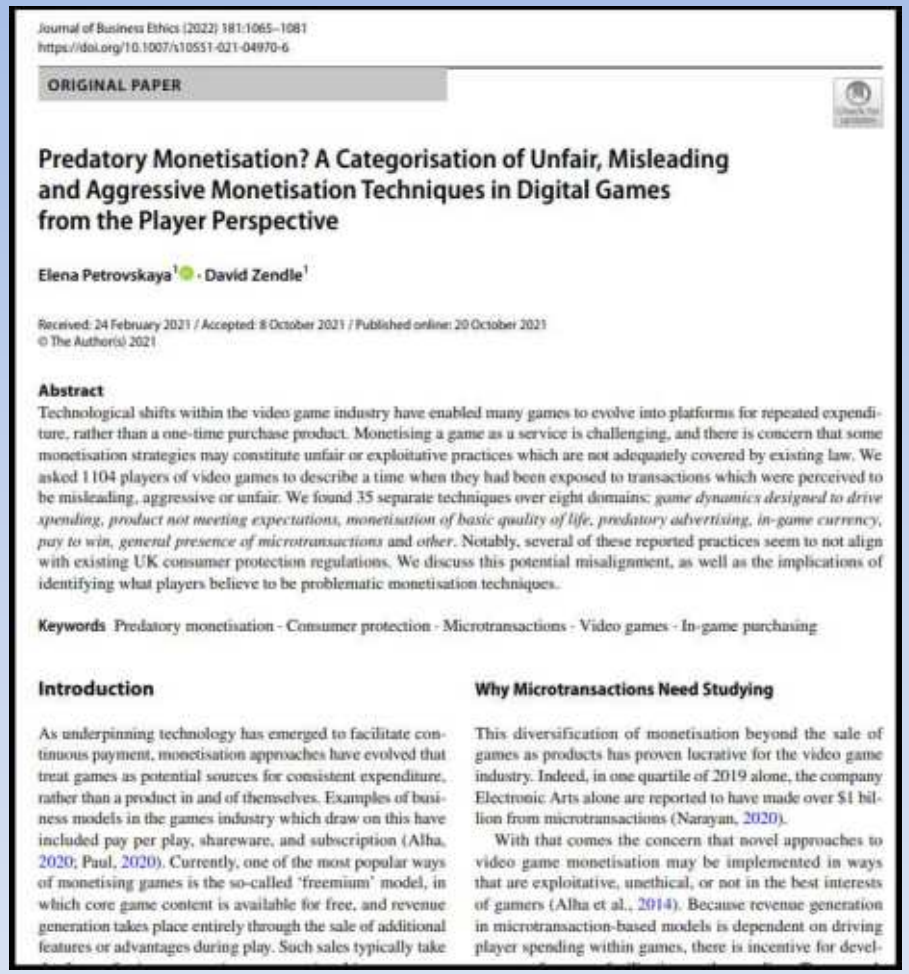
6. Continued excessive use of Internet games despite knowledge of psychosocial problems.
7. Has deceived family members, therapists, or others regarding the amount of Internet gaming.
8. Use of Internet games to escape or relieve a negative mood (e.g., feelings of helplessness, guilt, anxiety).
9. Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of participation in Internet games.

Note: Only nongambling Internet games are included in this disorder. Use of the Internet for required activities in a business or profession is not included; nor is the disorder intended to include other recreational or social Internet use. Similarly, sexual Internet sites are excluded.

Specify current severity:

Internet gaming disorder can be mild, moderate, or severe depending on the degree of disruption of normal activities. Individuals with less severe Internet gaming disorder may exhibit fewer symptoms and less disruption of their lives. Those with severe Internet gaming disorder will have more hours spent on the computer and more severe loss of relationships or career or school opportunities.

Research: Player MTX experiences



Journal of Business Ethics (2022) 181:1065–1081
https://doi.org/10.1007/s10551-021-04970-6

ORIGINAL PAPER

Predatory Monetisation? A Categorisation of Unfair, Misleading and Aggressive Monetisation Techniques in Digital Games from the Player Perspective

Elena Petrovskaya[1] · David Zendle[1]

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Abstract
Technological shifts within the video game industry have enabled many games to evolve into platforms for repeated expenditure, rather than a one-time purchase product. Monetising a game as a service is challenging, and there is concern that some monetisation strategies may constitute unfair or exploitative practices which are not adequately covered by existing law. We asked 1104 players of video games to describe a time when they had been exposed to transactions which were perceived to be misleading, aggressive or unfair. We found 35 separate techniques over eight domains: *game dynamics designed to drive spending, product not meeting expectations, monetisation of basic quality of life, predatory advertising, in-game currency, pay to win, general presence of microtransactions* and *other*. Notably, several of these reported practices seem to not align with existing UK consumer protection regulations. We discuss this potential misalignment, as well as the implications of identifying what players believe to be problematic monetisation techniques.

Keywords Predatory monetisation · Consumer protection · Microtransactions · Video games · In-game purchasing

Introduction

As underpinning technology has emerged to facilitate continuous payment, monetisation approaches have evolved that treat games as potential sources for consistent expenditure, rather than a product in and of themselves. Examples of business models in the games industry which draw on this have included pay per play, shareware, and subscription (Alha, 2020; Paul, 2020). Currently, one of the most popular ways of monetising games is the so-called 'freemium' model, in which core game content is available for free, and revenue generation takes place entirely through the sale of additional features or advantages during play. Such sales typically take

Why Microtransactions Need Studying

This diversification of monetisation beyond the sale of games as products has proven lucrative for the video game industry. Indeed, in one quartile of 2019 alone, the company Electronic Arts alone are reported to have made over $1 billion from microtransactions (Narayan, 2020).

With that comes the concern that novel approaches to video game monetisation may be implemented in ways that are exploitative, unethical, or not in the best interests of gamers (Alha et al., 2014). Because revenue generation in microtransaction-based models is dependent on driving player spending within games, there is incentive for devel-

SOURCE: Petrovskaya and Zendle (2022)

- Survey of N=1104 players
- Exposure to transactions perceived as **misleading, aggressive or unfair**

Key implications

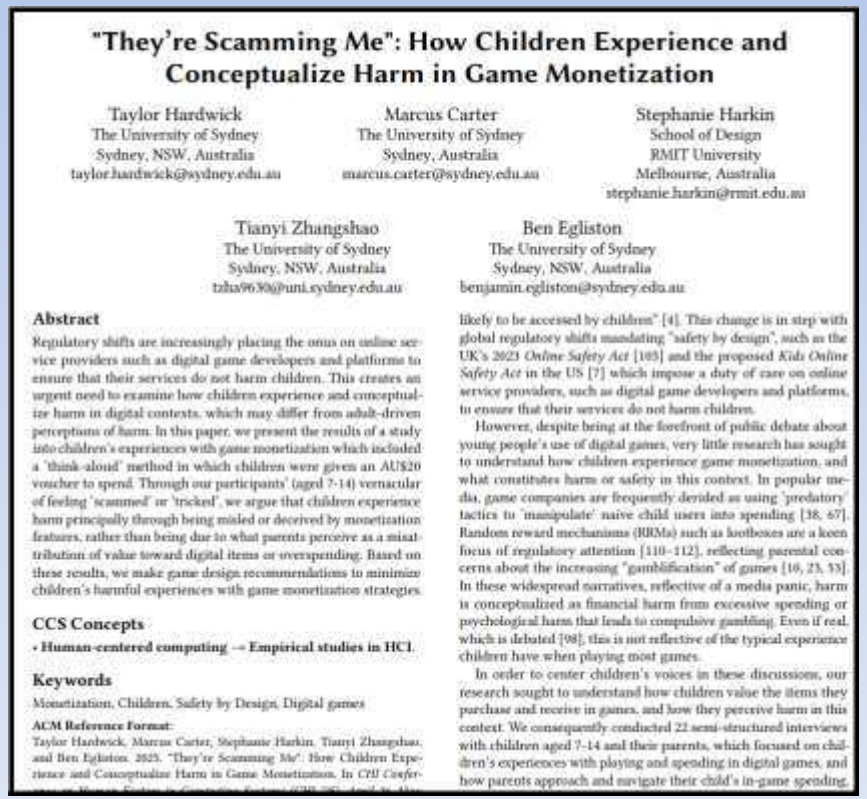
- **Aggressive** features "impair choice" or unduly influence
- **Psychological manipulation** viewed as "unfair"
- Recommend gameplay should be fundamentally the same with or without payment

Study: Children's Experiences of "Harm" in Game Monetisation

- Interview study of 22 children aged 7-14 years, with a focus on *Roblox*

- Participants described experiences of 'scammed' or 'tricked' (deception)

- Study lacks insights into true harms (e.g., psychological, financial, etc.)



"They're Scamming Me": How Children Experience and Conceptualize Harm in Game Monetization

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Abstract

Regulatory shifts are increasingly placing the onus on online service providers such as digital game developers and platforms to ensure that their services do not harm children. This creates an urgent need to examine how children experience and conceptualize harm in digital contexts, which may differ from adult-driven perceptions of harm. In this paper, we present the results of a study into children's experiences with game monetization which included a 'think-aloud' method in which children were given an AU$20 voucher to spend. Through our participants' (aged 7-14) vernacular of feeling 'scammed' or 'tricked', we argue that children experience harm principally through being misled or deceived by monetization features, rather than being due to what parents perceive as a misattribution of value toward digital items or overspending. Based on these results, we make game design recommendations to minimize children's harmful experiences with game monetization strategies.

CCS Concepts

• **Human-centered computing** → **Empirical studies in HCI**.

Keywords

Monetization, Children, Safety by Design, Digital games

ACM Reference Format:

Taylor Hardwick, Marcus Carter, Stephanie Harkin, Tianyi Zhangshao, and Ben Egliston. 2025. "They're Scamming Me": How Children Experience and Conceptualize Harm in Game Monetization. In *CHI Confer-*

likely to be accessed by children" [4]. This change is in step with global regulatory shifts mandating "safety by design", such as the UK's 2023 *Online Safety Act* [105] and the proposed *Kids Online Safety Act* in the US [7] which impose a duty of care on online service providers, such as digital game developers and platforms, to ensure that their services do not harm children.

However, despite being at the forefront of public debate about young people's use of digital games, very little research has sought to understand how children experience game monetization, and what constitutes harm or safety in this context. In popular media, game companies are frequently derided as using 'predatory' tactics to 'manipulate' naive child users into spending [38, 67]. Random reward mechanisms (RRMs) such as lootboxes are a keen focus of regulatory attention [110–112], reflecting parental concerns about the increasing "gamblification" of games [16, 23, 33]. In these widespread narratives, reflective of a media panic, harm is conceptualized as financial harm from excessive spending or psychological harm that leads to compulsive gambling. Even if real, which is debated [98], this is not reflective of the typical experience children have when playing most games.

In order to center children's voices in these discussions, our research sought to understand how children value the items they purchase and receive in games, and how they perceive harm in this context. We consequently conducted 22 semi-structured interviews with children aged 7-14 and their parents, which focused on children's experiences with playing and spending in digital games, and how parents approach and navigate their child's in-game spending.

Design recommendations

- Monetised RRMs not appropriate for children
- Easy access to refunds
- Protections for items and accounts
- Virtual currencies should be transparent, flexible

Hardwick et al. (2025)

Systematic review of MTX and GD/IGD

Addictive Behaviors Reports

The role of microtransactions in Internet Gaming Disorder and Gambling Disorder: A preregistered systematic review

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ARTICLE INFO

ABSTRACT

1. Introduction

SOURCE:
sciencedirect.com/science/article/pii/S2352853222000104

- Review of N=14 studies
- Mostly cross-sectional, male and non-representative samples

Review findings

- Positive correlations between loot box expenditure and gambling disorder (r=0.17 to 0.35)
- Positive correlations between Risky Loot Box Use and gaming disorder (r=.32 to .60) and Risky Loot Box and gambling disorder (r=.32 to .49)
- BUT little consistency in MTX measurement

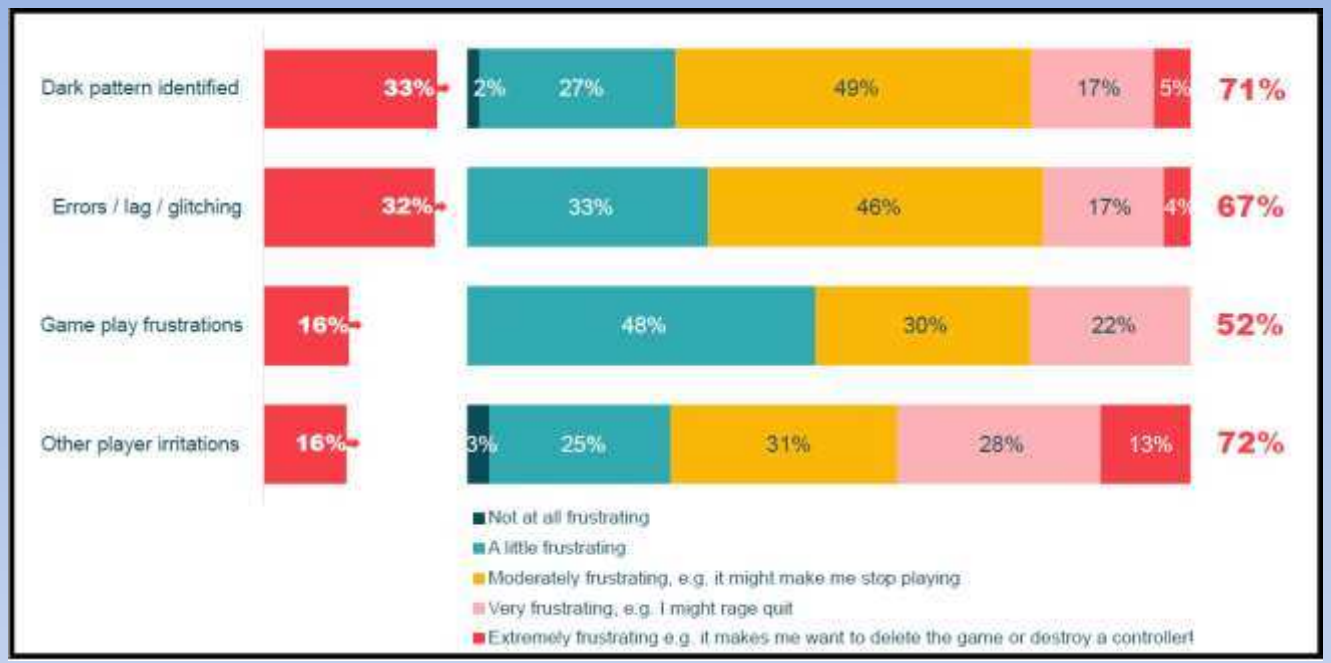
Review of loot boxes and "harms" (Greer et al. 2022)

Harm type	Assessment of the strength and value of evidence *Strength and value of evidence of an association between the product and harm*	Assessment of the strength of relationship *Strength of the relationship between the product and harm*
	Loot boxes	
Problem gambling	High	Medium
Internet gaming disorder	Medium	Medium-high
Other types of harm	Low-medium	Insufficient evidence
	Simulated gambling	
Problem gambling	Medium	Medium-high
Internet gaming disorder	Medium	Low-medium
Other types of harm	Low-medium	Insufficient evidence
	Other in-game purchases	
Problem gambling	Medium	Low-medium
Internet gaming disorder	Low-medium	Insufficient evidence
Other types of harm	Low-medium	Insufficient evidence

SOURCE: https://aifs.gov.au/

<u>Research evidence</u>:

- Cross-sectional
- Small samples
- Inconsistent approach to products
- Symptom-focused
- Harms unclear



Undue financial loss

Financial loss is by far the biggest negative consequence of gaming experienced by players. Close to half (**46%**) of the players had experienced at least one of the following:

- spent more money on a game than they had intended (**30%**)
- felt pressured into buying something (**27%**)
- accidentally made a purchase (**19%**).

Most common dark patterns:
- Freemiums
- Hidden costs
- Redirections
- Pop-ups

95% of players (N=800) have encountered tactics

Assessing dark design patterns

4. Commerce
Commerce: *compulsive use*
4.1.1 Does progression require in-game resources which can be earned through repetitive play?
4.1.2 Does the game attempt to make its use compulsive or habitual?
Commerce: *in-app purchasing*
4.2.1 Can the user pay to gain permanent enhancements to the gameplay experience?
4.2.2 Can the user pay to gain temporary enhancements to the gameplay experience?
4.2.3 Can the user pay to progress?
4.2.4 Can the user make regular payments to the game?
4.2.5 Does the user need to purchase immediate currency to buy in-game items?
Commerce: *advertising*
4.3.1 Does the game include advergames?
4.3.2 Does the game include advertising which is challenging to dismiss?
4.3.3 Is there advertising related directly to in-game items?
4.3.4 Does the game include full-screen content not linked to the game?
4.3.5 Does the game feature adverts that constrain playing times?

(RIGA – Risk in Games Assessment; Fitton et al. 2021)

unicef
for every child

ONLINE GAMING AND CHILDREN'S RIGHTS:

Recommendations for

The Online Gaming Industry

on Assessing Impact on Children

IN-GAME PURCHASES

Children may not appreciate the real monetary value of in-game purchases in the same way as adults and may be more likely to accidently over-spend without the consent of their parents. Companies can support children in understanding the value of in game currencies and put in place mechanisms to recognize and remedy accidental or uninformed purchases.

2.6.8. Do you apply daily and monthly spending limits to your games, or are your games compatible with platform-level parental controls or other features, that enable players to control spending?

2.6.9. Do you have mechanisms in place to identify and respond to abnormal spending patterns?

2.6.10. Do you have a policy in place to reimburse purchases, e.g. those made by a child without parental consent? Is the policy easy to find and clearly communicated? Do you track the number of cases where children make purchases without parental consent?

2.6.11. Does your game design restrict availability of some items to a specific time period or give exclusive offers tied to certain timeframes?

2.6.12. For games that offer in-game microtransactions, can players earn the same of comparable items from gameplay without making purchases? If yes, are your games designed to encourage players to purchase virtual items to save time?

2.6.13. Do your games use lootboxes or similar features? Are you transparent about what can be won and what the odds of winning are in a way that is easily understandable?

iii. Public health, regulatory, and other responses

Competing perspectives

- Desire among gaming stakeholders (e.g., industry) to protect the image/perception of gaming as recreation and artistic good
  - Resistance to games as "addictive"

- Desire among scientists (particularly clinical) to validate, protect, and assist vulnerable users of games who develop problems
  - Resistance to games as "always beneficial"

The public need for responses to problem gaming

NHS opens clinic to help child addicts of computer games

GPs will be able to refer young people, after 'gaming disorder' defined as a health problem

▲ Call of Duty: Infinite Warfare is popular with young gamers. Photograph: Activision

The NHS is opening the country's first specialist clinic to treat children and young adults who are

SOURCE:
https://www.theguardian.com/society/2019/oct/08/nhs-opens-clinic-to-help-child-addicts-of-computer-games

Referrals to UK gaming addiction clinic triple in year of lockdowns

Sharp rise attributed to young people spending more time at home during Covid pandemic

▲ Symptoms of gaming addiction include complaining of headaches and problems with sleep. Photograph: Nick Moore/Alamy

The number of children and young adults entering treatment for gaming addictions and disorders tripled over the last year, and experts believe that the pandemic and lockdowns played a key role in the increase.

SOURCE:
https://www.theguardian.com/society/2021/jun/20/gaming-disorders-triple-among-young-during-year-of-uk-lockdowns

Gaming industry response to ICD-11

World Health Organization & 'Gaming Disorder'

esa

Entertainment Software Association

Published on 30 May 2019

https://www.youtube.com/watch?time_continue=104&v=ZxMboDkbwJ0

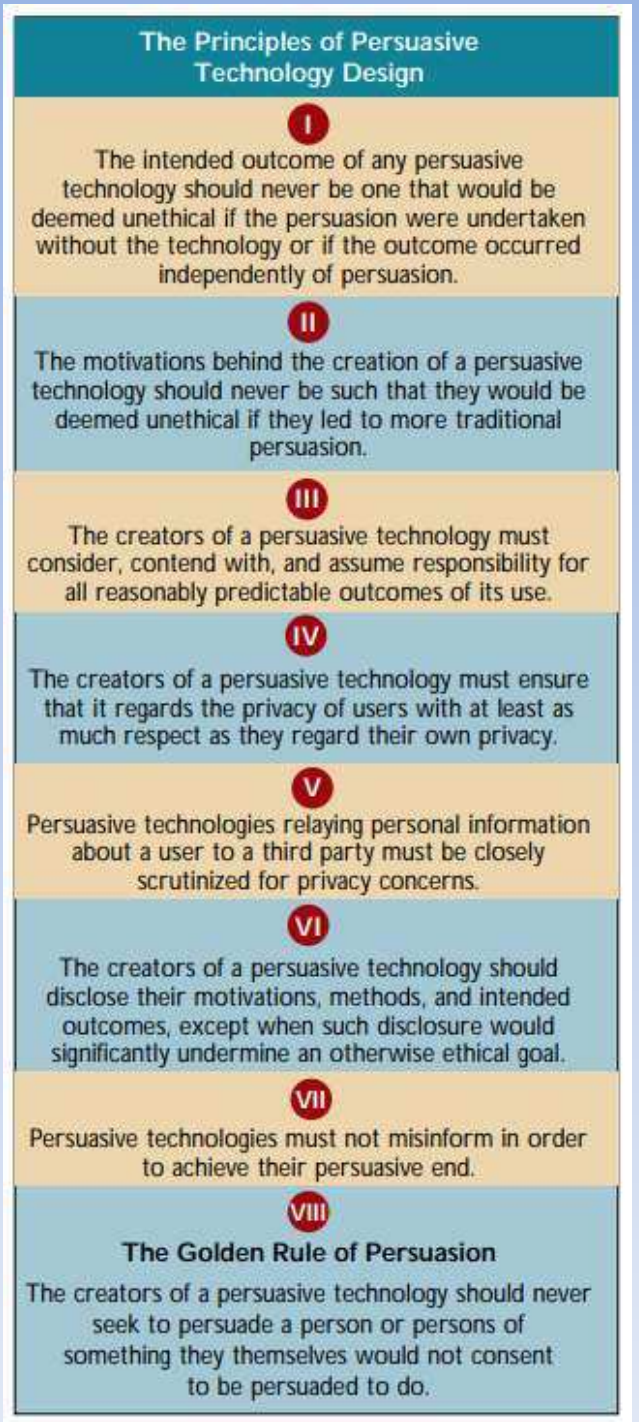
"It is never our intent for our players to play our games to the exclusion of other activities… [but] ***it's ultimately up to the individual game player or his or her parent*** *or guardian to determine how long he or she should spend playing any game"* (CNN, 2012)

Ethics of persuasive design

The **"Golden Rule"** of Persuasion:

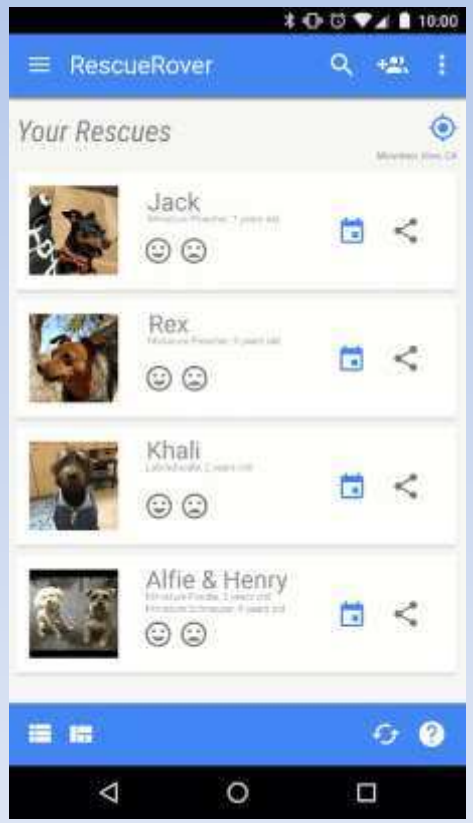
The creators of a persuasive technology should never seek to persuade a person or persons of something they themselves would not consent to be persuaded to do.

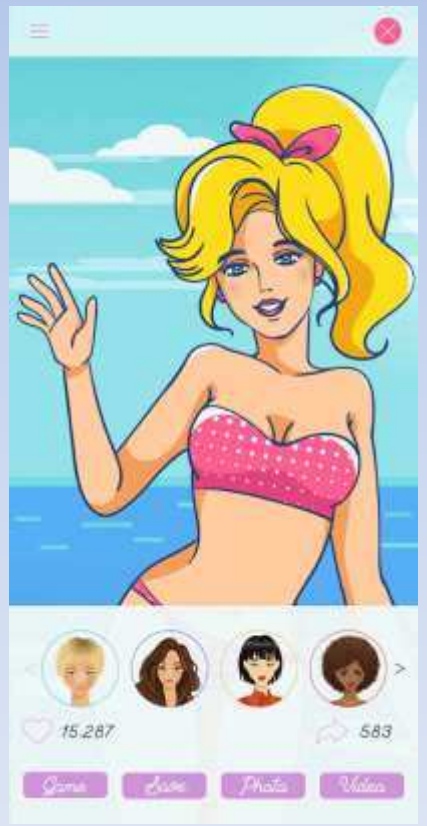
Berdichevsky and Neuenschwander (1999)
Toward an Ethics of Persuasive Technology



Policy: Google Play – “Disruptive” ads

Ads presented in unexpected ways that disrupt or interfere with the user experience and result in inadvertent clicks or affecting the usability of device functions





Legal argument in the US

(Caffarone, 2023)

- Video game developers who "*succeed in their expressed intention to rewrite the neural pathways of gamers should be held liable for the intentional tort of battery*"
  - Game developers are:
    - acting intentionally (not accidental/involuntary)
    - acting with substantial knowledge
  - "Manipulating brains" resulting in gaming addiction constitutes harmful contact
  - Gamers have not consented to manipulation

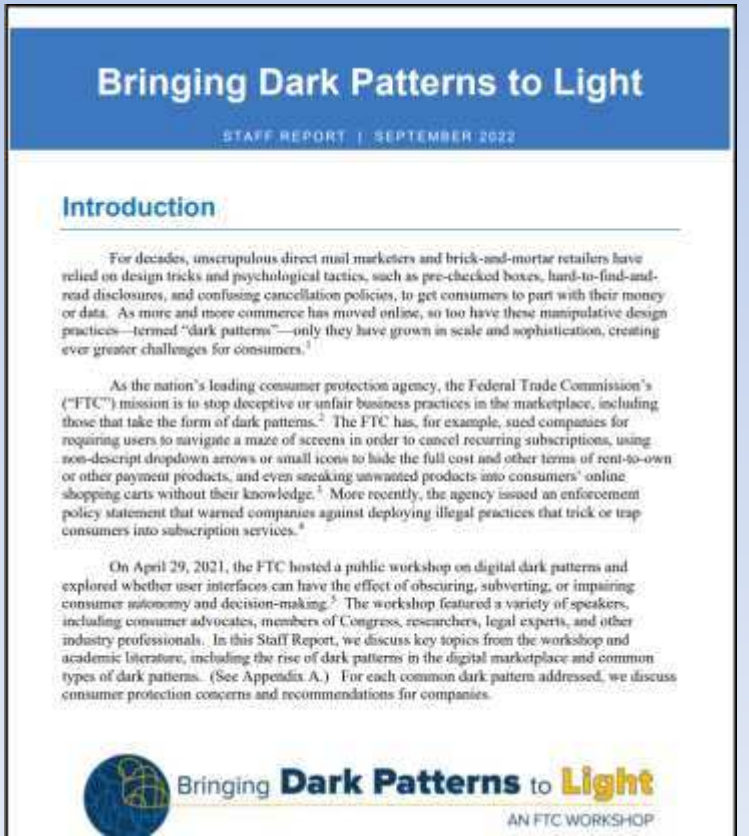
Video Game Users Fight to Hold Large Companies Liable for Gaming Addictions

- US gamers seeking legal remedy for damages suffered from gaming addiction, and allege that companies failed to warn of addictive effects
  - Epic Games (*Fortnite*)
  - Roblox Corporation (*Roblox*)
  - Activision Blizzard (*Call of Duty*)
  - Rockstar Games (*Grand Theft Auto*)
- Defence: Video games are **artistic expressions** entitled to full constitutional protections
  - ***Brown v. Entertainment Merchants Ass'n*** (2011) is a landmark decision VGs protected under the First Amendment

https://sports-entertainment.brooklaw.edu/uncategorized/video-game-users-fight-to-hold-large-companies-liable-for-gaming-addictions/

US: Federal Trade Commission (FTC)

- Some dark patterns may violate FTC Act
- Design elements that lead to unauthorised charges
- “Purchase disguised as play”
- Fine-print descriptions
- Free trials that become subscriptions
- ‘Grinding’ is highlighted
  - Form of inducement



Bringing Dark Patterns to Light

STAFF REPORT | SEPTEMBER 2022

Introduction

For decades, unscrupulous direct mail marketers and brick-and-mortar retailers have relied on design tricks and psychological tactics, such as pre-checked boxes, hard-to-find-and-read disclosures, and confusing cancellation policies, to get consumers to part with their money or data. As more and more commerce has moved online, so too have these manipulative design practices—termed “dark patterns”—only they have grown in scale and sophistication, creating ever greater challenges for consumers.[1]

As the nation’s leading consumer protection agency, the Federal Trade Commission’s (“FTC”) mission is to stop deceptive or unfair business practices in the marketplace, including those that take the form of dark patterns.[2] The FTC has, for example, sued companies for requiring users to navigate a maze of screens in order to cancel recurring subscriptions, using non-descript dropdown arrows or small icons to hide the full cost and other terms of rent-to-own or other payment products, and even sneaking unwanted products into consumers’ online shopping carts without their knowledge.[3] More recently, the agency issued an enforcement policy statement that warned companies against deploying illegal practices that trick or trap consumers into subscription services.[4]

On April 29, 2021, the FTC hosted a public workshop on digital dark patterns and explored whether user interfaces can have the effect of obscuring, subverting, or impairing consumer autonomy and decision-making.[5] The workshop featured a variety of speakers, including consumer advocates, members of Congress, researchers, legal experts, and other industry professionals. In this Staff Report, we discuss key topics from the workshop and academic literature, including the rise of dark patterns in the digital marketplace and common types of dark patterns. (See Appendix A.) For each common dark pattern addressed, we discuss consumer protection concerns and recommendations for companies.

Bringing Dark Patterns to Light

AN FTC WORKSHOP

- Epic deployed design tricks known as dark patterns aimed at getting consumers of all ages to make unintended in-game purchases.
- Fortnite's counterintuitive, inconsistent, and confusing button configuration led players to incur unwanted charges.
- The company also made it easy for children to make purchases without parental consent.
- Epic locked the accounts of customers who disputed unauthorized charges with credit card companies.

Australian Government
Department of Infrastructure, Transport, Regional Development, Communications and the Arts

Australian Classification

New mandatory classifications for gambling-like content in video games

From 22 September 2024, there will be new mandatory minimum classifications for gambling-like content in video games.

- Video games containing in-game purchases linked to elements of chance, such as paid loot boxes, will receive a minimum classification of M (not recommended for children under 15 years of age) at a minimum.
- Video games containing simulated gambling, such as casino games, will be legally restricted to adults with a minimum classification of R 18+ (Restricted – legally restricted to adults aged 18 years or older) at a minimum.
- The M classification is an advisory rating and places no legal restrictions on the sale or distribution of these games. The R 18+ classification is a legal restriction meaning it is illegal to sell or distribute these games to people under the age of 18.
- The new mandatory minimum classifications for gambling-like content in video games brings the gaming industry in line with age-based restrictions in the real-world.
- Video games that have been classified before 22 September 2024 will not be reclassified, unless they become unclassified through revocation or modification. In these scenarios, video games will need to be reclassified in accordance with the new guidelines.
- Read the Guidelines for the Classification of Computer Games 2023 for further details on how in-game purchases linked to elements of chance and simulated gambling are defined, legislation.gov.au/F2023L01424/asmade/text.

These changes will apply to games on computers, gaming consoles, phones and tablets.

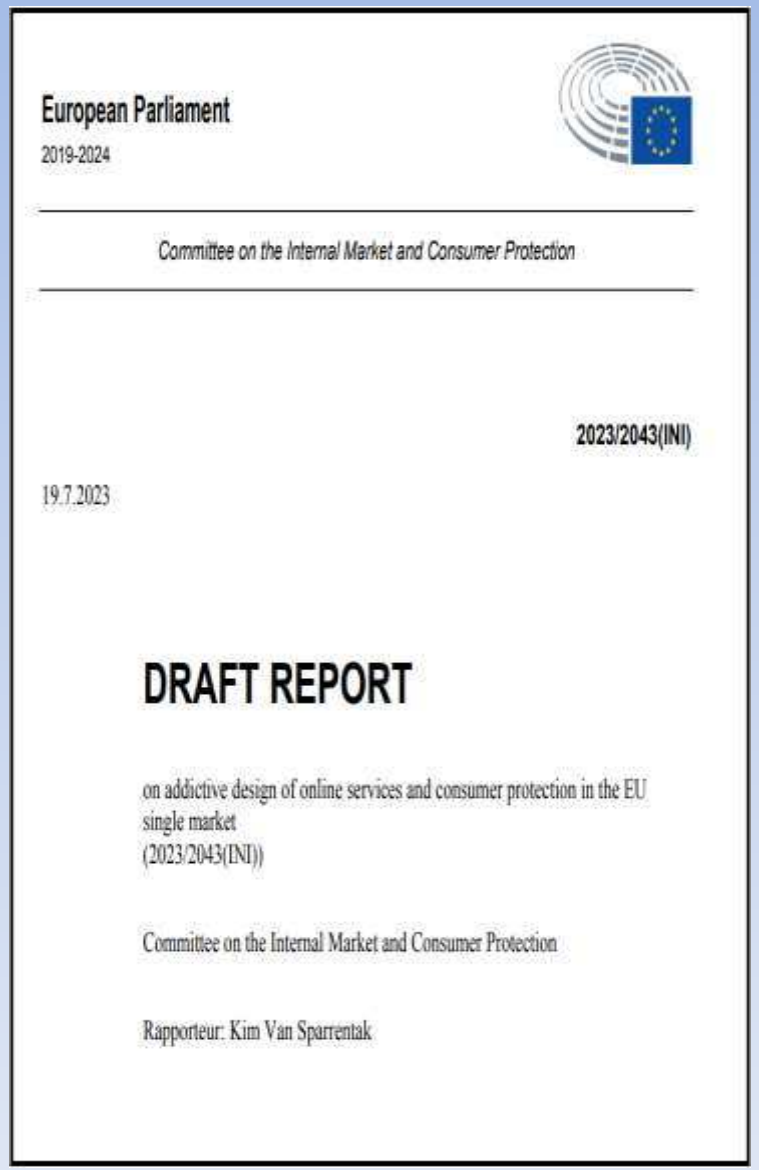
King et al. (2012)

- Review of 112 video games featuring gambling simulations have been classified as suitable for sale
- **Simulated gambling is a 'theme' (not interactive)**

Recommendations – Consumer Policy Research Centre (Australia)

- Meaningful and standardised disclosures
- Make “unfair” illegal
- Ban the use of gambling-like designs in games
- Restrict microtransactions and enforce clear labelling of in-game transactions
- Impose penalties on companies that fail to remedy
- Clear pathways for disputes
- Ensure funding for ethical game development

MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION on addictive design of online services and consumer protection in the EU single market



European Parliament
2019-2024

Committee on the Internal Market and Consumer Protection

2023/2043(INI)

19.7.2023

DRAFT REPORT

on addictive design of online services and consumer protection in the EU single market
(2023/2043(INI))

Committee on the Internal Market and Consumer Protection

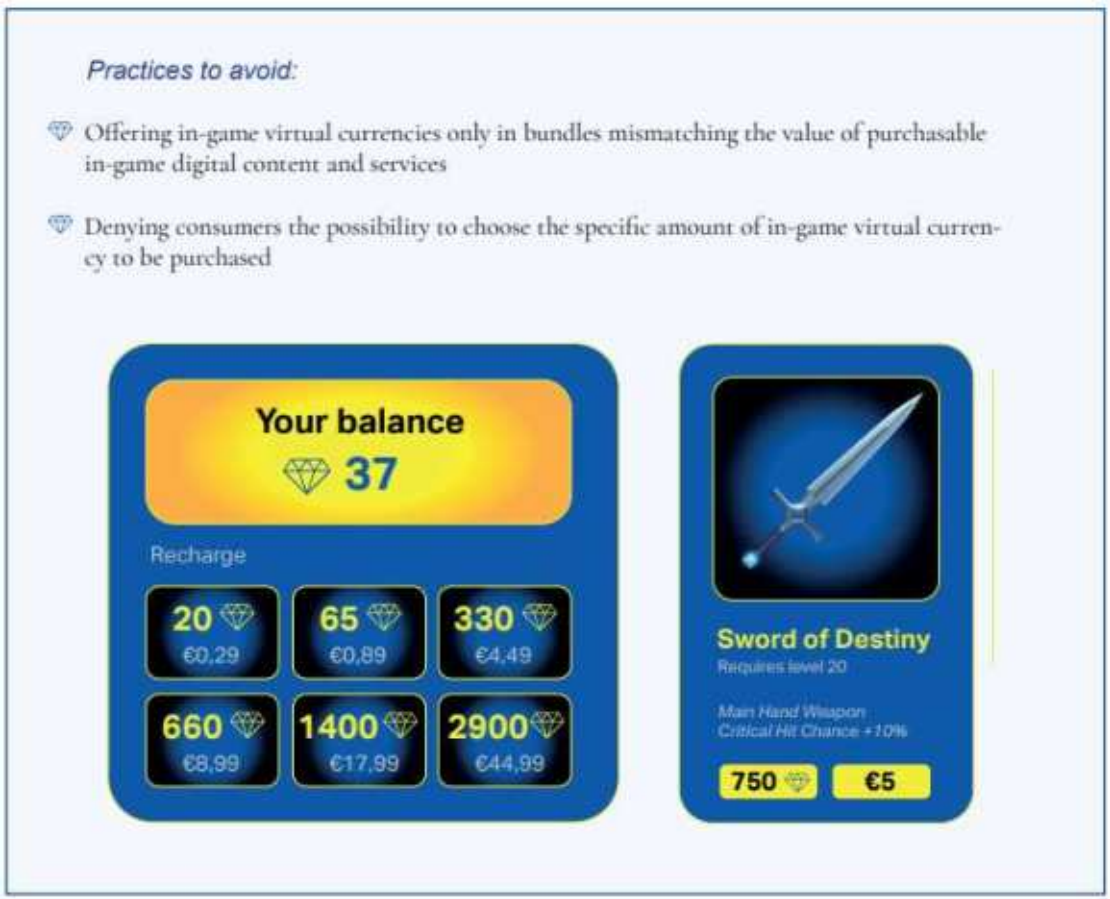
Rapporteur: Kim Van Sparrentak

- Some digital services exploit similar psychological vulnerabilities to those involved in an addiction to gambling; whereas addictive design features intentionally play into consumers' vulnerabilities

- Many digital services, such as online games, … are designed to keep users on the platform for as long as possible so as to maximise the time and money they spend

SOURCE:
https://www.europarl.europa.eu/doceo/document/IMCO-PR-750069_EN.pdf

The Consumer Protection Cooperation Network's Key Principles on In-game Virtual Currencies



SOURCE:
https://commission.europa.eu/document/8af13e88-6540-436c-b137-9853e7fe866a_en

European Commission

Consumer Protection Principles

March 2025

Example:

PRINCIPLE 3:

Practices that force consumers to purchase unwanted in-game virtual currency should be avoided


Are some video games (e.g., those with monetised elements) more harmful/problematic than others?


Yes

Are some video games (e.g., those with monetised elements) more harmful/problematic than others?

- Monetisation takes many forms, and not all forms are inherently harmful. Risks and harms must be separated from opportunity costs.
- There is evidence that some gaming products and services are 'anti-consumer' and 'addictive' and aim to exploit player vulnerabilities.
- Vulnerable players are likely to be more severely affected by products with predatory monetisation and persuasion tactics. There may be pressures on players from linked digital media in the ecosystem.

Conclusions: On games

- Games are increasingly ‘live-service’
- Game design often leverages operant conditioning (e.g., random rewards) and endless, continuous design
- Monetisation schemes may be ‘gambling-like’ but generally require broader taxonomic categorisation
- Less is known about the systems, algorithms, mechanics, machine learning that influence behaviour

Conclusions: Research

- Research focus on monetisation as akin to, or related to, "gambling" may be too narrow
  - e.g., a cross-sectional study of microtransaction spending behaviour correlated with PGSI (*R*=.30)
- Emerging tools and guides for identification in policy and regulatory frameworks
- Need for greater sophistication in research on user vulnerability – beyond stable factors (e.g., 'traits') to examine situational elements and behaviors
- Need for industry action and collaboration

Conclusions: Public health

- Policy focus expanding beyond gambling to consumer protection and online safety
- Regulatory frameworks for ‘addictive’ game design and research priority frameworks
- Public understanding of risks of products
- Discussion of ethical design and education for game developers/designers
- Need for interventions for problem gaming involving monetised gaming activities

Thank you

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ResearchGate:
https://www.researchgate.net/profile/Daniel-King-36