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LOOT BOX REGULATION IN AUSTRALIA: CLASSIFICATION AND GAMBLING

SALLY WORLAND* AND PROFESSOR KIERNAN TRANTER†

In September 2024, the Guidelines for the Classification of Computer Games 2023 came into force, allowing the Classification Board to rate digital games that contain loot boxes. This follows broad concerns in Australia and internationally regarding the parallels between loot boxes and gambling and a range of perceived harms, especially for children and young people. This paper argues that the Guidelines, although a first step, are limited in scope and focus, and further reforms are needed to adequately address predatory monetisation in digital games. These include uniform probability disclosure for loot boxes, changes to the ratings to focus on predatory game structures and amendments to bring specific games directly under the online gambling regime.

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I. INTRODUCTION

There is significant community anxiety surrounding the existence of ‘loot boxes’ in digital games, as it is more frequently considered that they create a pathway for children towards problem gambling.¹ In response, the Australian Government has recently introduced the *Guidelines for the Classification of Computer Games 2023* (‘Guidelines’), which came into force in September 2024.² The Guidelines are a first step in the regulation of loot boxes for Australian players. However, this article argues that more

¹ Standing Committee on Social Policy and Legal Affairs, House of Representatives, *You Win Some, You Lose More* (Report, June 2023), 129-31 [6.1-6.20].

² *Guidelines for the Classification of Computer Games 2023* (Cth).

should be done to address the harmful practices of predatory monetisation in digital gaming.

The article is organised into three parts. The first part provides an overview of loot boxes, the anxiety caused by the relationship between loot boxes, children and gambling, and the Guidelines. The second part identifies that there are two primary problems with the Guidelines. First, the Guidelines potentially flatten the Mature classification³ ('M rating') for games with loot boxes by not distinguishing between the existence of a loot box and separately, the predatory structures that funnel players into randomised benefit-for-cost mechanisms. Second, the conceptualisation of the harms caused by loot boxes remain limited, due to a focus on preventing legacy gambling forms. Although beneficial, the Guidelines should open the way for further reform. The third part suggests further reforms, including mandatory probability disclosure, refinement of the Guidelines to focus on predatory practices and bringing games with predatory randomised benefit-for-cost mechanics within the *Interactive Gambling Act 2001* (Cth) ('*Interactive Gambling Act*').

II. LOOT BOXES, COMMUNITY ANXIETY AND THE AUSTRALIAN GUIDELINES

Digital games are a major form of entertainment in Australia. In 2023, the Australian digital game market was valued at \$AU4.21 billion.⁴ Loot boxes are a contemporary feature in modern digital gaming. Generally loot boxes are considered as an in-game mechanism that provides players with a randomised benefit, for a cost.⁵ The benefit is usually an item or upgrade that the player can use in-game; although a 'benefit' can include purely aesthetic prizes (often termed 'skins') that have no direct utility during gameplay, but might have a real-world value in a secondary market.⁶ Precise definitions are contentious. Some limit loot boxes to randomised benefits purchased in-game with

³ *Classification (Publications, Films and Computer Games) Act 1995* (Cth) s 7(3) ('*Classification Act*').

⁴ James Batchelor, 'The Australian games industry in numbers', *Game Industry.biz* (Web Page, 12 November 2023) <<https://www.gamesindustry.biz/the-australian-games-industry-in-numbers>>.

⁵ See, eg, Sebastian Schwiddessen and Philipp Karius, 'Watch Your Loot Boxes!—Recent Developments and Legal Assessment in Selected Key Jurisdictions from a Gambling Law Perspective' (2018) 1(1) *Interactive Entertainment Law Review* 17; Peter Cartwright and Richard Hyde, 'Virtual Coercion and the Vulnerable Consumer: 'Loot Boxes' as Aggressive Commercial Practices' (2022) 42(4) *Legal Studies* 555-575, 556.

⁶ Aaron Drummond et al, 'Why Loot Boxes Could Be Regulated as Gambling' (2020) 4(10) *Nature Human Behaviour* 986.

real-world currency, while others extend the definition to include randomised benefits that are achieved through either gameplay or the use of in-game currency.⁷

Loot boxes are pervasive in digital games. A 2020 study identified that 58% of the top games on the Google Play store, 59% of the top iPhone games, and 36% of the top Steam games contained loot boxes.⁸ The same study also identified that 93% of Android games (54 of 58) and 94% of iPhone games (56 of 59) that featured loot boxes were classified as suitable for children aged 12 and over.⁹ Loot boxes available for purchase using real world currency are a form of microtransaction, a business model that appeared in the 2000s as a way for players to obtain extra items or services in-game.¹⁰ Microtransactions have been a significant source of income for game companies. Electronic Arts (EA), one of the dominant game companies, reported income of \$USD 4.3 billion from microtransactions in 2023.¹¹

Although consumed by Australians of all ages,¹² digital games are particularly popular with children and young people. The three overarching concerns about loot boxes stem from this connection. The first concern is that game companies exploit compulsive behaviours in children to maximise loot box purchasing, leading to direct financial and mental health harms.¹³ The second is that loot boxes have been linked to ongoing problematic gambling,¹⁴ particularly because loot boxes have been found to generate

⁷ Matthew McCaffrey, 'Loot Boxes, Problem Gambling, and Problem Gaming: A Critical Review of the Emerging Literature' (2023) 52(1) *Communications of the Association for Information Systems* 132, 135.

⁸ David Zendle et al, 'The Prevalence of Loot Boxes in Mobile and Desktop Games' (2020) 115(9) *Addiction* 1768, 1768 ('The Prevalence of Loot Boxes'). Subsequent studies have suggested that the prevalence of loot boxes in mobile games has increased: Leon Xiao, Laura Henderson and Philip Newall, 'Loot Boxes are more Prevalent in United Kingdom Video Games than Previously Considered: Updating Zendle et al. (2020)' (2022) 117(9) *Addiction* 2553; David Zendle et al, 'Response to Xiao et al.: If Everything is a Loot Box, Nothing Is' 117(9) *Addiction* 2555.

⁹ Zendle et al (n 8) 1770.

¹⁰ Schwidessen and Karius (n 5) 19.

¹¹ Asif Zapata, 'From Play to Pay: How Microtransactions Took Over Gaming', *The Business Standard* (Web Page, 4 October 2023) <<https://www.tbsnews.net/features/play-pay-how-microtransactions-took-over-gaming-712234>>.

¹² 'Australian Games Industry Statistics', *Interactive Games & Entertainment Association* (Web Page, 5 May 2021) <<https://igea.net/faq/australian-games-industry-statistics/#:~:text=Some%20of%20the%20highlights%20include%3A%201%2091%20per,those%20aged%2065%20and%20over%20identifying%20as%20gamers>>.

¹³ European Parliament, Committee on the Internal Market and Consumer Protection (IMCO), *Loot boxes in Online Games and Their Effect on Consumers, in Particular Young Consumers*, Policy Department for Economic, Scientific and Quality of Life Policies, PE 652.727, (July 2020, Luxembourg) 29.

¹⁴ Leon Xiao, 'Regulating Loot Boxes as Gambling? Towards a Combined Legal and Self-regulatory Consumer Protection Approach' (2021) 4(1) *Interactive Entertainment Law Review* 27; Deirdre Leahy,

similar emotional responses as the thrill of gambling.¹⁵ Third, because loot boxes functionally constitute a form of gambling, they should therefore be subject to the same regulation and controls as other forms of gambling.¹⁶

In response to these concerns, there have been attempts at regulation in different jurisdictions. The Belgium and Netherlands gambling regulators have decided that loot boxes purchased for real-world currency, that provide transferrable rewards were subject to the existing national gambling regulations and proceeded to take action against gaming companies that failed to adhere with these standards.¹⁷ However, there has been some backsliding after the penalty initially imposed by the Netherlands regulator on EA was recently overturned, by the Netherlands Superior Administrative Law Court, the Council of State. That court decided that classifying a game with paid loot boxes as gambling requires consideration to the whole context of the game.¹⁸

In China, specific loot box regulations have been introduced that mandate probability disclosure. However, it has been identified that 'sub-optimal' compliance by game companies, has been caused by; weaknesses in drafting the definition for loot boxes, the visibility of the disclosures, the level of detail disclosed, and the overall utility of probability disclosures in influencing player choices.¹⁹ In South Korea, games with loot boxes had been regulated under a self-regulatory rating system. This was maintained by the games industry within its context of broader statute regulation, concerned with

'Rocking the Boat: Loot Boxes in Online Digital Games, the Regulatory Challenge, and the EU's Unfair Commercial Practices Directive' (2022) 45(3) *Journal of Consumer Policy* 561, 565.

¹⁵ Andrew Brady and Garry Prentice, 'Are Loot Boxes Addictive? Analyzing Participant's Physiological Arousal while Opening a Loot Box' (2021) 16(4) *Games and Culture* 419.

¹⁶ Kevin Liu, 'Global Analysis into Loot Boxes: is it "Virtually" Gambling?' (2019) 28(3) *Washington International Law Journal* 763.

¹⁷ Xiao (n 14) 35-36.

¹⁸ *Electronic Arts Inc & Electronic Arts Swiss S.A.R.L. v Kansspelautoriteit* (2020) 812 *Rechtbank Den Haag* [District Court of The Hague] (15 October 2020); Leon Xiao and Pieterjan Declerck, 'Paid Video Game Loot Boxes are Not Gambling Under Dutch Gambling Regulation? Shifting the goalpost In *Electronic Arts V. Kansspelautoriteit*' (2023) 27(9) *Gaming Law Review* 445.

¹⁹ Leon Xiao, 'Drafting Video Game Loot Box Regulation for Dummies: A Chinese Lesson' (2022) 31(3) *Information & Communications Technology Law* 343; Leon Xiao and Philip Newall, 'Probability Disclosures are not Enough: Reducing Loot Box Reward Complexity as a Part of Ethical Video Game Design' (2022) 50 *Journal of Gambling Issues* 145.

children and excessive gaming.²⁰ In 2024, South Korea also introduced mandatory probability disclosure.²¹

In Australia, a 2018 Senate inquiry reviewed the existing loot box practices research on the evidence of harms and recommended to the Government a cautious regulatory approach, beginning with the *Australian Classification Scheme*.²² The inquiry also affirmed the opinion of the Australian Communication and Media Authority (ACMA) that not all loot boxes fall within the purview of the *Interactive Gambling Act*.²³ In November 2022, South Australian independent MP and well known anti-gambling campaigner Andrew Wilkie introduced a private members bill that would have amended the *Classification (Publications, Films and Computer Games) Act 1995* (Cth) ('*Classification Act*') to compel the Classification Board to consider loot boxes when classifying games and specifying a minimum classification of Restricted ('R 18+ rating') (Restricted 18+ – legally restricted to adults) for games with loot boxes.²⁴ While the bill lapsed in August 2023, the Government did release the Guidelines in 2023 made under the *Classification Act* that came into force on 24 September 2024.²⁵

The Guidelines prescribe that games that have 'in-game purchases linked to elements of chance' are not permitted in material classified lesser than a M rating (not recommended for children under the age of 15).²⁶ Further, games that have 'in-game purchases linked to elements of chance and simulated gambling' have an impact associated with no lower than an R 18+ rating.²⁷ The Guidelines define 'in-game purchases linked to elements of chance' as:

²⁰ Leahy (n 14) 568; Stephanie Derrington, Shaun Star, and Sarah J. Kelly, 'The Case for Uniform Loot Box Regulation: A New Classification Typology and Reform Agenda' (2021) 46 *Journal of Gambling Issues* 302, 314.

²¹ Leon Xiao and Solip Park, 'Better than Industry Self-Regulation: Compliance of Mobile Games with Newly Adopted and Actively Enforced Loot Box Probability Disclosure Law in South Korea' (OSFPreprints, 6 September 2024) <<https://osf.io/preprints/osf/xnvqa>>.

²² The Senate Environment and Communications References Committee, *Gaming Micro-Transactions for Chance-Based Items* (Report, 18 September 2018) 72 [5.11].

²³ *Ibid* 73 [5.12].

²⁴ Explanatory Memorandum, Classification (Publications, Films and Computer Games) Amendment (Loot Boxes) Bill 2022 (Commonwealth of Australia) 3.

²⁵ *Classification (Publications, Films and Computer Games) Act 1995* (Cth) s 12(1).

²⁶ *Guidelines for the Classification of Computer Games 2023* (Cth), 13.

²⁷ Michelle Rowland, 'New Mandatory Minimum Classifications for Gambling-like Games Content', *The Hon Michelle Rowland* (Web Page, 23 September 2023) <<https://minister.infrastructure.gov.au/rowland/media-release/new-mandatory-minimum->

'Digital goods or services determined by chance, including Paid Loot Boxes, that can be acquired within a game:

- (a) using real world currency; or
- (b) using in-game virtual currency, items or credits that can be purchased using real-world currency.'²⁸

'Simulated gambling' is defined as:

'Interactive activity within a game that:

- (a) resembles or functions like a real-world age restricted betting or gambling service; and
- (b) does not provide rewards that can be redeemed for real world currency or traded to other players in-game for real world currency.'²⁹

Paid Loot Boxes are defined as:

'A virtual container, however described:

- (a) that can be purchased or unlocked using real world currency or using in-game virtual currency, items or credits that can be purchased using real world currency; and
- (b) that rewards players with an in-game digital item or items, where the exact reward the player is to receive is not disclosed to the player prior to purchase.'³⁰

The Guidelines represent a first step in the regulation of loot boxes within digital games. They make loot boxes visible to the Classification Board and provide clear guidance to the Board that games with loot boxes that are connected to real-world currency are subject to an M rating and games that simulate restricted gambling are assigned an R 18+ rating. However, there are problems with the Guidelines, relating to scope and harms.

classifications-gambling-games-content>; Transport Department of Infrastructure, Regional Development, Communications and the Arts, 'New Mandatory Minimum Classifications for Gambling-like Games Content', *Australian Classification* (Web Page, 26 September 2023) <<https://www.classification.gov.au/about-us/media-and-news/news/new-mandatory-minimum-classifications-for-gambling-games-content>>.

²⁸ *Guidelines for the Classification of Computer Games 2023* (Cth) 13.

²⁹ *Ibid* 15.

³⁰ *Ibid* 14.

III. PROBLEMS WITH THE GUIDELINES

There are two problems with the Guidelines. The first relates to the scope of game features captured by the definitions. This could have the effect of ‘flattening’ the impact of ratings by not distinguishing between the scale of randomised benefit-for-cost mechanics and its structure and location within different games. This connects to the second problem in relation to the evidence base of harms in relation to loot boxes and gambling. Both highlight the need for a more targeted focus on the predatory practices associated with loot boxes.

A. *Scope of Game Features Caught by the Guidelines and the Potential Flattening of the ‘M’ Rating*

The Guidelines potentially misunderstand the ubiquity of loot boxes within contemporary gaming.³¹ Loot boxes have their origins in a confluence of two deep features of digital gaming.

The first is the randomised benefit-for-cost mechanic. Stretching back to tabletop games, there have been mechanics where players sacrifice a resource of some kind for a randomised benefit (for example, using game currency to purchase a card from a deck). Due to the ease of digital systems undertaking random number generation (RNG), randomised rewards have been an enduring feature within digital games. Together with the capacity of digital systems to provide and keep track of in-game currencies and resources, combining the two to form a randomised benefit-for-cost mechanic has been a basic feature in digital gaming since the earliest games. The foundational games in the *Pokémon* franchise had a ‘games corner’ where in-game currency (coins) could be used in simulated ‘slot machines’ for randomised benefits.³² Throughout the Nintendo *Zelda* franchise, there were ‘stores’ and ‘mini-games’ where players paid with in-game currency for the opportunity to receive a randomised benefit. Indeed, some of the earliest digital

³¹ Heather Wardle, *Games Without Frontiers?: Socio-historical Perspectives at the Gaming/Gambling Intersection* (Springer Nature, 2021) 68.

³² Game Freak, *Pokémon Red* (Nintendo, 1996); Game Freak, *Pokémon Blue* (Nintendo, 1996); Samuli Laato, ‘Is Simulating Casino Environments in Video Games Worse than Gambling with Loot Boxes? The Case of the Removed Pokémon Game Corner’ (2020) *Proceedings of the Conference on Technology Ethics*. In later re-releases, this was removed.

role-playing games (RPGs) had randomised benefit-for-cost mechanics.³³ The children's toy-to-game franchise *Skylanders*³⁴ from the early 2010s had internal minigames where players paid in-game currency to undertake a game of chance to win randomised benefits. This means that mechanics that work like loot boxes are a ubiquitous part of digital gaming. This is where the narrower definition of a loot box as a 'randomised benefit for real-world currency' has an attraction. This does link the random benefit-for-cost mechanic to a real-world microtransaction. However, the Guidelines goes further in both the definition of 'in-game purchases linked to elements of chance' and 'Paid Loot Boxes' to 'using in-game virtual currency, items or credits that can be purchased using real world currency'.³⁵ This seems like a reasonable extension in limiting the new ratings regime to games that have either a direct, or a one step removed, microtransaction for a randomised benefit. One step removed games have a microtransaction portal where in-game currency or assets can be purchased, with real-world currency and those resources are then able to be used to purchase loot boxes. Seemingly, the Guidelines would exclude games that are 'sealed' and do not have portals where real-world currency can be used to purchase in-game currency or assets.

However, even games without an official microtransaction portal, secondary markets for in-game assets for real-world currency exist. A well-known example relates to *Pokémon*. Shiny Pokémon are unique skins of normal Pokémon that rarely spawn, usually the odds of finding a shiny Pokémon are one in thousands.³⁶ There are online secondary markets where shiny Pokémon can be bought and sold.³⁷ Through secondary markets for in-game assets, the distinction between games that have a microtransaction portal and sealed games becomes blurred. The potential for secondary markets is that 'sealed' games that have loot boxes and a capacity for converting in-game assets to in-game currency, a player could purchase an asset on a secondary market with real-world currency, bring it into the game, convert it to in-game currency and then use that to access loot boxes. The

³³ Steven Wright, 'The Evolution of Loot Boxes', *PC Gamer* (Web Page, 9 December 2017) <<https://www.pcgamer.com/the-evolution-of-loot-boxes/>>.

³⁴ Toys for Bob, *Skylanders: Giants* (Activision, 2012).

³⁵ Department of Infrastructure, Transport Regional Development, Communications and the Arts (n 27).

³⁶ Maude Bonenfant et al, "Finally! My First Shiny!": Assessing Text Mining Tools and Methodologies for the Study of the Pokémon Sword and Shield Twitter Online Community' (2020) *Canadian Society for Digital Humanities/Société Canadienne Des Humanités Numériques*, [5.4].

³⁷ For example: *Shiny24* (Web Page, 2024) <<https://shiny24.com/>>.

Guidelines do not provide direction as to whether the existence or even the possibility of secondary markets means a 'sealed' game with random benefit-for-cost mechanism would satisfy the threshold of an 'M' rating or below.

The Guidelines' definitions do not specify that the transaction purchasing the loot box needs to be entirely between the gamer and the gaming company. Rather, the definitions hinge on the transaction and the providence of the resources that the gamer brings to the transaction. Conceptually, nearly any game, and especially games within the sport, role-playing and deck building genres, where there is an emphasis on acquisition and use of in-game assets, could generate a secondary market. This could mean there is the potential for the Guidelines to apply to sealed games that might not come within the primary understanding of a loot box. This could have the effect of nullifying the ratings, rather than providing consumers with clear insight into the expected content and suitability of a game, it could flatten the scope to a point of meaninglessness. The flattening of a category occurs when there are too many diverse objects caught within the category. This is problematic for regulation as it means that often unintended targets are regulated. In a classification scheme where ratings exist to enhance consumer knowledge about what content to expect within a specific media product, flattening undermines the effectiveness of the rating as a guide to content because it signifies too wide a range of content. Potentially the wording of the Guidelines could capture games that have random benefit-for-cost mechanics that do not have an obvious or clear connection to real-world currency.

This concern with the Guidelines leading to M ratings for games with very different player experiences of random benefit-for-cost mechanisms, is also evident for games that fall within the primary target of the Guidelines; that is, games with a random benefit-for-cost mechanics, where the cost is a microtransaction or an in-game asset that is purchasable through a microtransaction. A study for the UK Department for Culture, Media and Sport emphasised the diversity of scope, experience, purpose, and level of engagement associated with loot boxes.³⁸ In some games, loot boxes are a marginal and optional experience, players can play through the game without engaging with loot boxes. In other games, loot boxes are front and centre of the gaming experience due to a range of design

³⁸ Darshana Jayemanne et al., *Loot Boxes and Digital Gaming: A Rapid Evidence Assessment* (Report, April 2021) 18-19.

strategies aimed at funnelling and pushing loot boxes onto players. These 'predatory' strategies can involve the necessity to engage with loot boxes to progress the game, timer alerts and countdowns to pressure players to buy loot boxes, monitored prompting that identifies a player struggling to progress and pops up a loot box, and awarding a player a 'key' but requiring purchasing of the corresponding loot box to use the key.³⁹ Further, there is a different emotional response to a loot box that is simply a mystery item purchasable in an in-game shop, compared to one that imposes onto the screen with graphical fanfare and bright imagery of wrapped presents, shiny eggs, or a buzzy, simulated casino game.⁴⁰ Further, there is the phenomena most well-known in association with *Counter Strike: Global Offensive (CS:GO)*⁴¹ where loot boxes provide aesthetic skins (that do not change game playability) but due to the popularity and intensity of the CS:GO community, rarely-spawned skins have high real-world value in secondary markets as purely collectable digital assets.⁴²

There are strong policy grounds for games where the design of the game is structured to funnel players towards loot boxes to be given a more restricted rating. There is also a difference between the secondary market for digital assets that is encouraged and authorised by the gaming company, as has happened with GS:GO, and the potential for secondary markets of otherwise sealed games. The approach in the Guidelines, which states that 'if a game has loot boxes, then it should receive a certain rating', does seem blunt. A more nuanced examination of the experience of the loot box within a game as a whole (and its surrounding culture, including secondary markets) is more apt. Although based on the specifics of the Netherlands gambling laws, this was one of the findings of the Council of State, that loot boxes must be assessed within the contexts of the game experience as a whole.⁴³

³⁹ On taxonomies of features associated with loot boxes see: Nick Ballou, Charles Gbadmosi and David Zende, 'The Hidden Intricacy of Loot Box Design: A Granular Description of Random Monetized Reward Features' *Proceedings of DiGRA 2022 Conference: Bringing Worlds Together* Annex 2342-9666. See also Damian Bank, 'Problematic Monetization in Mobile Games in the Context of the Human Right to Economic Self-Determination' (2023) 149 *Computers in Human Behavior* 107958.

⁴⁰ Wardle (n 31) 69.

⁴¹ Valve and Hidden Path Entertainment, *Counter-Strike: Global Offensive* (Valve, 2012).

⁴² Simen Langeland, 'Adolescents and the Loot Box Phenomenon. A Study on the Most Controversial Phenomemon in Video Games' (Thesis, Høgskulen i Volda, 2021) 41.

⁴³ *Electronic Arts Inc and Electronic Arts Swiss S.A.R.L. v Kansspelautoriteit* (n 18); Although there are some criticisms of whose experience, which type of gamer and intensity of engagement and vulnerability to

The danger of the Guidelines is a flattening out of the scope of games that would receive a M rating. It could catch games because of the possibility of a real-world secondary market for in-game assets in what is otherwise a sealed game, and it bundles games with incidental loot boxes into the same rating as games with predatory monetisation features. By potentially having a large population of M rated games, the harms of predatory loot boxes become diluted. Furthermore, in flattening the M rating, the Guidelines possibly sends the wrong message to game companies. Under the Guidelines, games with incidental or restrained use of loot boxes are subject to the same rating as games with more attention grabbing and nudging loot boxes. The message could be understood that, as these games will be assigned the same rating, the Guidelines are an incentive to game companies to maximise income through incorporation of more predatory, randomised, benefit-for-costs mechanics.

B. *Evidence Base of Harms in relation to Loot Boxes and Gambling*

This potential flattening of the M rating because the Guidelines does not directly see that predatory monetisation features within games; it arises because they are not directly focused on digital gaming but are framed against a broader context of the known harms of established gambling.

This is revealed by the R 18+ rating for simulated gambling games. These are games that provide a virtual gambling experience that mirrors legacy real-world gambling games but are for virtual currency only. Some of the earliest commercial home digital games were simulated gambling games such as the 1978 *Casio* for the Atari 2600 console and the 1980 *Horse Racing* for the Intellivision console. The contemporary descendants of these games would be R 18+ under the Guidelines. The rationale is that these games replicate what is otherwise a regulated activity that, under Australian law, requires that participants are 18 years and older. As such, there is a sense of treating like-as-like, and there is significant anxiety in the community that simulated gambling games enculturate problem gambling.⁴⁴

predatory nudges, the ‘whole of game’ experience should be considered from Xiao and Declerck (n 18) 451.

⁴⁴ See, Standing Committee on Social Policy and Legal Affairs (n 1) 129 [6.1].

However, there are *prima facie* some critical differences. First, these games are only for virtual in-game currency. Real-world gambling is regulated because real-world money is at stake. Simulated games are defined in the Guidelines as sealed, with only in-game currency at stake, and the style of these games would not likely generate a secondary market for rare in-game assets. These games do seem less problematic in terms of young people and financial harms than M rated loot boxes facilitating microtransactions. As such, the primary justification for the R 18+ rating comes from the concern that these styles of games socialise young people to adult gambling (that is legacy 19th and 20th century forms of institutional gambling such as horse racing, card games and casino-style machines) and serve as a pathway to problem gambling.⁴⁵ The exception are 'social casino' style games. These games resemble online gambling sites and require real-world currency to purchase in-game currency to be used in-game. These games avoid direct regulation as online gambling by not having a facility to cash out, but winning unlocks in-game rewards.⁴⁶ These games, like the Australian developed *Heart of Vegas*,⁴⁷ that resembles a gaming lounge with different slot machines, have a clear connection to problem gambling.⁴⁸ A focus directly on social casino style games, where there is a real-world pay-to-play mechanic, does seem to warrant R 18+ rating. However, the Guidelines are framed more broadly than the real-world currency, pay-to-play social casinos, by directing the Classification Board R 18+ rate any game with 'simulated gambling.'

This is where the question of evidence-based regulation becomes important. There are many studies that have explored the impact of simulated gambling on real-world gambling. The evidence is contested. There is evidence that some players do 'graduate' to problem gambling in the real-world,⁴⁹ and there is evidence that many do not have any

⁴⁵ Laato (n 32).

⁴⁶ Alexander Ross and David Nieborg, 'Spinning is winning: Social casino apps and the platformization of gamble-play' (2021) 21(3) *Journal of Consumer Culture* 84, 85.

⁴⁷ Aristocrat 'Heart of Vegas', (Web Page) <<https://heartofvegasslots.productmadness.com/auth>>.

⁴⁸ Loretta Lohberger, 'Woman who Stole \$940,000 from Vet to Gamble Online Jailed for Six Years', *ABC News* (Web Page, 9 December 2021) <<https://www.abc.net.au/news/2021-12-09/rachel-naomi-perri-jailed-over-vet-theft-to-gamble-online/100686998>>.

⁴⁹ Daniel L. King et al, 'Adolescent Simulated Gambling Via Digital and Social Media: An Emerging Problem' (2014) 31 *Computers in Human Behavior* 305; Ingo Fiedler et al, 'Simulated Gambling: An Explorative Study Based on a Representative Survey' (2023) 40(4) *Journal of Gambling Studies* 255; Nerilee Hing et al, 'Not All Games are Created Equal: Adolescents Who Play and Spend Money on Simulated Gambling Games Show Greater Risk for Gaming Disorder' (2022) 137(2) *Addictive Behaviors* 107525.

real-world gambling issues having played these games.⁵⁰ There is also evidence that people with real-world gambling addiction have reduced problematic conduct through transitioning to these games.⁵¹ In this context, the R 18+ directive in the Guidelines could be seen as more about messaging than addressing actual harms, particularly in relation to young people and loot boxes specifically.

Messaging to the community and specific stakeholders are an important factor in regulation. The coming into force of the Guidelines indicates to game companies, parents, players, the gambling industry, and the community sector that the Australian Government is able and willing to engage with the issue of loot boxes. It also provides a measure to rate social casino games R 18+. However, in addition to the evidence base of harms from sealed simulated gambling games, the evidence base of harms in relation to loot boxes is also more complicated than might be suggested in the Minister for Communications' announcement of the Guidelines, where mention was made to the 'established links between in-game purchases, loot boxes, simulated gambling and gambling-related harm.'⁵² In the release, the Minister refers to a 2022 report commissioned by the government. The report, a literature-based review, identified an association between loot boxes and negative health/behaviour outcomes like problem gambling and financial and psychological distress.⁵³ It did not identify causal relationships.⁵⁴ Rather, it mapped a complex set of unclear relationships between digital activity and harms. For example, in looking at literature that focused on loot boxes and internet gambling disorder, the report concluded there was 'medium evidence that loot box purchasing is associated with internet gaming disorder, with less evidence of an association between opening loot boxes for free or selling items from loot boxes and internet gaming disorder.'⁵⁵ The key word is association. Studies identified internet gaming disorder coexisting with loot box purchasing but could not discern whether loot

⁵⁰ Alex M T Russell et al, 'Order of First-Play in Simulated Versus Monetary Gambling' (2023) 12(4) *Journal of Behavioral Addictions* 992.

⁵¹ Sally Melissa Gainsbury et al, 'An Exploratory Study of Interrelationships Between Social Casino Gaming, Gambling, and Problem Gambling' (2015) 13(1) *International Journal of Mental Health and Addiction* 136.

⁵² Rowland (n 27).

⁵³ Nancy Greer, Cailem Murray Boyle and Rebecca Jenkinson, *Harms Associated with Loot Boxes and Simulated Gambling in Video Games: A Review of the Evidence* (Report, June 2022) 5.

⁵⁴ *Ibid* 5, 20.

⁵⁵ *Ibid* 20.

box purchasing was a pathway to internet gambling disorder or if internet gaming disordered was evidenced by loot-box purchasing.⁵⁶

This is a recurring feature of the scholarship that attempts to summarise and synthesize the harms of loot boxes. Identifying causal relationships is difficult. There is a sense that paid loot boxes embedded in a game with predatory funnelling techniques can cause harms similar to gambling, but the diversity of players and the diversity of loot boxes makes it difficult to generalise.⁵⁷ There is also evidence that suggests that national and cultural differences impact on connections between loot box use and perceptions of gambling harms.⁵⁸ There is some evidence to suggest that majority of revenue from loot boxes comes from a small minority of players.⁵⁹ The focus on whether loot boxes are gambling or whether loot boxes *leads* to gambling problems, is potentially a barrier to effective loot box regulation.⁶⁰ The focus is trying to fit the diversity of loot boxes, games and players into preexisting understandings of gambling and gambling harms.

Australia does have a staggering gambling problem. Gambling harms are causing significant health, social and economic costs.⁶¹ However, the deep history of gambling and the intertwining of the gambling industry with elements of Australian culture and government, has meant that effective regulation has been problematic.⁶² Furthermore,

⁵⁶ Ibid. See also: Aaron Drummond et al, 'The Relationship Between Problem Gambling, Excessive Gaming, Psychological Distress and Spending on Loot Boxes in Aotearoa New Zealand, Australia, and the United States—A Cross-National Survey' (2020) 15(3) *Plos one* e0230378; Phillip C. Raneri et al, 'The Role of Microtransactions in Internet Gaming Disorder and Gambling Disorder: A Preregistered Systematic Review' (2022) 15 *Addictive Behaviors Reports* 100415, 13.

⁵⁷ Leon Y. Xiao et al, 'Loot Boxes: Gambling-Like Mechanics in Video Games' cited in Newton Lee (ed), *Encyclopedia of Computer Graphics and Games* (Springer Nature, 2021) 3.

⁵⁸ Leon Y. Xiao, Tullia Fraser and Philip Newall, 'Opening Pandora's Loot Box: Weak Links Between Gambling and Loot Box Expenditure in China, and Player Opinions on Probability Disclosures and Pity-Timers' (2023) 39(2) *Journal of Gambling Studies* 645. In a later study this team suggests that it is possible that the findings in this research on cultural difference, might have stemmed from participant's interpreting the problem gambling scale differently to the researchers' understanding of the scale. See Leon Y. Xiao et al, 'Loot Boxes, Gambling-Related Risk Factors, and Mental Health in Mainland China: A Large-Scale Survey' (2024) 148 *Addictive Behaviors* 1, 2.

⁵⁹ David Zende, Elena Petrovskaya and Heather Wardle, 'How Do Loot Boxes Make Money? An Analysis of a Very Large Dataset of Real Chinese CSGO Loot Box Openings' (2020) *PsyArXiv Preprints* <<https://doi.org/10.31234/osf.io/5k2sy>>.

⁶⁰ Wardle (n 31) 71.

⁶¹ Sara Rolando and Heather Wardle, 'That's Why It's Gambling, Because You Don't Know What You Find In It!': Perceptions of the Relationship Between Gaming and Gambling Among Young Adult Gamers' (2024) 27(6) *Journal of Youth Studies* 869.

⁶² Sarah Marko et al, '“Aussies Love a Bet”: Gamblers Discuss the Social Acceptance and Cultural Accommodation of Gambling in Australia' (2022) 46(6) *Australian and New Zealand Journal of Public Health* 829.

this legacy has manifested in the emergence of online and mobile gambling platforms that are particularly targeted vulnerable demographics and are a pervasive feature in Australian media content and social environments.⁶³ In this context, loot boxes in digital gaming can be seen as generative of significant anxiety by socialising young Australians to the ubiquity of gambling within Australian social and cultural spaces, and, possibly, the gamer companies might appear to be an easier target than the established and politically savvy onshore gambling industry.⁶⁴

C. *Summary of the Problems with the Guidelines*

In summary, the Guidelines manifest two related problems. The first is that it potentially flattens the range of games that would receive an M rating because of the broad definition of loot boxes that does not distinguish between incidental random benefit-for-cost features and predatory monetisation structures that nudge and entice players into loot box consumption. It also only focuses on the game itself and not the possibilities for secondary markets for in-game assets. Further, the Guidelines are framed according to established understandings of gambling and gambling harm. This means that the R 18+ is reserved for games that resemble legacy gambling forms, like social casinos, but might not, if they are free to play, cause direct material harm, yet leave games that have predatory random benefit-for-cost mechanics (which can have a significant real-world value) as only M rated. A suggested way forward for regulation is to go deeper than connecting loot boxes to gambling but focus on whether a game is using predatory techniques to target and entrap players to engage with randomised benefits for cost mechanics.⁶⁵ This approach deals directly with the specific game features related to monetisation. However, such an approach would need to go beyond the current approach outlined by the Guidelines.

⁶³ Christine Parker et al, 'Addressing the Accountability Gap: Gambling Advertising and Social Media Platform Responsibilities' (2024) 32(4) *Addiction Research & Theory* 1; Samantha Thomas et al, "It Is Always There In Your Face." Australian Young People Discuss Exposure to Gambling Activities and Promotions' (2023) 3 *SSM-Qualitative Research in Health* 100220.

⁶⁴ Maggie Johnson and Charles Livingstone, 'Measuring Influence: An Analysis of Australian Gambling Industry Political Donations and Policy Decisions' (2021) 29(3) *Addiction Research & Theory* 196.

⁶⁵ Daniel King and Paul Delfabbro, 'Video Game Monetization (eg., 'Loot Boxes'): A Blueprint for Practical Social Responsibility Measures' (2019) 17(1) *International Journal of Mental Health and Addiction* 166, 175.

IV. FURTHER LOOT BOX REGULATION FOR AUSTRALIA

There are three further reforms that could directly address the concerns of predatory monetisation in digital gaming. The first is updating the Guidelines to facilitate the Classification Board to focus more directly on the in-game experience as whole and predatory randomised benefit-for-cost mechanics. The second is in-game probability disclosure. The third is the inclusion of digital games with predatory randomised benefit-for-cost mechanisms, such as social casinos, under the *Interactive Gambling Act*.

A. *Revised Guidelines to Focus on Predatory Randomised Benefit-for-cost Mechanisms*

Rating regimes, as regulation, work through increasing the knowledge and awareness in consumers and, where appropriate, attempt to limit its sale. In the digital space, aged-based restrictions may impact sale, however, have little influence on access.⁶⁶ As such, the Guidelines themselves will not stop children from accessing games with loot boxes. Therefore, the Guidelines' regulatory power rests solely on the capacity to increase knowledge and awareness within the market, that certain games will have loot boxes. This is where problems inherent to the Guidelines framing could diminish its effectiveness. In many respects, flattening out the M rating is desirable from a regulatory perspective because it captures a wider spectrum of games with randomised benefit-for-cost mechanics, however, it does not clearly connect the problematic game features with known harms. Consequentially, the Guidelines risk failing to adequately inform players of the prospects that randomised benefit-for-cost mechanics will manifest within a specific game.

Rather than distinguishing between games with loot boxes (rated M) and simulated gambling games (rated R18+), the Guidelines should be reframed to rate games with predatory randomised benefit-for-cost mechanisms as R 18+. In its June 2023 report '*You Win Some, You Lose More Report*' on online gambling, the House of Representatives Standing Committee on Social Policy and Legal Affairs referred to the recently announced Guidelines and suggested that:

⁶⁶ See: Svetlana Smirnova, Sonia Livingstone, and Mariya Stoilova, *Understanding Of User Needs And Problems: A Rapid Evidence Review of Age Assurance and Parental Controls in Everyday Life* (Report, 30 June 2021).

The Australian Government should consider applying a more granular approach to determining the classification of games with loot boxes through the National Classification Scheme. Games that contain loot boxes that can be purchased, and which closely resemble gambling, should be given a higher classification.⁶⁷

Identifying loot boxes within a game is not difficult. Indeed, they work because they are obvious in compelling or nudging the player to increase engagement with randomised benefit-for-cost mechanics. Developers tactically demand of the player their attention and investment with loot boxes in many contexts. Most effectively, by offering a less attractive product (game) for those who do not engage with loot boxes or by manufacturing artificial stress and by deploying loot boxes at calculated moments. On this basis, the R 18+ rating should apply to games that will not allow in-game progression without loot box engagement, where there are count-downs for loot boxes, where the game monitors progress and offers loot boxes and where in-game incentives are 'rewarded' to unlock a loot box. It would not take the Classification Board long to identify games with these features and would not add excessively to the cost of the Board's determinations.

Further, due to the permeability between in-game assets and real-world money, the Guidelines distinction between in-game and real-world costs should be dispensed with. This might mean that sealed games that use predatory strategies would fall within the ambit of an R 18+ rating, even if the pathway to direct monetisation is not as structured. The risk is possibly a flattening of the rating. However, there are two mitigating factors. First, the Australian Government, in the current Guidelines, has 'simulated gambling' games getting an R 18+ rating, even when they do not have an obvious real-world financial connection, because they resemble legacy gambling games. Shifting the regulatory emphasis towards the predatory strategies focuses directly on the harmful game elements rather than game resemblance to historical forms of gambling. Second, there is a suggestion that predatory structures within games diminish the player experience and that games that over utilise these strategies often fail to attract a player community. The commonly referred to example is the 2017 EA title *Star Wars Battlefront II*,⁶⁸ where excessive use of loot boxes in the original iteration of the game caused

⁶⁷ Standing Committee on Social Policy and Legal Affairs, House of Representatives (n 1) 147 [6.91].

⁶⁸ DICE, *Starwars Battlefront II* (Electric Arts, 2017).

significant player backlash and media controversy which lead to an update that removed the loot boxes.⁶⁹ The reaction was because the overuse of loot boxes undermined players' sense of progression and enjoyment of the game.⁷⁰ Due to this, it is unlikely that many games would adopt predatory features without monetary gain, which limits the number of games that would otherwise flatten the rating.

B. *Probability Disclosure*

A further reform should be the mandating of probability disclosure for randomised benefit-for-cost mechanics in games. Like ratings, mandatory disclosure, regulates an activity by providing information to consumers about the likelihood of success. The Chinese experience with mandatory disclosure provides a range of lessons on how to make players aware of probabilities and how to ensure substantive compliance by gaming companies.⁷¹ A particular lesson from China is the need for a mandated universal format that companies must use when disclosing probabilities.⁷² While research indicates that probability disclosure will not stop a determined player, it will enhance awareness and knowledge of chances within player communities. Gaming companies have coded the randomised algorithm for these features, and it is not a difficult nor costly expectation that they publish these in a uniform manner.

C. *Regulating Games with Predatory Randomised Benefit-for-cost Mechanics as Gambling*

A further direction for reform is to include digital games with predatory randomised benefit-for-cost mechanisms under the *Interactive Gambling Act*. As Drummond et al has identified loot boxes where there the real-world money involved, such as the skin dropping in *CS:GO* does seem to fit within the broad understanding of gambling which are otherwise regulated under national laws.⁷³ Further, the clear parallels between 'social casino' and online gambling sites suggest the need to apply the same rules for both.

⁶⁹ Brendan Scott, "'Loot Boxes' Drawing Regulatory Attention' (2018) 21(7) *Internet Law Bulletin* 124.

⁷⁰ Wardle (n 31) 68; See also: Rolando and Wardle (n 61) 879.

⁷¹ Xiao (n 14).

⁷² Xiao (n 14).

⁷³ Drummond et al (n 6) 987-988.

In Australia, bringing games with these features under the *Interactive Gambling Act* would require two amendments. First, to broaden the definition of 'gambling service' and clarify the term 'consideration' by including in-game currency or assets⁷⁴ and, second, a more detailed definition of 'game' to include the 'game-within-a-game' nature of randomised benefit-for-cost mechanics to avoid the argument that was successful in striking down the approach of the Netherlands regulator.

By bringing games with predatory randomised benefit-for-cost mechanics under the *Interactive Gambling Act*, these games and their distributors would be subject to ACMA regulation, the statutory complaint process, expectations in relation to age limits, advertising controls and it would facilitate access to the self-exclusion registry for problematic gamblers.⁷⁵ The House of Representatives Standing Committee on Social Policy and Legal Affairs noted that reform to include loot box and social casino games within the definition of a 'gambling service' which had been recommended by a number of stakeholders in submissions, including the Australian Psychological Society, but was concerned about compliance and enforcement.⁷⁶ Eulenstein suggests that ACMA's reformed regulatory action in 2017 under the *Interactive Gambling Act* has been effective to regulate online betting platforms, with large overseas providers opting to either withdraw from the Australian market or become licenced under the Act.⁷⁷ The digital gaming market is dominated by large companies such as EA, Microsoft, Blizzard, and Nintendo who distribute through a limited number of platforms like Steam and the stores for Apple and Android devices. It would seem to share contextual similarities, as a known market with well identified international participants to that which the AMCA dealt with when the amended *Interactive Gambling Act* came into force in the mid-2010s. This possibly mitigates some of the concerns that the House of Representatives Standing Committee on Social Policy and Legal Affairs had in relation to compliance and effectiveness.

⁷⁴ *Interactive Gambling Act 2001* (Cth) s 4 (e)(iii).

⁷⁵ On aspects of the *Interactive Gambling Act 2001* (Cth) see: Joachim Dietrich and Matthew Raj, 'Sports And Esports as Conduits for Gambling: The Legal Regulation of Gambling Advertising In Australia' (2023) 42(2) *University of Queensland Law Journal* 191.

⁷⁶ Standing Committee on Social Policy and Legal Affairs (n 1) 146-7 [6.88].

⁷⁷ Kristy Eulenstein, 'Legal Consciousness and the Australian Interactive Gambling Act-The Success of Expert Bureaucrats in Transnational Networks' (2018) 24 *Australian International Law Journal* 155 165-167.

Bringing games with predatory, randomised benefit-for-cost mechanisms into the statutory online gambling regulatory regime is intended to serve a deterrent effect. Digital gaming companies are likely to resist the restrictions applied to their online gaming platforms for the sake of a single type of microtransaction. Further, it is possible that these reforms would not greatly increase the regulatory load on the AMCA, as the effect of deterrence would motivate gaming companies to remove the features that attract regulation under these proposed reforms.

However, amending the Act to expand the AMCA's regulatory oversight would not ban Australian exposure to games with predatory randomised benefit-for-cost mechanisms. Access will remain available as there will always be a small number of rogue operators and the use of a VPN to access content allows Australian-based players to access this content as if they were located offshore. However, clarifying that digital games which have predatory structures connected to a randomised benefit-for-cost mechanics are gambling, and should be regulated as gambling, will reduce the prevalence and availability of these kinds of games for Australian based players.

V. CONCLUSION

In conclusion, the Guidelines are a good first step in the regulation of loot boxes. It shows a willingness by the Australian Government to engage with the possible harms that stem from loot boxes. However, there are some clear problems with the Guidelines that suggest the need for more focused reforms. The Guidelines manifest two problems. The first is that the Guidelines potentially flatten out the M rating because of its focus on the existence of loot boxes, rather than the location of these and the in-game structures that impact player experience. The second is that as a result of the concern with legacy gambling and gambling pathways, the Guidelines do not directly focus on the harms of predatory monetisation in games. It was recommended that further regulatory reform is needed, including reframing the Guidelines so that predatory practices fall within the R+ 18 rating, introduce uniform mandatory probability disclosure, and extend the existing online gambling regulations to games with predatory structures in relation to random benefit-for-cost mechanics.

REFERENCES*A ARTICLES/BOOKS/REPORTS*

Ballou, Nick, Charles Gbadamosi and David Zendle, 'The Hidden Intricacy of Loot Box Design: A Granular Description of Random Monetized Reward Features' Proceedings of DiGRA 2022 Conference: Bringing Worlds Together Annex 2342-9666

Bank, Damian, 'Problematic Monetization in Mobile Games in the Context of the Human Right to Economic Self-Determination' (2023) 149 *Computers in Human Behavior* 107958

Bonenfant, Maude, Patrick Deslauriers, Alexandra Dumont, Antoine Jobin and J  r  mie Pelletier-Gagnon, "Finally! My First Shiny!": Assessing Text Mining Tools and Methodologies for the Study of the Pok  mon Sword and Shield Twitter Online Community' (2020) *Canadian Society for Digital Humanities/Soci  t   Canadienne Des Humanit  s Num  riques*

Brady, Andrew and Garry Prentice, 'Are Loot Boxes Addictive? Analyzing Participant's Physiological Arousal while Opening a Loot Box' (2021) 16(4) *Games and Culture* 419

Cartwright, Peter and Richard Hyde, 'Virtual Coercion And The Vulnerable Consumer: 'Loot Boxes' As Aggressive Commercial Practices' (2022) 42(4) *Legal Studies* 555-575

Cerulli-Harms, Annette, Frithjof Michaelsen, Marlene M  nsch, Christian Thorun and Pierre Hausemer, 'Loot Boxes in Online Games and their Effect on Consumers, in Particular Young Consumers' *Publication for the Committee on the Internal Market and Consumer Protection (IMCO), Policy Department for Economic, Scientific and Quality of Life Policies*, (European Parliament, 2020 No 202 Luxembourg)

Derrington, Stephanie, Shaun Star and Sarah J. Kelly, 'The Case for Uniform Loot Box Regulation: A New Classification Typology and Reform Agenda' (2021) 46 *Journal of Gambling Issues* 302

Dietrich, Joachim and Matthew Raj, 'Sports and Esports as Conduits for Gambling: The Legal Regulation of Gambling Advertising In Australia' (2023) 42(2) *The University of Queensland Law Journal* 191

Drummond, Aaron, James D. Sauer, Christopher J. Ferguson and Laurenc C. Hall, 'The Relationship Between Problem Gambling, Excessive Gaming, Psychological Distress and

Spending on Loot Boxes in Aotearoa New Zealand, Australia, And The United States—A Cross-National Survey' (2020) 15(3) *Plos one* e0230378

Drummond, Aaron, James D. Sauer, Lauren C. Hall, David Zendle and Malcolm R. Loudon, 'Why Loot Boxes Could be Regulated as Gambling' (2020) 4(10) *Nature Human Behaviour* 986

Eulenstein, Kristy, 'Legal Consciousness and the Australian Interactive Gambling Act-The Success Of Expert Bureaucrats In Transnational Networks' (2018) 24 *Australian International Law Journal* 155

Fiedler, Ingo, Lennart Ante, Marc von Meduna, Fred Steinmetz, Sylvia Kairouz and Jean-Michel Costes, 'Simulated Gambling: An Explorative Study Based on a Representative Survey' (2024) 40(1) *Journal of Gambling Studies* 255

Gainsbury, Sally Melissa, Nerilee Hing, Paul Delfabbro, Grant Dewar and Daniel L. King, 'An Exploratory Study of Interrelationships Between Social Casino Gaming, Gambling, and Problem Gambling' (2015) 13(1) *International Journal of Mental Health and Addiction* 136

Greer, Nancy, Cailem Murray Boyle and Rebecca Jenkinson, *Harms Associated with Loot Boxes and Simulated Gambling in Video Games: A Review of the Evidence* (Report, June 2022)

Hing, Nerilee, Alex M T Russell, Daniel L King, Matthew Rockloff, Matthew Browne, Philip Newall and Nancy Greer, 'Not All Games Are Created Equal: Adolescents Who Play and Spend Money on Simulated Gambling Games Show Greater Risk For Gaming Disorder' (2023) 137 *Addictive Behaviors* 107525

House of Representatives Standing Committee on Social Policy and Legal Affairs *You Win Some, You Lose More* (Parliament of Australia, Canberra, 2023).

Jayemanne, Darshana, Shiona Chillas, Jim Moir, Augusto Rocha, Fraser Simpson and Heather Wardle, *Loot Boxes and Digital Gaming: A Rapid Evidence Assessment* (Report, April 2021)

Johnson, Maggie and Charles Livingstone, 'Measuring Influence: An Analysis of Australian Gambling Industry Political Donations and Policy Decisions' (2021) 29(3) *Addiction Research & Theory* 196

- King, Daniel L and Paul H Delfabbro, 'Video Game Monetization (Eg, 'Loot Boxes'): A Blueprint for Practical Social Responsibility Measures' (2019) 17(1) *International Journal of Mental Health and Addiction* 166
- King, Daniel L., Paul H. Delfabbro, Dean Kaptsis and Tara Zwaans, 'Adolescent Simulated Gambling Via Digital And Social Media: An Emerging Problem' (2014) 31 *Computers in Human Behavior* 305
- Laato, Samuli, 'Is Simulating Casino Environments in Video Games Worse than Gambling with Loot Boxes? The Case of the Removed Pokémon Game Corner' (2020) *Proceedings of the Conference on Technology Ethics*
- Langeland, Simen, 'Adolescents and the Loot Box Phenomenon. A Study on the Most Controversial Phenomemon in Video Games' (Thesis, Høgskulen i Volda, 2021)
- Leahy, Deirdre, 'Rocking the Boat: Loot Boxes in Online Digital Games, the Regulatory Challenge, and the EU's Unfair Commercial Practices Directive' (2022) 45(3) *Journal of Consumer Policy* 561
- Liu, Kevin, 'Global Analysis Into Loot Boxes: Is It "Virtually" Gambling?' (2019) 28(3) *Washington International Law Journal* 763
- Marko, Sarah, Samantha Thomas, Hannah Pitt and Mike Daube, "'Aussies Love A Bet": Gamblers Discuss The Social Acceptance and Cultural Accommodation of Gambling in Australia' (2022) 46(6) *Australian and New Zealand Journal of Public Health* 829
- McCaffrey, Matthew, 'Loot Boxes, Problem Gambling, and Problem Gaming: A Critical Review of the Emerging Literature' (2023) 52(1) *Communications of the Association for Information Systems* 132
- Parker, Christine, César Albarrán-Torres, Casey Briggs, Jean Burgess, Nicholas Carah, Mark Andrejevic, Daniel Angus and Abdul Obeid, 'Addressing the Accountability Gap: Gambling Advertising And Social Media Platform Responsibilities' (2024) 32(4) *Addiction Research & Theory* 1
- Raneri, Phillip C., Christian Montag, Dmitri Rozgonjuk, Jason Satel and Halley M. Pontes, 'The Role of Microtransactions in Internet Gaming Disorder and Gambling Disorder: A Preregistered Systematic Review' (2022) 15 *Addictive Behaviors Reports* 100415

- Rolando, Sara and Hether Wardle, 'That's Why It's Gambling, Because You Don't Know What You Find In It!' Perceptions of The Relationship Between Gaming and Gambling Among Young Adult Gamers' (2024) 27(6) *Journal of Youth Studies* 869
- Ross, Alexander and David Nieborg, 'Spinning is Winning: Social Casino Apps and the Platformization of Gamble-Play' (2021) 21(3) *Journal of Consumer Culture* 84
- Russell, Alex M T, Nerilee Hing, Philip Newall, Nancy Greer, Cassandra K Dittman, Hannah Throne and Matthew Rockloff, 'Order Of First-Play In Simulated Versus Monetary Gambling' (2023) 12(4) *Journal of Behavioral Addictions* 992
- Schwiddessen, Sebastian and Philipp Karius, 'Watch Your Loot Boxes!—Recent Developments and Legal Assessment in Selected Key Jurisdictions From a Gambling Law Perspective' (2018) 1(1) *Interactive Entertainment Law Review* 17
- Scott, Brendan, "'Loot Boxes" Drawing Regulatory Attention' (2018) 21(7) *Internet Law Bulletin* 124
- Smirnova, Svetlana, Sonia Livingstone and, Mariya Stoilova, *Understanding Of User Needs And Problems: A Rapid Evidence Review of Age Assurance and Parental Controls in Everyday Life* (Report, 30 June 2021)
- Thomas, Samantha, Simone McCarthy, Hannah Pitt, Sarah Marko, Sean Cowlshaw, Melanie Randle and Mike Daube, "It Is Always There in Your Face." Australian Young People Discuss Exposure to Gambling Activities And Promotions' (June 2023) 3 *SSM- Qualitative Research in Health* 100220
- Wardle, Heather, *Games Without Frontiers?: Socio-Historical Perspectives at the Gaming/Gambling Intersection* (Springer Nature, 2021)
- Xiao, Leon. Y., 'Drafting Video Game Loot Box Regulation For Dummies: A Chinese Lesson' (2022) 31(3) *Information & Communications Technology Law* 343
- Xiao, Leon. Y., Tullia Fraser and Philip Newall, 'Opening Pandora's Loot Box: Weak Links Between Gambling and Loot Box Expenditure in China, and Player Opinions on Probability Disclosures and Pity-Timers' (2023) 39(2) *Journal of Gambling Studies* 645
- Xiao, Leon. Y. and Philip Newall, 'Probability Disclosures are Not Enough: Reducing Loot Box Reward Complexity as a Part Of Ethical Video Game Design' (2022) *Journal of Gambling Issues* 145

Xiao, Leon Y., 'Regulating Loot Boxes as Gambling? Towards A Combined Legal And Self-Regulatory Consumer Protection Approach' (2021) 4(1) *Interactive Entertainment Law Review* 27

Xiao, Leon Y. and Pieterjan Declerck, 'Paid Video Game Loot Boxes are Not Gambling Under Dutch Gambling Regulation? Shifting the Goalpost In Electronic Arts V. Kansspelautoriteit' (2023) 27(9) *Gaming Law Review* 445

Xiao, Leon Y., Laura L. Henderson, Rune Nielsen, Paweł Grabarczyk and Philip Newall, 'Loot Boxes: Gambling-Like Mechanics in Video Games' in Newton Lee (ed), *Encyclopedia of Computer Graphics and Games* (Springer Nature, 2021)

Xiao, Leon Y., Laura L. Henderson and Philip W. S. Newall, 'Loot Boxes are more Prevalent in United Kingdom Video Games than Previously Considered: Updating Zendle et al. (2020)' (2022) 117(9) *Addiction* 2553

Xiao, Leon Y., Tullia C Fraser, Rune Kristian Lundedal Nielsen and Philip W S Newall, 'Loot Boxes, Gambling-Related Risk Factors, and Mental Health in Mainland China: A Large-Scale Survey' (2024) 148 *Addictive Behaviors* 107860

Xiao, Leon. Y. and Solip Park, 'Better than Industry Self-Regulation: Compliance of Mobile Games with Newly Adopted and Actively Enforced Loot Box Probability Disclosure Law in South Korea', *OSFPreprints*, 6 September 2024)
<<https://osf.io/preprints/osf/xnvqa>>

Zendle, David, Rachel Meyer, Paul Cairns, Stuart Waters and Nick Ballou, 'The Prevalence Of Loot Boxes in Mobile and Desktop Games' (2020) 115(9) *Addiction* 1768

Zendle, David, Elena Petrovskaya and Heather Wardle, 'How Do Loot Boxes Make Money? An Analysis of a Very Large Dataset Of Real Chinese CSGO loot box openings' (2020) *PsyArXiv Preprints* <<https://doi.org/10.31234/osf.io/5k2sy>>

Zendle, David, Paul Cairns, Rachel Meyer, Stuart Waters and Nick Ballou, 'Response to Xiao et al.: If everything is a loot box, nothing is' (2022) 117(9) *Addiction* 2555

B CASES

Electronic Arts Inc & Electronic Arts Swiss S.A.R.L. v Kansspelautoriteit (2020) 812
Rechtbank Den Haag [District Court of The Hague] (15 October 2020)

C LEGISLATION

Classification (Publications, Films and Computer Games) Act 1995 (Cth)

Interactive Gambling Act 2001 (Cth)

D OTHER

Aristocrat 'Heart of Vegas', (Web Page)

<<https://heartofvegasslots.productmadness.com/auth>>

'Australian Games Industry Statistics', *Interactive Games & Entertainment Association*

(Web Page, 5 May 2021) <<https://igea.net/faq/australian-games-industry-statistics/#:~:text=Some%20of%20the%20highlights%20include%3A%201%2091%20per,those%20aged%2065%20and%20over%20identifying%20as%20gamers>>

Batchelor, James, 'The Australian Games Industry in Numbers', *Game Industry.biz* (Web

Page, 12 November 2023) <<https://www.gamesindustry.biz/the-australian-games-industry-in-numbers>>

Department of Infrastructure, Transport, Regional Development, Communications and

the Arts, 'New mandatory minimum classifications for gambling-like games content',

(Web Page, 26 September 2023) <<https://www.classification.gov.au/about-us/media-and-news/news/new-mandatory-minimum-classifications-for-gambling-games-content>>

Department of Infrastructure, Transport Regional Development, Communications and

the Arts, *Guidelines for the Classification of Computer Games 2023* (Report, 17 May

2023) DICE, *Starwars Battlefront II* (United States, Electric Arts)

European Parliament, Committee on the Internal Market and Consumer Protection

(IMCO), *Loot boxes in Online Games and Their Effect on Consumers, in Particular Young*

Consumers, Policy Department for Economic, Scientific and Quality of Life Policies, PE 652.727, (July 2020, Luxembourg)

Explanatory Memorandum, Classification (Publications, Films and Computer Games)

Amendment (Loot Boxes) Bill 2022 (Commonwealth of Australia)

Game Freak, 'Pokémon Red' (Nintendo, 2016)

Lohberger, Loretta, 'Woman who stole \$940,000 from vet to gamble online jailed for six years', *ABC News* (Web Page, 9 December 2021) <<https://www.abc.net.au/news/2021-12-09/rachel-naomi-perri-jailed-over-vet-theft-to-gamble-online/100686998>>

Rowland, Michelle, 'New Mandatory Minimum Classifications for Gambling-like Games Content', *The Hon Michelle Rowland* (Web Page, 23 September 2023) <<https://minister.infrastructure.gov.au/rowland/media-release/new-mandatory-minimum-classifications-gambling-games-content>>

Standing Committee on Social Policy and Legal Affairs, House of Representatives, *You Win Some, You Lose More* (Report, June 2023)

The Senate Environment and Communications References Committee, *Gaming Micro-Transactions for Chance-Based Items* (Report, 18 September 2018)

Transport Department of Infrastructure, Regional Development, Communications and the Arts, 'New Mandatory Minimum Classifications for Gambling-like Games Content', (Web Page, 2 September 2023) <<https://www.classification.gov.au/about-us/media-and-news/news/new-mandatory-minimum-classifications-for-gambling-games-content>>

Shiny24 (Web Page, 2024) <<https://shiny24.com/>>

Toys for Bob, *Skylanders: Giants* (Activision, 2012)

Valve and Hidden Path Entertainment, *Counter-Strike: Global Offensive* (Valve, 2012)

Wright, Steven T, 'The Evolution Of Loot Boxes', *PC Gamer* (Webpage, 9 December 2017) <<https://www.pcgamer.com/the-evolution-of-loot-boxes/>>

Zapata, Asif, 'From Play To Pay: How Microtransactions Took Over Gaming', *The Business Standard* (Web Page, 4 October 2023) <<https://www.tbsnews.net/features/play-pay-how-microtransactions-took-over-gaming-712234>>



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EMOTION RECOGNITION TECHNOLOGIES AND DIGNITY IN AI-BASED SURVEILLANCE CAPITALISM

BRUCE BAER ARNOLD*, WENDY BONYTHON+, TESS ROONEY**

Businesses, governments and other entities are increasingly presented with AI-based 'emotion recognition' biometric systems, promoted as tools offering robust insights into the honesty, comprehension or health support needs of individuals, particularly students and employees. Australian universities may consider adopting this technology as they expand their AI engagement in learning/assessment platforms and student support systems. Automated emotion recognition systems pose legal and human rights challenges arising from their potential to be used deterministically; their potential lack of reproducibility, replicability and validity; and their susceptibility to bias, notwithstanding their possible utility. Further, they rely on non-consensual or co-opted participation of individuals whose dignity is eroded by consequent reduction from persons to data subjects. This article evaluates such systems through a dignitarian human rights lens, highlighting the need for a precautionary approach.

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The expansion of AI-based digital emotional recognition technologies (ERTs) is outpacing societal understanding and regulatory oversight. ERTs are promoted as capable of accurately interpreting emotions in real time, on a large scale. For example, reliably indicating honesty, distress, incomprehension, delight or disengagement for users of a corporate workspace platform or academic learning platform. ERTs are promoted as capable of accurately interpreting emotions in real time, on a large scale. For example, by monitoring all users of a corporate workspace platform or academic learning platform, it may thus reliably indicate honesty, distress, incomprehension, delight or disengagement. In contrast to traditional tools such as polygraphs and blood pressure monitors, which require individual physical contact, ERTs involve AI-based interpretation of indicators of mental states gathered automatically by AI ‘reading’ the appearance or sound of people online, for example; frowns, smiles, blinks, speech volume or speed, or even syntax. They potentially have diverse applications, including those which involve honesty; for example employee recruitment, border control, identification of unvoiced student distress in learning platforms, disengagement by precarious employees in call centres and logistics centres or prediction of potential terrorism in public transport hubs. As a manifestation of a new stage of surveillance capitalism,¹ the development and deployment of ERTs necessitates a dignitarian understanding, underpinned by a nuanced use of the precautionary principle.

This article offers a concise critique of ERTs through a dignitarian lens. Part One is genealogical, relating ERTs to historical attempts to determine character, cognitive capacity and truth, through phrenology, graphology and physiognomy, that were deemed to provide an objective and legally recognisable understanding of individuals and groups.

¹ Shoshana Zuboff, *The Age of Surveillance Capitalism* (Public Affairs, 2019).

Those attempts have been extensively critiqued on scientific, dignitarian, and legal grounds. Part Two evaluates emerging ERTs as a facet of surveillance capitalism, suggesting the need for caution about claims regarding trustworthy ‘mind reading’. It highlights specific dignitarian concerns. Part Three engages with questions about regulation, noting benchmarks in the European Union. Part Four offers a conclusion.

I. FROM LOMBROSO TO EMERGING AI

Attempts to discern human emotion, character, and cognition through physical observation, represents a problematic legacy in science and law. Metaphors such as “eyes are the windows of the soul” reflect long-standing notions that an individual’s integrity, bravery or other attributes could be discerned by observing that person during ordinary conversation or under coercive questioning. Systematic attempts to determine character through observation of eyes, grimaces, perspiration, twitches, blushes, or pallor have been unpersuasive. These attempts coexisted with heuristics such as phrenology (determining character and capacities on the basis of skull shape),² physiognomy (similar determination on the basis of facial features)³ and graphology (determining character on the basis of handwriting).⁴ They each claim scientific authority without an empirical foundation. As pseudo-sciences, epitomized by Lombroso’s criminological theories, they embed societal, racial, gender, and class biases within purportedly ‘objective’ frameworks.⁵ Contemporary legal systems rightly reject these approaches as scientifically invalid and incompatible with frameworks of human dignity.

Australians have become habituated to a range of identifier and individuation digital biometrics,⁶ such as the facial recognition used in passports and driver licence cards and some mobile phones or the forensic use of fingerprint databases.⁷ Those systems involve objectively verifiable physical measures of individuation, rather than utilising physical measures as proxies for determination of intangible attributes such as cognition,

² Nicole Rafter, ‘The Murderous Dutch Fiddler: Criminology, History and the Problem of Phrenology’ (2005) 9(1) *Theoretical Criminology* 65.

³ David Horn, *The Criminal Body: Lombroso and the Anatomy of Deviance* (Psychology Press, 2003).

⁴ Julie Spohn, ‘The Legal Implications of Graphology’ (1997) 75(3) *Washington University Law Quarterly* 1307.

⁵ Mary Gibson, *Born to Crime: Cesare Lombroso and the Origins of Biological Criminology* (Praeger, 2002).

⁶ James Wayman, ‘Biometrics in Identity Management Systems’ (2008) 6(2) *IEEE Security & Privacy* 30.

⁷ Wendy Bonython and Bruce Arnold, ‘Beyond the Corporeal: Extending Propertisation of Body Parts to Derivative Information’ (2016) 23(3) *Journal of Law & Medicine* 688.

emotion, or character. This system employs pattern recognition algorithms to match specific biological characteristics against established databases to quickly, usefully, lawfully and accurately determine identity. Its use is framed by a range of law, notably the *Privacy Act 1988* (Cth). They do not purport to ascertain an individual's mental state, cognition or character.

The emergence of surveillance capitalism —network-based large-scale collection of data about individuals and algorithmic decision-making about those populations— has featured adoption by businesses, governments and educational institutions of digital platforms for uses that include delivery of academic content and assessment, advertising via social media, retailing and social service administration.⁸ Organisations are increasingly embracing 'bossware'⁹ —automated management tools in, for example, warehouses operated by logistics giants such as Amazon.¹⁰ Advances in AI-based pattern recognition and the ease with which global-scale 'training sets' can be invisibly acquired from social media, are fostering both major research investment and corporate interest in the adoption of ERTS; some of which might be embedded in the digital learning platforms with which most Australian academics are familiar and also with real-time activity management systems in workplaces such as call centres. Those ERTs are conceptualised as offering an algorithmic view of minds, understanding and emotion, based on pattern matching, rather than workplace discipline through activity counts in conventional bossware.

II. MIND READING OR MISCHIEF

Corporate interest in AI is used to make sense of minds through sound, sight and algorithms reflects broader trends in surveillance capitalism. ERTs are a new panopticism, but with a different and problematic genealogy. Advocates promote broad application, ranging from risk assessment of employees and students at risk of self-harm, bullying or assault to traders in financial institutions who require performance guidance regarding unduly risky transactions because of substance abuse. The ERTs are promoted

⁸ Bruce Baer Arnold, 'Surveillance Machines in Ivory Towers? Surveillance Capitalism, Dignity and Learning Management Systems' (2022) 19(1) *Canberra Law Review* 70.

⁹ Luke Munn, 'Expansive and Invasive: Mapping the "Bossware" Used to Monitor Workers' (2024) 22(2) *Surveillance & Society* 104.

¹⁰ Luc Cousineau, Ariane Ollier-Malaterre and Xavier Parent-Rochelleau, 'Employee Surveillance Technologies: Prevalence, Classification, and Invasiveness' (2023) 21(4) *Surveillance & Society* 447.

as cost-effectively ‘reading minds’ through AI-based remote observation (an unblinking digital eye, watching many), triggering beneficial interventions or performance evaluations alongside Foucauldian disciplining of those surveilled.

There is now substantial, but under-recognised, research on ERTs for the educational sector.¹¹ Advocates suggest that these systems can be cost-effectively incorporated in next-generation learning management systems to, for example; automatically alert education administrators that a student is distressed and therefore needs in-person support, is not understanding discussion in a virtual tutorial or is breaching academic integrity in an online assessment exercise. An ERT might be used to trigger intervention by an academic or chatbot to prompt the student to seek assistance, or provide assistance founded on scripting of the student as an abstraction (a data profile within a large data set) rather than an individual.

From both a dignitarian and managerialist perspective, the potential benefits of ERTs must be assessed against potential harms and questions about scientific validity and ethical implementation. Although ERTs employ more sophisticated methodological approaches than the pseudo-sciences, they face the same challenges in establishing replicability, reproducibility and validity that historic pseudo-scientific approaches encountered. Those challenges are not, as argued by some proponents, overcome simply by increasing the sample size of test populations. AI platforms have been demonstrated to be biased in some applications as a result of

¹¹ Kiavash Bahreini, Rob Nadolski and Wim Westera, ‘Towards Multimodal Emotion Recognition in E-learning Environments’ (2016) 24(3) *Interactive Learning Environments* 590; Yu Du, Rubén González Crespo and Oscar Sanjuán Martínez, ‘Human Emotion Recognition for Enhanced Performance Evaluation in E-learning’ (2023) 12(2) *Progress in Artificial Intelligence* 199; Myneni Madhu Bala, Haritha Akkineni, Siva Abhishek Sirivella, Siddharth Ambati and Krishna Venkata Sai, ‘Implementation of an Adaptive E-learning Platform with Facial Emotion Recognition’ (2023) 29(4) *Microsystem Technologies* 609; Gouizi, Khadidja, Bereksi Reguig and Choubeila Maaoui, ‘Emotion Recognition from Physiological Signals’ (2011) 35(6-7) *Journal of medical engineering & technology* 300; Müzeyyen Bulut Özek, ‘The Effects of Merging Student Emotion Recognition with Learning Management Systems on Learners’ Motivation and Academic Achievements’ (2018) 26(5) *Computer applications in engineering education* 1862; Wenbin Zhou, Justin Cheng, Xingyu Lei, Bedrich Benes and Nicoletta Adamo, ‘Deep Learning-based Emotion Recognition from Real-time Videos’ *Human-Computer Interaction. Multimodal and Natural Interaction: Thematic Area, HCI 2020, Proceedings II* (Springer, 2020) 321; Archana Sharma and Vibhakar Mansotra, ‘Deep-learning Based Student Emotion Recognition from Facial Expressions in Classrooms’ (2019) 8(6) *International Journal of Engineering and Advanced Technology* 4691; Benisemeni Zakka and Hima Vadapalli, ‘Detecting Learning Affect in E-learning Platform Using Facial Emotion Expression’, *Proceedings of the 11th International Conference on Soft Computing and Pattern Recognition* (Springer, 2021) 217; and Chunyan Wang, ‘Emotion Recognition of College Students’ Online Learning Engagement Based on Deep Learning’ (2022) 17(6) *International Journal of Emerging Technologies in Learning* 110.

deficiencies within the training datasets, including as a result of under-representation of ethnic or other minority groups. It is problematic to dismiss, as some proponents do, concerns about bias (which demonstrably affect the validity of results and potentially foster discrimination or other harms) as a 'function of inadequate training datasets' rather than from the technology. AI currently has inherent limitations, centred on what researchers call a 'stochastic parrot',¹² reaching outcomes on the basis of probabilities derived from the learning datasets it has been trained upon, rather than understanding and more saliently responding in a nuanced, individualised basis, informed by precautionary considerations.

Corporate actors may implement new algorithmic fairness mechanisms to detect and correct systemic biases as they are identified. Researchers are expanding their investigation into culture-specific emotional expression patterns. However, some caution these efforts remain insufficient, concluding 'we cannot speak of actual accuracy for facial emotion recognition systems for any practical purposes'.¹³ Kang comments that speech emotion recognition is:

'a technology founded on tenuous assumptions around the science of emotion that not only render it technologically deficient but also socially pernicious'.¹⁴

Noone engaged with the nature of ERT advocacy, quoting an expert's comment:

'The knowledge that these systems don't work isn't compelling enough for governments to not throw money at it ... [t]he allure of power, and computational power, is so high when it comes to emotion recognition that it's almost too interesting to give up, even though there's overwhelming scientific evidence to show that it actually doesn't work'.¹⁵

¹² Zihao Li, 'The Dark Side of ChatGPT: Legal and Ethical Challenges from Stochastic Parrots and Hallucination' (2023) *arXiv preprint arXiv:2304.14347*; and Emily M Bender, Timnit Gebru, Angelina McMillan-Major and Shmargaret Shmitchell, 'On the Dangers of Stochastic Parrots: Can Language Models be too Big?', *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (ACM, 2021) 610.

¹³ Federico Cabitza, Andrea Campagner and Martina Mattioli, 'The Unbearable (technical) Unreliability of Automated Facial Emotion Recognition' (2022) 9(2) *Big Data & Society* 1, 1.

¹⁴ Edward Kang, 'On The Praxes And Politics of AI Speech Emotion Recognition', *Proceedings Of The 2023 ACM Conference On Fairness, Accountability, and Transparency* (ACM, 2023) 455, 456.

¹⁵ Greg Noone, 'Emotion Recognition is Mostly Ineffective. Why are Companies Still Investing in it' (2022) *Tech Monitor* <<https://Techmonitor.Ai/Technology/Emerging-Technology/Emotion-Recognition>>.

Robust criticisms from within the AI community¹⁶ and disagreements among regulators, mean that broad policymaking and institutional adoption should be informed by a nuanced precautionary approach rather than disregarding Kant's imperative that people should not be treated as a means to an end, in this instance; the furtherance of corporate profit and AI research.

The concerns are increasingly reflected in regulatory approaches adopted or recommended by overseas institutions. The International Working Group on Data Protection in Technology's (the 'Berlin Group') recent Working Paper on Facial Recognition Technology provides a comprehensive analysis of ERT's limitations.

The Berlin Group's research reveals fundamental flaws in the underlying assumption that there is a universal set of emotional expressions. It highlights the lack of evidence for consistent correlation between emotion and the physical expression of that emotion, emphasizing that such expression varies significantly across cultural and social contexts, which leads to persistent biases. It states:

'Biometric categorization systems similarly assume that certain biometric traits are linked to specific tendencies, inclinations, or characteristics – a premise virtually indistinguishable from phrenology or physiognomy. Companies have claimed that these systems can identify a range of traits, including sexuality, autism, likelihood of criminality, and more. However, these technologies rely on historical data containing its own biases, assumptions, and prejudices, frequently exacerbating historic and societal harms towards marginalized groups. We are yet to see evidence that these systems successfully identify anything but existing bias'.¹⁷

The United Nations Special Rapporteur on Freedom of Religion and Belief, in discussing the Right to Freedom of Thought (which includes the right not to be forced to reveal or disclose one thoughts and, by extension, feelings), explicitly referenced technologies like ERT as posing:

'dilemmas about how to protect mental privacy, how to protect thoughts from impermissible manipulation and modification, and how to prevent these

¹⁶ Lisa Feldman Barrett, Ralph Adolphs, Stacy Marsella, Aleix Martinez And Seth Pollak, 'Emotional Expressions Reconsidered: Challenges to Inferring Emotion from Human Facial Movements' (2019) 20(1) *Psychological Science In The Public Interest* 1; Lauren Rhue, Racial Influence on Automated Perceptions of Emotions (2018) <[Http://Dx.Doi.Org/10.2139/Ssrn.3281765](http://Dx.Doi.Org/10.2139/Ssrn.3281765)>.

¹⁷ International Working Group on Data Protection in Technology, Working Paper on Facial Recognition Technology (2022) 16-17.

technologies from being used and abused to punish real or inferred thoughts, rather than an individual's conduct'.¹⁸

More directly, Article 5(1)(f) of the European Union's AI Act ('the AI Act')¹⁹ prohibits use of emotion recognition systems in educational or employment settings. Apart from limited exceptions on medical or safety grounds—which may permit use if there are legitimate and serious concerns about student or employee psychological health—the prohibition appears to exclude use of ERT for many of the purposes in employment and education advocated by its proponents.

Under the AI Act's Annexe 3, ERT is identified as 'high-risk AI', subject to stringent regulatory oversight. Extrinsic materials associated with the AI Act expressly identify the scientific uncertainty—including variability in emotional expression between individuals and between cultures, along with the risk of discrimination and the vulnerability of students and employees in the context of the prohibition by application of recital 44. The materials further note the impact of discrimination and bias when AI is used in biometric applications, by application of recital 54.

III. REGULATION

Elizabeth I famously (and apocryphally) is quoted as not liking to make windows into men's hearts and secret thoughts. Her sentiment resonates in a potentially under-regulated era of 'surveillance capitalism 2.0'. AI neither thinks nor respects dignity. Tensions between AI surveillance and human dignity thus demand concrete solutions to protect individual autonomy while acknowledging legitimate institutional needs.

That is because ERTs, accurate or otherwise, pose dignitarian challenges in three fundamental ways. Firstly, they often operate without meaningful consent or accountability, a particular concern in emerging educational and workplace settings where people must be surveillable. Secondly, they reduce individuals to data subjects, clusters of attributes, that are analysable or countable, rather than complex human beings. Thirdly, they potentially infringe on the fundamental freedom of thought identified in Article 18 of the International Covenant on Civil and Political Rights

¹⁸ UN Special Rapporteur on Freedom of Religion or Belief, Report on the Freedom of Thought, 5 October 2021, A/76/380, 94.

¹⁹ Regulation (EU) No 2024/1689 of the European Parliament and of the Council of 13 June 2024 on the Harmonised Rules on Artificial Intelligence (AI) [2024] OJ L 1689/1.

(‘ICCPR’)²⁰ and Article 9 of the European Convention on Human Rights (‘ECHR’).²¹ That freedom encompasses a right to keep thoughts and emotions private and to be protected from undiscernible manipulation prevalent in many embodiments of surveillance capitalism²² and free from penalisation for thoughts and emotions, as distinct from expression or action that is illegal.

Although not ratified in Australia, we contend that it is a paramount freedom in a world of increasingly pervasive surveillance.²³ It is an inseverable aspect of human dignity and flourishing. As such, Australian governments and institutions have an ethical, if not formally legal, obligation to actively consider the implications of the freedom when designing regulatory systems for emerging technologies such as ERTs.

Administrative justifications for the use of ERTs vary, as indicated above, ranging from the scope for assistance to distressed students or those otherwise requiring special support through to law enforcement at borders and other locations. Such justifications must be contextualised against the uncertain accuracy of the technology, scope for harms and the under-recognised but fundamental freedom of thought. One benchmark for construing harms and accountability is provided by Robodebt.²⁴ Another is provided by the Cambridge Analytica scandal, centred on undisclosed dataset building.²⁵

Use of ERTs in online learning platforms within universities and secondary schools, for example, likely rely on false consent and weak accountability.²⁶ Existing learning platforms for example, do not offer university students scope to ‘opt out’ of those surveillance machines. Participation on those platforms is essentially the price of admission to modern education. Its operation is opaque and neither controlled nor understood by most academics, whose performance is increasingly assessed through

²⁰ *International Covenant on Civil and Political Rights*, opened for signature 16 December 1966, 999 UNTS 171 (entered into force 23 March 1976) art 18.

²¹ *Convention for the Protection of Human Rights and Fundamental Freedoms*, opened for signature 4 November 1950, 213 UNTS 221 (entered into force 3 September 1953), as amended by Protocol No 11, ETS No 155 (entered into force 1 November 1998) art 9.

²² Jan Trzaskowski, ‘Manipulation By Design’ (2024) 34(14) *Electronic Markets* 1.

²³ Simon Mccarthy-Jones, ‘The Autonomous Mind: The Right To Freedom of Thought in the Twenty-First Century’ (2019) 2(19) *Frontiers in Artificial Intelligence* 1.

²⁴ Justin Gregger, ‘Justice for Robodebt’ (2023) 29 *James Cook University Law Review* 27; and Adam Graycar and Adam Masters, ‘Bureaucratic Bastardry: Robodebt/Debt Recovery, AI and The Stigmatisation of Citizens by Machines and Systems’ (2022) 16(5-6) *International Journal of Public Policy* 333.

²⁵ Alexis Ward, ‘The Oldest Trick in The Facebook: Would the General Data Protection Regulation have Stopped the Cambridge Analytica Scandal?’ (2022) 25 *Trinity College Law Review* 221.

²⁶ Bruce Baer Arnold, ‘A Tyranny Of Metrics In The Age Of Legal Big Data’ In Luca Siliquini-Cinelli and Thomas Giddens (Eds), *Biopolitics And Structure in Legal Education* (Routledge, 2023) 248.

algorithms that objectify both students and their teachers. Students and other data subjects are unlikely to be told that they were singled out for their attention, or otherwise determined, or ignored on the basis that AI underlying a learning platform had identified smiles, frown, eye blinks, hesitations in speech or other indicia of a mental state, which is independent of ethnicity, neurodiversity, gender or other attributes, or that such data was collected and incorporated by the platform into its training datasets.

These concerns are highlighted by the problematic implementation of assessment surveillance technologies during Covid-19 like ProctorU and Proctorio. These automated proctoring services have been criticised for false positives, false negatives, and punitive real-time interactions contrary to claims of reliability in identifying academic integrity breaches in online exams.²⁷ Similar concerns regarding validity and reliability of results—and the associated resourcing implications for educators in investigating and responding to false positive and false negative results, occur in the context of other AI-based academic integrity measures. The services demonstrate how automated systems, without proper human oversight and dignity-centred safeguards, can harm rather than help students.

An AI's ethical boundaries are set by the instructions which have been built into the code. It is not a moral person and is not concerned with truth, irrespective of the anthropomorphism that has resulted in critics endowing it with 'hallucinations', or inherent values and ethics.²⁸

Questions about dignity in the use—and likely misuse, of ERTs are therefore questions about both the agency of the entities that deploy the systems, and the governance provided by legislators and regulatory bodies that shape decision-making by users, for example data protection and human rights agencies. Effective preservation of dignity requires action at multiple levels. At the institutional level, organisations must develop clear consent mechanisms, including the right to opt out, and implement robust human oversight protocols, beyond that of a notional 'human in the loop'. Regular audits must examine system impact on vulnerable populations, alongside accessible appeal processes

²⁷ Jade Vu Henry and Martin Oliver, 'Who Will Watch the Watchmen? The Ethico-political Arrangements of Algorithmic Proctoring for Academic Integrity' (2021) 4 *Postdigital Science and Education* 1

²⁸ Carl Bergstrom and Brandon Ogbunu, 'Opinion: ChatGPT isn't 'Hallucinating.' It's Bullshitting' (2023) *Undark* <<https://undark.org/2023/04/06/chatgpt-isnt-hallucinating-its-bullshitting/>>; and Michael Townsend Hicks, James Humphries and Joe Slater, 'ChatGPT is Bullshit' (2024) 26(38) *Ethics and Information Technology* 1.

for academic staff and students, to protect individual rights. Regulatory frameworks that recognise dignity and require rights impact assessments, along with clear accountability structures, should be mandatory before the deployment of any ERT in an educational or employment context. Technical solutions must integrate 'dignity by design' principles alongside emerging considerations of privacy protections,²⁹ while incorporating user-controlled privacy settings and transparent data protocols.

IV. CONCLUSION

Three decades of social media platform regulation are salient reminders of the challenges of retrospective governance in protecting human dignity and rights. As ERTs proliferate, proactive measures will become crucial. Education institutions, as probable early adopters, have the opportunity and responsibility to develop models that promote dignity while leveraging technological benefits.

There is unlikely to be a global consensus in the near future about whether ERTs will remain what Wyden dismissed as 'bunk science'.³⁰ Governments and other entities will continue to fund research on AI, seen as a prerequisite for international competitiveness, and research on ERTs. In part that reflects the inherent difficulty in developing algorithms that make sense of the mind. In part it is because organisations are attracted by potential applications of global-scale 'mind reading'.

From a dignitarian perspective, neither AI or AI-based emotion recognition technology is inherently problematic. Instead, it is the current regulatory environment, or lack thereof, in the Australian context that raises significant concerns regarding its implementation. Addressing ERTs as tools rather than outcomes may indeed foster human flourishing. Effective use requires careful consideration of accuracy limitations and potential discriminatory impacts. Development and deployment must demonstrate awareness of, and guard against, historically problematic "scientism" in technological adoption,³¹ preventing harm to marginalised groups who differ from a technologically or algorithmically decided 'norm', including neurodiverse individuals. Using ERTs as a 'truth

²⁹ Ira Rubinstein, 'Regulating Privacy by Design' (2011) 26(3) *Berkeley Technology Law Journal* 1409.

³⁰ Ron Wyden, 'EU Restrictions on AI Emotion Detection Products' (Media release, June 15 2023).

³¹ Richard Williams and Daniel Robinson (eds), *Scientism: The New Orthodoxy* (Bloomsbury, 2015).

machine', akin to a polygraph, would exacerbate racial profiling in law enforcement where individuals unjustly incur penalties or experience other negative outcomes.

Much ERT research will continue outside constraints provided by university ethics boards and filters built into funding provision by bodies such as Australia's National Health & Medical Research Council and Australian Research Council. Claims that ERTS will alleviate harms such as violence at public transport nodes or suicides at particular locations, will continue to gain media attention and support for trials by public/private sector bodies. There is scope however, for national moratoria on adoption of emotion recognition by Australian universities and the Tertiary Education Quality Standards Authority,³² robust questioning by industrial organisations such as the National Tertiary Education Union and rigorous scrutiny by privacy regulators such as the Office of the Australian Information Commissioner, drawing on insights provided by peer data protection agencies in the EU, notably the Berlin Group.

Discourse about emotion recognition capabilities, priorities, necessities and accountability is ultimately a manifestation of individuals exercising their dignity—participating in public decision-making rather than leaving responsibility to entities that may value administrative convenience, profit or career advancement over public goods.

³² Philip Dawson, 'Strategies for Using Online Invigilated Exams' (Tertiary Education Quality Standards Authority) <<https://www.teqsa.gov.au/sites/default/files/2022-10/strategies-for-using-online-invigilated-exams.pdf>> notes use of AI products from vendors such as Proctorio, ProctorU, Examity and IRIS Invigilation.

REFERENCE LIST

A *Articles/Books/Reports*

Arnold, Bruce Baer, 'Surveillance Machines in Ivory Towers? Surveillance Capitalism, Dignity and Learning Management Systems' (2022) 19(1) *Canberra Law Review* 70

Arnold, Bruce Baer, 'A Tyranny of Metrics in the Age of Legal Big Data' in Luca Siliquini-Cinelli and Thomas Giddens (eds), *Biopolitics and Structure in Legal Education* (Routledge, 2023) 248

Bahreini, Kiavash, Rob Nadolski and Wim Westera, 'Towards multimodal emotion recognition in e-learning environments' (2016) 24(3) *Interactive Learning Environments* 590

Bala, Myneni Madhu, Haritha Akkineni, Siva Abhishek Sirivella, Siddharth Ambati and Krishna Venkata Sai, 'Implementation of an adaptive E-learning platform with facial emotion recognition' (2023) 29(4) *Microsystem Technologies* 609

Barrett, Lisa Feldman, Ralph Adolphs, Stacy Marsella, Aleix Martinez and Seth Pollak, 'Emotional expressions reconsidered: Challenges to inferring emotion from human facial movements' (2019) 20(1) *Psychological Science in the Public Interest* 1

Bonython, Wendy and Bruce Baer Arnold, 'Beyond the Corporeal: Extending Propertisation of Body Parts to Derivative Information' (2016) 23(3) *Journal of Law & Medicine* 688

Bulut Özek, Müzeyyen, 'The Effects of Merging Student Emotion Recognition with Learning Management Systems on Learners' Motivation and Academic Achievements' (2018) 26(5) *Computer Applications in Engineering Education* 1862

Cabitza, Federico, Andrea Campagner and Martina Mattioli, 'The Unbearable (technical) Unreliability of Automated Facial Emotion Recognition' (2022) 9(2) *Big Data & Society* 1

Coghlan, Simon, Tim Miller and Jeannie Paterson, 'Good Proctor or "Big Brother"? Ethics of Online Exam Supervision Technologies' (2021) 34(4) *Philosophy & Technology* 1581

Cousineau, Luc, Ariane Ollier-Malaterre and Xavier Parent-Rochelleau, 'Employee Surveillance Technologies: Prevalence, Classification, and Invasiveness' (2023) 21(4) *Surveillance & Society* 447

Du, Yu, Rubén González Crespo, and Oscar Sanjuán Martínez, 'Human Emotion Recognition for Enhanced Performance Evaluation in E-learning' (2023) 12(2) *Progress in Artificial Intelligence* 199

Giannakakis, Giorgos, Dimitris Grigoriadis, Katerina Giannakaki, Olympia Simantiraki, Alexandros Roniotis and Manolis Tsiknakis, 'Review on Psychological Stress Detection using Biosignals' (2019) 13(1) *IEEE transactions on affective computing* 440

Gibson, Mary, *Born to Crime: Cesare Lombroso and the Origins of Biological Criminology* (Praeger, 2002)

Gouizi, Khadidja, Bereksi Reguig and Choubeila Maaoui, 'Emotion Recognition from Physiological Signals' (2011) 35(6-7) *Journal of Medical Engineering & Technology* 300

Graycar, Adam and Adam Masters, 'Bureaucratic Bastardry: Robodebt/debt recovery, AI and the Stigmatisation of Citizens by Machines and Systems' (2022) 16(5-6) *International Journal of Public Policy* 333

Greggery, Justin, 'Justice for Robodebt' (2023) 29 *James Cook University Law Review* 27

Henry, Jade Vu and Martin Oliver, 'Who Will Watch the Watchmen? The Ethico-political Arrangements of Algorithmic Proctoring for Academic Integrity' (2021) 4 *Postdigital Science and Education* 1

Hicks, Michael Townsen, James Humphries and Joe Slater, 'ChatGPT is Bullshit' (2024) 26(38) *Ethics and Information Technology* 1

Horn, David, *The Criminal Body: Lombroso and the Anatomy of Deviance* (Psychology Press, 2003)

Jain, Anil, Ruud Bolle and Sharath Pankanti (eds), *Introduction to Biometrics: Personal Identification in Networked Society* (Springer, 1996)

Kang, Edward, 'On the Praxes and Politics of AI Speech Emotion Recognition', *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency* (ACM, 2023) 455

Li, Zihao, 'The Dark Side of ChatGPT: Legal and Ethical Challenges from Stochastic Parrots and Hallucination' (2023) *arXiv preprint arXiv:2304.14347*

- McCarthy-Jones, Simon, 'The Autonomous Mind: The Right to Freedom of Thought in the Twenty-first Century' (2019) 2(19) *Frontiers in Artificial Intelligence* 1
- Munn, Luke, 'Expansive and Invasive: Mapping the "Bossware" Used to Monitor Workers' (2024) 22(2) *Surveillance & Society* 104
- Nuffield Council on Bioethics, *Genetics and Human Behaviour: The Ethical Context*. (Nuffield Council on Bioethics, 2002)
- Rafter, Nicole, 'The Murderous Dutch Fiddler: Criminology, History and the Problem of Phrenology' (2005) 9(1) *Theoretical Criminology* 65
- Rhue, Lauren, 'Racial Influence on Automated Perceptions of Emotions' (2018) <<http://dx.doi.org/10.2139/ssrn.3281765>>
- Rubinstein, Ira, 'Regulating Privacy by Design' (2011) 26(3) *Berkeley Technology Law Journal* 1409
- Sharma, Archana, and Vibhakar Mansotra, 'Deep Learning-based Student Emotion Recognition from Facial Expressions in Classrooms' (2019) 8(6) *International Journal of Engineering and Advanced Technology* 4691
- Spohn, Julie, 'The Legal Implications of Graphology' (1997) 75(3) *Washington University Law Quarterly* 1307
- Trzaskowski, Jan, 'Manipulation by Design' (2024) 34(14) *Electronic Markets* 1
- Veltmeijer, Emmeke, Charlotte Gerritsen, and Koen Hindriks, 'Automatic Emotion Recognition for Groups: a Review' (2021) 14(1) *IEEE Transactions on Affective Computing* 89
- Wang, Chunyan, 'Emotion Recognition of College Students' Online Learning Engagement Based on Deep Learning' (2022) 17(6) *International Journal of Emerging Technologies in Learning* 110
- Ward, Alexis, 'The Oldest Trick in the Facebook: Would the General Data Protection Regulation have Stopped the Cambridge Analytica Scandal?' (2022) 25 *Trinity College Law Review* 221
- Wayman, James, 'Biometrics in Identity Management Systems' (2008) 6(2) *IEEE Security & Privacy* 30

Williams, Richard and Daniel Robinson (eds), *Scientism: The New Orthodoxy* (Bloomsbury, 2015)

Zakka, Benisemeni and Hima Vadapalli, 'Detecting Learning Affect in E-learning Platform Using Facial Emotion Expression', *Proceedings of the 11th International Conference on Soft Computing and Pattern Recognition* (Springer, 2021) 217

Zuboff, Shoshana, *The Age of Surveillance Capitalism* (Public Affairs, 2019)

B Legislation

Privacy Act 1988 (Cth)

C Other

Balash David, Dongkun Kim, Darika Shaibekova, Rahel Fainchtein, Micah Sherr and Adam Aviv, 'Examining the Examiners: Students' Privacy and Security Perceptions of Online Proctoring Services', *Proceedings of the Seventeenth Symposium on Usable Privacy and Security*, (Usenix, 2021)

Bender, Emily, Timnit Gebru, Angelina McMillan-Major, and Shmargaret Shmitchell, 'On the dangers of stochastic parrots: Can language models be too big?', *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (ACM, 2021)

Bergstrom, Carl and Brandon Ogbunu, 'Opinion: ChatGPT isn't 'Hallucinating.' It's Bullshitting' (2023) *Undark* <<https://undark.org/2023/04/06/chatgpt-isnt-hallucinating-its-bullshitting/>>

Convention for the Protection of Human Rights and Fundamental Freedoms, opened for signature 4 November 1950, 213 UNTS 221 (entered into force 3 September 1953)

Dawson, Philip, 'Strategies for Using Online Invigilated Exams' (Tertiary Education Quality Standards Authority) <<https://www.teqsa.gov.au/sites/default/files/2022-10/strategies-for-using-online-invigilated-exams.pdf>>

International Covenant on Civil and Political Rights, opened for signature 16 December 1966, 999 UNTS 171 (entered into force 23 March 1976)

International Working Group on Data Protection in Technology, Working Paper on Facial Recognition Technology (2022)

<https://www.bfdi.bund.de/SharedDocs/Downloads/DE/Berlin-Group/20230608_WP-Facial-Recognition-Technology.pdf?__blob=publicationFile&v=2>

McClain, Jade, 'Alexa, am I Happy? How AI Emotion Recognition Falls Short' New York University (Dec 2023) <<https://www.nyu.edu/about/news-publications/news/2023/december/alexa--am-i-happy--how-ai-emotion-recognition-falls-short.html>>

Noone, Greg, 'Emotion Recognition is Mostly Ineffective. Why are Companies Still Investing in it' (2022) *Tech Monitor* <<https://techmonitor.ai/technology/emerging-technology/emotion-recognition>>

Regulation (EU) No 2024/1689 of the European Parliament and of the Council of 13 June 2024 on the Harmonised Rules on Artificial Intelligence (AI) [2024] OJ L 1689/1

Special Rapporteur on Freedom of Religion or Belief, *Report on the Freedom of Thought*, UNGAOR, 76th sess, Agenda Item 94, UN Doc A/76/380, (5 October 2021)

Wyden, Ron, 'EU Restrictions on AI Emotion Detection Products' (Media release, June 15 2023)

Zhou, Wenbin, Justin Cheng, Xingyu Lei, Bedrich Benes and Nicoletta Adamo, 'Deep Learning-based Emotion Recognition from Real-time Videos', *Human-Computer Interaction. Multimodal and Natural Interaction: Thematic Area, HCI 2020 Proceedings, Part II* (Springer, 2020) 321