

Is it gambling or a game?

Simulated gambling games: Their use and regulation

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What are simulated gambling games?

Simulated gambling games imitate many of the core characteristics of gambling—such as the look, sound and actions—but do not provide an opportunity to bet, win or lose real money. This key point distinguishes them from commercial gambling. Recent years have seen a sharp increase in the availability of these games, leading to increased interest and use. They have received varying labels, including social gambling games, gambling-like games, and free or practice games (Gainsbury, Hing, Delfabbro, Dewar, & King, 2014; Gainsbury, Hing, Delfabbro, & King, 2014; King, Delfabbro, Kaptsis, & Zwaans, 2014; Owens, 2010). Within the context of this paper they will be referred to collectively as simulated gambling.

Research into simulated gambling is in its infancy. Therefore the findings presented within this paper should be taken as preliminary, and these must be reinforced by further research. The current evidence primarily relates to social gambling games and practice games; further explorations into the other types of simulated gambling would broaden the knowledge base and allow meaningful comparisons between the different types of simulated gambling.

The most popular forms of simulated gambling are poker, “pokies”, lotteries and casino-style games such as blackjack. However mini gambling games may also be included within a bigger non-gambling game. There are also games that, while they do not appear to have a gambling theme, can include elements that are commonly associated with gambling (Gainsbury, King, Delfabbro et al., 2015; Griffiths, King, & Delfabbro, 2014; King, Delfabbro, Zwaans, & Kaptsis, 2012; King et al., 2014; Parke, Wardle, Rigbye, & Parke, 2012). (For a full discussion of the different game see “Types of simulated gambling games”, below.)

Who, what, where, when and why?

Who plays?

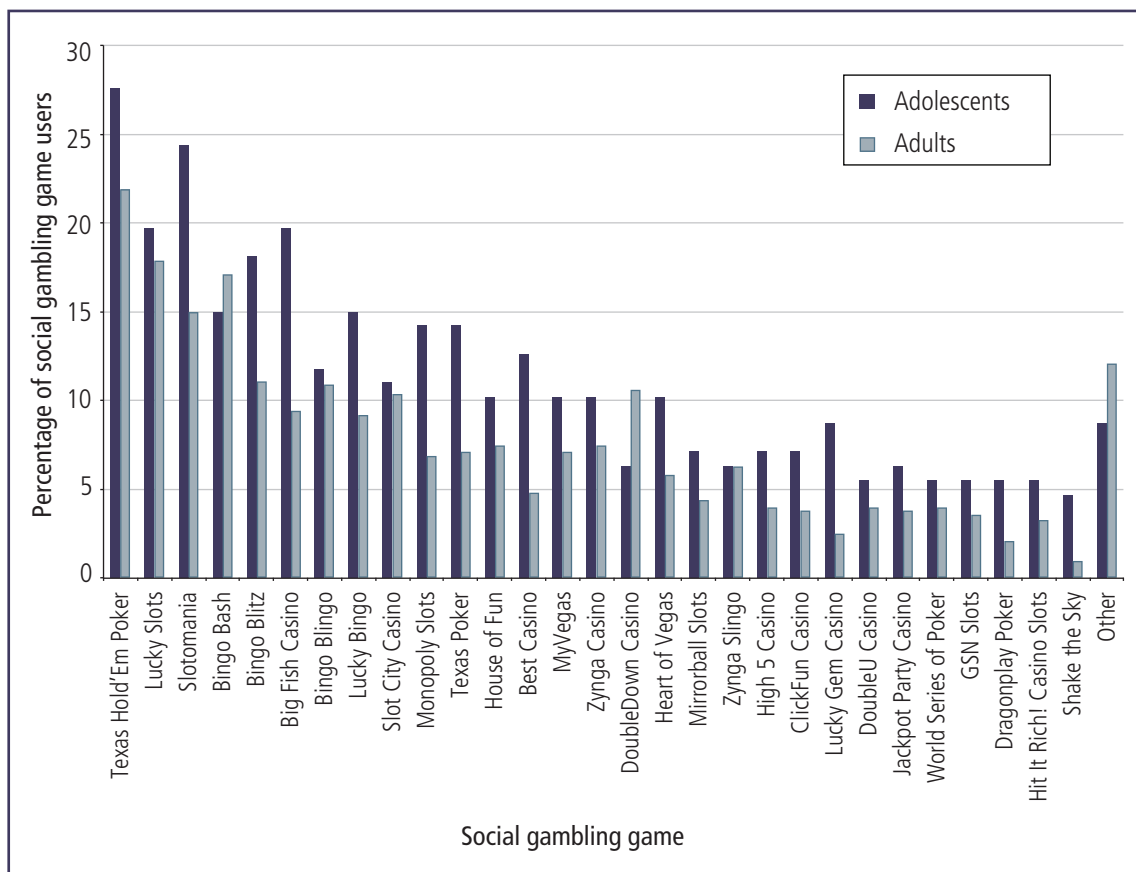
Current, limited, evidence suggests that simulated gambling is an increasingly popular pastime that is enjoyed by a diverse range of people. While there is currently no Australian estimate that encompasses all of the different types of simulated gambling, it has been estimated that a third of Australian adults and just over a fifth of Australian adolescents play social gambling games each year (Gainsbury et al., 2015). These figures reveal that Australians are engaging with social gambling games slightly more than the rest of the world, with estimations placing overall international participation in social gambling games at approximately 20% (Lewis et al., 2012).

In terms of demographics, the average social gambling gamer has been described as being in their early 40s, with some research suggesting that females are more likely than males to play social gambling games, while other research suggests that males and females are equally likely to play these games (Casual Games Association, 2012; Gainsbury et al., 2015). This contrasts with those who play games on consoles (e.g., Xbox®, PlayStation®), with the average console game player being a male in his mid-to-late 30s (Casual Games Association, 2012; Entertainment Software Association, 2015).

Gainsbury, Russell, and Hing (2014) asserted that social gambling gamers represent a distinct subgroup of gamers. Compared to those who play games that do not include a gambling element, social gambling gamers are more likely to speak a language other than English at home, be single or living with a partner, and work or study full-time (Gainsbury et al., 2015; Gainsbury, Russell, & Hing, 2014).

What simulated games are popular?

The most popular forms of simulated gambling are poker, slots (also known as “pokies” in Australia), lotteries and casino-style card or table games, such as blackjack (Byrne, 2004; Gainsbury et al., 2015; Hing et al., 2014; King, Delfabbro, Kaptsis, & Zwaans, 2014; McBride & Derevensky, 2009). Other simulated games—such as roulette, dice, Keno, sports betting and race wagering—are also quite popular (Gainsbury et al., 2015; McBride & Derevensky, 2009). In addition, Gainsbury et al. (2015) recently found that the most popular social casino games available as mobile applications (apps) on smart phones and tablets are again poker and slot games—namely Texas Hold’Em Poker, Lucky Slots, Slotomania, and Bingo Bash. See Figure 1 for the most popular apps currently played in Australia.



Note: Multiple responses were allowed.

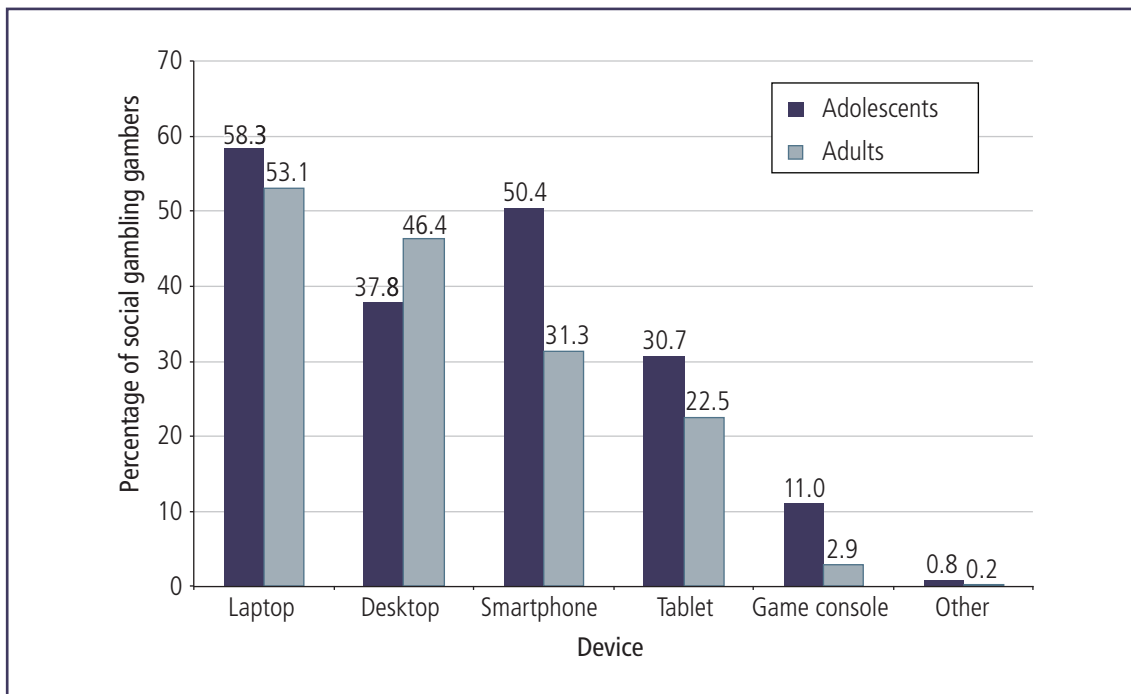
Source: Adapted from Gainsbury et al. (2015)

Figure 1: The most popular social gambling games in Australia among adult and adolescent social gambling game players

Where does play occur?

The development of mobile Internet technology means that play can occur anywhere—at home, at work, and while commuting to and from work (using mobile handheld devices). A small number of studies have investigated this more deeply, specifically examining the different means through which people access simulated gambling, again primarily among social gambling games. Industry data indicate that almost three-quarters of social gambling gamers play on smartphone or tablet devices, while one-quarter play on desktop or laptop computers (Social Casino Summit & SuperData Research, 2014). In contrast, recent Australian research (Gainsbury et al., 2015) suggests that both

computers and mobile devices are popular (Figure 2). This study also provided further nuance, showing that Australian adults have a clear preference for playing social gambling games on a desktop or laptop computer, while adolescents use more mobile devices, particularly laptops and smartphones.



Note: Multiple responses were allowed.

Source: Adapted from Gainsbury et al. (2015)

Figure 2: Preferred devices for playing social gambling games among adult and adolescent Australians

There are also suggestions that the ways in which simulated gambling is accessed are related to how it is played. Specifically, it is suggested that those who play on smartphones or tablets adopt a “casual” style in which they play for short periods as a way to pass the time, while more “serious” or “involved” players prefer desktop or laptop computers (SuperData, 2015, as cited by Gainsbury et al., 2015). Desktops/laptops are also where most of the revenue is generated. This preference may, at least in part, be because desktop/laptop versions of simulated gambling games contain more features, something that may be appealing to serious or more involved players (Social Casino Summit & SuperData Research, 2014). Nonetheless, the availability of simulated gambling on smartphones and tablets has generated concern, as the constant availability of gambling-related activities facilitates a deep integration of gambling or gambling-like activities into everyday life (Albarrán Torres & Goggin, 2014; Griffiths, King, & Delfabbro, 2014).

The development of “wearable” technology provides a new level of accessibility to simulated gambling. Simulated gambling is already available on smartwatches such as the Apple Watch; however, research is yet to examine how these wearable devices will affect the usage of simulated gambling.

When do people play?

Gambling research traditionally works on the premise that gamblers would take part in a single session of gambling in a day (albeit sometimes very lengthy sessions). This style of play, however, does not consistently translate to simulated gambling, where people often dip in and out of

play. There is still very little research into this area, but initial findings suggest that most social gambling gamers play one or two sessions per day, while a minority play six or more sessions in a typical day, with sessions typically lasting for less than 30 minutes (Gainsbury et al., 2015). Younger players and those with gambling problems tend to play more often than other players (Gainsbury et al., 2015).

Why do people play simulated gambling games?

A number of reasons why people play simulated gambling games have been identified in the existing research. Motivations for play can be grouped as being:

- for fun or entertainment: games are exciting and allow the player to spend time with their friends (or make new ones);
- a way to relax, relieve boredom or pass the time;
- a way to relieve negative emotion (e.g., anxiety, depression) and/or escape from problems; and
- a way to practice for “real money” gambling activities or for the challenge of the competition (Carran & Griffiths, 2015; Derevensky, Gainsbury, Gupta, & Ellery, 2013; Gainsbury et al., 2015; McBride & Derevensky, 2009).

With the exception of practising, these motivations are very similar to motivations for gambling (Clarke, 2008; Clarke et al., 2007; Schrans, Schellinck, & Walsh, 2001; Thomas, Allen, & Phillips, 2009). Current findings indicate that males are more likely than females to use social gambling games as a way to escape from their worries or improve their mood (Derevensky et al., 2013).

What else do we know?

Research has revealed further information regarding the convergence and movement between gaming and gambling, the roles that exposure and advertising have in gaming and gambling engagement, how simulated gambling may increase vulnerability to problematic gambling and the issue of gaming addiction. This is discussed in detail below. This section will conclude with a discussion about simulated gambling regulation in Australia.

Convergence between gaming and gambling

There has been a convergence of media and content in recent years as different digital channels begin to interact and depend on each other (Griffiths et al., 2014). This has happened in multiple areas, and commercial and simulated gambling are not exempt. The boundaries between simulated and commercial gambling have become increasingly blurred. For example, there are now opportunities to play realistic games that look and feel exactly like gambling (in some cases using the same artwork and characters). Money can be used to enhance or extend the experience, which further blurs the boundaries between these two activities. Anecdotal accounts reveal that commercial electronic gambling has also begun to incorporate features more traditionally associated with gaming, such as moving to new levels and increasing interactivity between player and game. Furthermore, commercial gambling operators have commenced partnering, merging with and purchasing simulated gambling companies, which suggests that not only is there a profit to be made from this sector but that other benefits may be reaped (Sapsted, 2013; Schneider, 2012). There is no research that has examined the effects of this convergence in detail, but likely consequences flowing from these increasingly blurry boundaries are outlined in the sections below.

Exposure and normalisation

The convergence between commercial and simulated gambling has raised concerns—particularly when it comes to young people—in relation to increasing people’s exposure to commercial

gambling through simulated gambling activities. Young people in contemporary society are highly technologically literate, being “digital natives”—essentially “native speakers” of the digital language and customs that are used to navigate computers, the Internet and other digital media (Prensky, 2001). This digital literacy allows young people to integrate technology effortlessly into every aspect of their lives. Such concentrated experience means that young people are more likely to be exposed to electronic gambling-related content during their day-to-day activities, particularly if they, their friends or their family engage with simulated or commercial gambling. In addition, increased engagement with simulated gambling activities is likely to result in individuals being exposed to gambling-related advertising on social media and other online media.

The potential for exposure to gambling-like experiences is therefore far beyond that experienced by previous generations, where exposure to gambling was primarily through traditional land-based venues, involving travel to a venue, complying with dress codes and producing age-related identification. Today, exposure to gambling-like experiences is ubiquitous. This means that people are much more likely to have a realistic gambling-type experience at a young age.

It has been speculated in both academic and public settings that consistent and repeated exposure to simulated gambling activities may serve to make gambling more familiar and “normal” for individuals. This, in turn, may increase the degree to which gambling is seen as acceptable, attractive and a relatively harmless entertainment option (Albarrán Torres & Goggin, 2014; Binde, 2014; Gainsbury, Hing, Delfabbro, Dewar et al., 2014; King, Delfabbro, & Griffiths, 2009; Moore & Ohtsuka, 1999; Parke et al., 2012). Further, the ability to play on electronic platforms means this exposure and experience may take place with less knowledge, supervision or commentary from friends and family, groups who traditionally provide oversight and warnings about potentially risky activities such as gambling. As young people are still developing—both physically and psychologically—and pre-disposed to explorative and risk-taking behaviours, this type of exposure is argued to make them more likely to then engage in commercial gambling (Floros, Siomos, Fisoun, & Geroukalis, 2013).

Advertising

Unlike legal commercial gambling, there is little (or no) regulatory control over the marketing strategies of companies that offer simulated gambling games (Binde, 2014; King et al., 2014). Facebook and Twitter are the major platforms used by the social gambling game industry to promote their products (Gainsbury et al., 2015). There are two ways advertising can occur via social media: content that is posted by the operator, and content that is posted by the user.

Operator-posted advertising

Operator-posted advertising via social media is any advertising explicitly posted by the operator to encourage players to either begin or continue playing the promoted game. Social gambling games, as an example, are marketed as “addictive” and are based on known popular culture brands (e.g., *The Wizard of Oz*, Figure 3; Gainsbury et al., 2015).

User-posted advertising

User-posted social media advertising encompasses any content posted by a user of a game on social media. This can take different forms, including updates of progress or successes; invitations to “friends” or “followers” to take part; or “liking”, “commenting” on or “sharing” content posted via simulated gambling operators, often in return for credits or other rewards (Figure 4; Gainsbury et al., 2015). This can take place on a social media platform (e.g., Facebook) or within the game itself, and can be instigated by the game in question, though it will be posted through the user’s social media account.

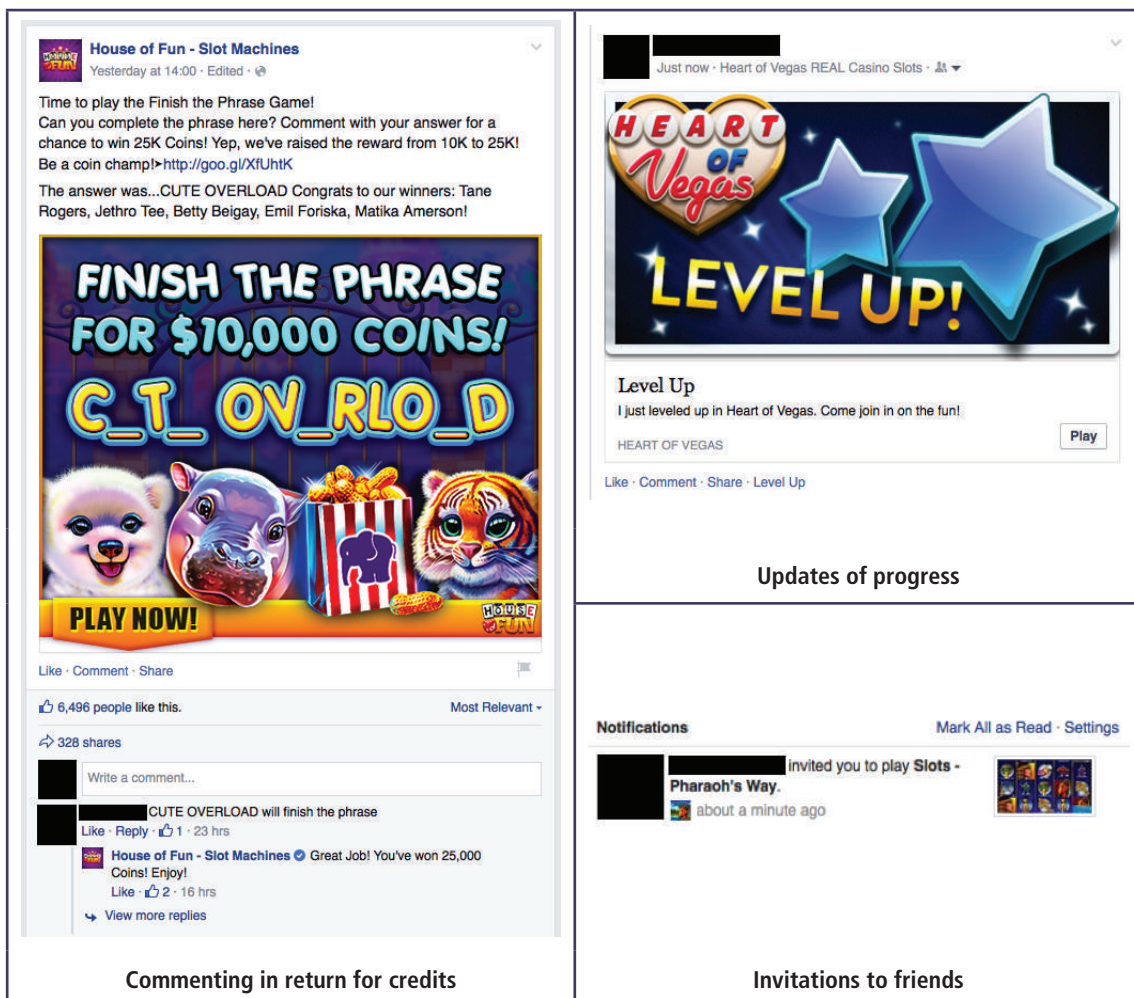
As these types of advertising expose both the users and their social media contacts (e.g., friends or followers) to simulated gambling, significant concerns have been raised. For example, research

shows that while explicit cross-promotions from games to commercial gambling occur either on social media sites or in social gambling games, albeit rarely, a significant perception remains among social gambling and practice game users that operators are encouraging them to try commercial gambling (Gainsbury et al., 2015; Parke et al., 2012). Further, while current research indicates that social gambling gamers rarely use user-posted social features, and that they do not perceive them to have an effect on their desire to gamble or their actual gambling behaviour (Gainsbury et al.,



Source: Gainsbury et al. (2015)

Figure 3: Examples of operator-posted social media advertising



Commenting in return for credits

Invitations to friends

Figure 4: Examples of user-posted social media advertising

2015), some simulated gambling users report that their exposure to advertising of gambling and simulated gambling games through apps and social media is “saturated”, “prolific”, “relentless”, and “overwhelming”, and that it serves as a constant reminder that is difficult for users to avoid (Derevensky et al., 2013; Gainsbury et al., 2015; Gainsbury, Hing, Delfabbro, Dewar et al., 2014; Hing et al., 2014). The constant pushing of simulated gambling advertising through social media may, at least partially, explain some users’ feeling that they are being encouraged to try gambling.

Movement between commercial and simulated gambling

The above discussion raises issues regarding ways in which the blurring of boundaries between gambling and gaming, combined with social media advertising, exposes people at a very early age to a gambling-like experience that may serve to normalise gambling as a suitable and acceptable activity (Griffiths & Parke, 2010). It is argued that this exposure and normalisation may encourage a transition from simulated to commercial gambling, particularly for those who lack experience with, or understanding of, commercial gambling (Griffiths et al., 2014; Griffiths & Parke, 2010; Monaghan, Derevensky, & Sklar, 2008). While the pathway from exposure to engagement has been demonstrated within land-based commercial gambling settings (Adams, Sullivan, Horton, Menna, & Guilmette, 2007; Cox, Yu, Affi, & Ladouceur, 2005; Moore, Thomas, Kyrios, Bates, & Meredyth, 2011; Storer, Abbott, & Stubbs, 2009), initial evidence in relation to both simulated gambling and commercial online gambling indicates that transitions between activities are multifaceted and complex, and are not as simple as moving in a linear fashion from simulated to commercial gambling.

Multiple studies have shown that individuals who engage with simulated gambling games or practice games are more likely to gamble than those who do not (Gainsbury et al., 2015; Gainsbury, Russell et al., 2014; Kim, Wohl, Salmon, Gupta, & Derevensky, 2014; King et al., 2014; McBride & Derevensky, 2009). Kim and colleagues (2014) found that it was making additional payments in “freemium” games (i.e., playing a game that is free to play at the basic level, but then choosing to pay to access further content or features to enhance or extend game play) that predicted an individual’s move from simulated to commercial gambling. Furthermore, those individuals who gamble online are more likely to play simulated gambling games than those who gamble solely in land-based venues (Hing et al., 2014). These findings, however, cannot be taken as definitive evidence, as they may reflect an overall interest in gambling rather than a progression from simulated to commercial gaming (Gainsbury et al., 2015; Kim et al., 2014).

A self-report study conducted by Gainsbury and colleagues (2015) sheds some light on pathways between the two, importantly finding that the pathways between simulated and commercial gambling may be more diverse and individualised than first thought. The study found that around 20% of adults and adolescents who played simulated gambling games said they had moved from playing gambling games to online commercial gambling activities, and that 16% of adults and 25% of adolescents reported moving from commercial to simulated gambling. Further, males, younger individuals, social media users and those with gambling problems were more likely to gamble commercially or report an increased desire to gamble as a result of playing social gambling games (Gainsbury et al., 2015). These are interesting and important initial findings. Some care needs to be taken when interpreting these findings, however, as the number of individuals who reported moving between simulated and commercial gambling was relatively small.

So why do people move from one to the other? Table 1 displays the reasons provided by participants in Gainsbury and colleagues’ (2015) research. This research is the first attempt to delineate motivations behind decisions to move between simulated gambling games and commercial gambling. As shown in Table 1, the primary motivator that was reported to influence movement in either direction between simulated and commercial gambling was money; people moved from games to commercial gambling in an attempt to *win* money, and people moved from gambling to games as a way to *avoid* spending money.

Other common themes arising from these responses included the skills required of each activity, the perceived challenge, and the enjoyment gained. For those moving from *simulated to commercial*

gambling, the perception that they had a good chance of winning while engaging in commercial gambling, and that commercial gambling is a challenge and more exciting than simulated gambling were all common reasons for their transition. For those moving in the other direction, from *commercial to simulated* gambling, the perception that games were easier to play, provided a challenge or competition, were a better game experience and were just as much fun as gambling commercially were common reasons to transition. While these findings reveal some similarities in factors motivating movement in either direction, further research is needed to understand these motivations at a deeper level.

Social gambling games to commercial gambling (%)		Commercial gambling to social gambling games (%)	
I wanted to win real money	50.5	I wanted to play without spending money	39.8
Playing social gambling games allowed me to play without risking any money	37.6	Social gambling games are easier to play	28.9
I thought I would have a good chance of winning at real-money gambling	31.7	Social gambling games are a better game experience	27.7
Playing social gambling games allowed me to develop my gambling skills	30.7	Playing social gambling games is just as much fun as gambling for money	22.9
Gambling for real money is more fun and exciting than social gambling games	25.7	I wanted to challenge myself	19.3
Real-money gambling is a better game experience	17.8	Social gambling games are more social than gambling	19.3
I wanted to challenge myself	17.8	I wanted greater competition against other players	16.9
Real-money gambling is easier to play	12.9	I had played social gambling games in the past	15.7
I didn't want my play to be connected to a social network	11.9	I came across advertisements for social gambling games as a result of real-money gambling	13.3
I wanted greater competition against other players	9.9	I wanted to reduce my real-money gambling	7.2
I came across advertisements for real-money gambling sites as a result of playing social gambling games	8.9		
I had gambled online in the past	6.9		

Source: Gainsbury et al. (2015)

Simulated gambling and problem gambling

In addition to the possibility that playing simulated gambling games may lead to commercial gambling behaviour for some, speculation and concern has been raised regarding the possibility that engagement with simulated gambling games may lead to an increased risk of problematic gambling. There are several reasons for this concern.

Firstly, as discussed above, simulated gambling games serve to expose individuals to gambling-like experiences and teach them the “rules of the game”, which may facilitate transition to commercial forms of gambling (Sévigny, Cloutier, Pelletier, & Ladouceur, 2005). The argument is that playing gambling-like games increases the likelihood of transitioning to gambling, and regular gambling then increases the risk of gambling problems. However, while regular engagement in gambling is a necessary precursor to gambling problems, the fact that someone engages regularly in gambling does not ensure their progression to problematic gambling behaviours.

Secondly, players are protected from the negative consequences of losing when playing simulated gambling (i.e., they do not lose “real” money), but are rewarded for winning (i.e., with credits,

music and so on). This may lead people to behave in a riskier manner when engaging with commercial gambling activities as they have experienced the pleasure of winning without the pain of “real” losses (Saugeres, Thomas, & Moore, 2014).

Thirdly, playing simulated games may lead to the development of false beliefs or thought processes about gambling. One of the known risk factors for the development of gambling problems is the experience of a big win early in an individual’s gambling-related experience (Bednarz, Delfabbro, & King, 2013; Gainsbury, Hing, Delfabbro, Dewar et al., 2014; Gupta, Derevensky, & Wohl, 2013; McBride & Derevensky, 2012). Practice games in particular have been shown to provide inflated “payout rates” of pseudo money or credits compared with commercial gambling sites (Sévigny et al., 2005). This may foster an inflated belief in the odds of winning, alongside false beliefs about the role of luck and chance in commercial gambling (Delfabbro, 2004; Gainsbury et al., 2015; Thomas, Moore et al., 2011). These types of beliefs place individuals at greater risk of experiencing problems with commercial gambling (Delfabbro, King, & Griffiths, 2014). Further, the blurring of boundaries between simulated and commercial gambling may lead people to think that their skills at games will transfer to gambling. People who transition primarily as a way to win money through their skills gained in game play, or because it a challenge, are at risk of experiencing gambling problems if they play with an inflated belief in their ability to influence the outcome of the game (e.g., Delfabbro, 2004; Langer, 1975). This is particularly likely to be the case with chance-based commercial gambling, where skill plays no part in the outcome.

A final, related issue with transitioning from gaming to gambling involves the motivation for play. Two motivations identified for playing simulated games are boredom and to relieve negative emotions such as anxiety and depression (Gainsbury et al., 2015; McBride & Derevensky, 2009). Gambling as a way of relieving negative affect and boredom are closely associated with gambling problems, particularly in relation to electronic gaming (pokie) gambling (Thomas, Allen, Phillips, & Karantzas, 2011; Thomas, Sullivan, & Allen, 2009). People who play simulated gambling as a means of temporarily relieving negative emotions may therefore be vulnerable to the development of gambling problems if they transition from games to monetised gambling.

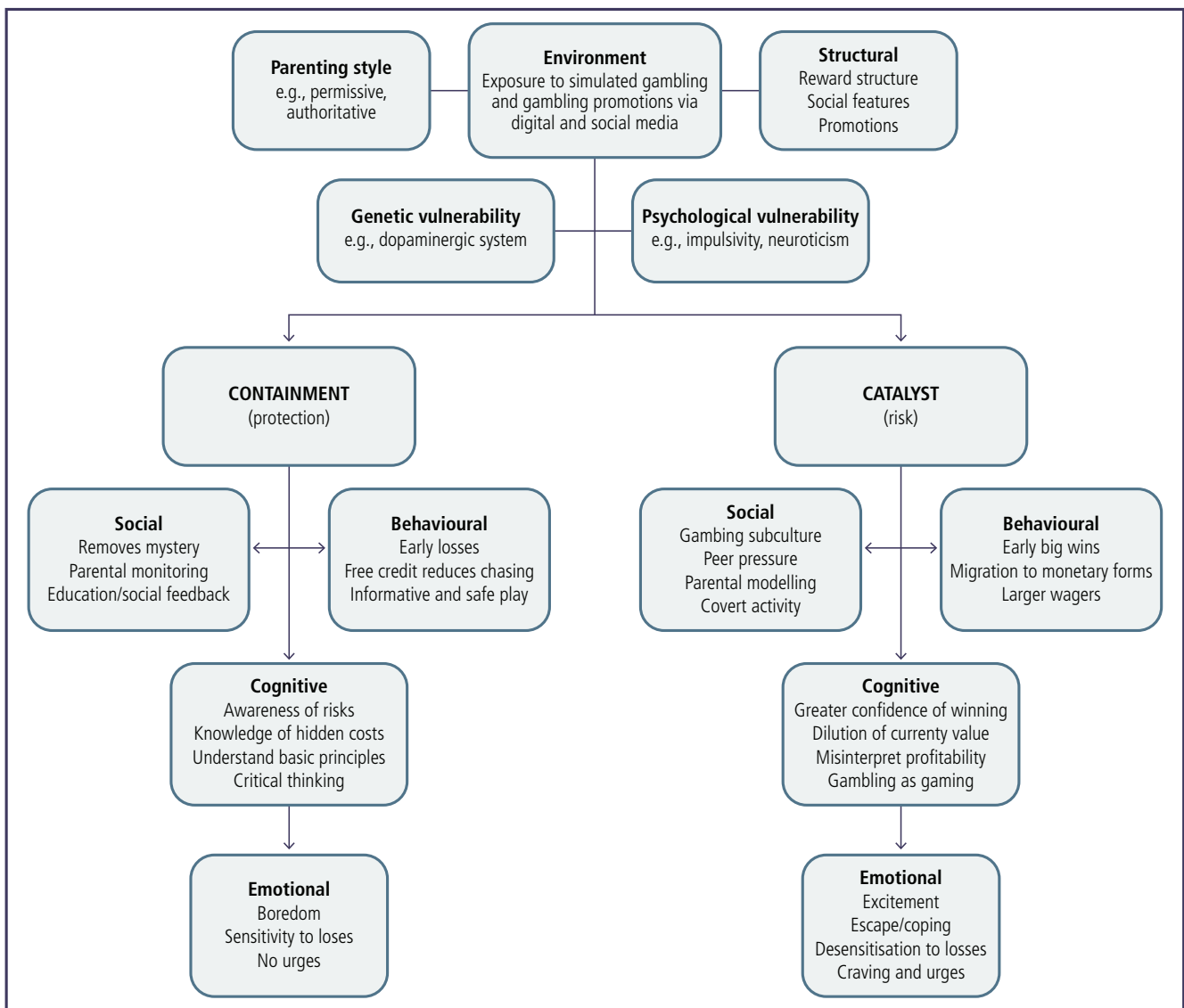
The risk factors identified above may individually or collectively increase the risk of developing problems with gambling for those who play simulated gambling games. Multiple studies have shown that those who have played simulated gambling games in the past are more likely to have a problem with gambling than those who have not (Derevensky et al., 2013; Griffiths et al., 2014; Griffiths & Parke, 2010; King, Delfabbro, Zwaans, & Kaptis, 2012; King et al., 2014; Sévigny et al., 2005). In addition, Gainsbury and colleagues (2015) found that for those with more severe gambling problems, there was a greater likelihood that the individual had also played social gambling games. This ranged from 37% of recreational gamblers to 82% of problem gamblers who had played social gambling games in the past year. These studies, however, are cross-sectional so cannot determine causality. In other words, it is still unclear whether simulated gambling led to risky commercial gambling or whether people experiencing gambling problems are also drawn to simulated gambling.

Interestingly, there is also some evidence to show that playing simulated gambling games as a replacement for gambling can be protective for some individuals (Gainsbury et al., 2015). As discussed above, people who transition from gambling to simulated games may be reducing their risks through finding a suitably challenging and entertaining activity that does not involve monetary losses. However, this substitution may be more effective for some than others. The same study also found that some individuals with gambling problems found simulated gambling and its associated advertising exacerbated the urge to gamble, or increased their engagement with commercial gambling. Further research is required to clarify these complex relationships.

King and Delfabbro (2016) recently proposed a model based on a review of previous simulated gambling research that describes two pathways from engagement in simulated gambling to later gambling behaviour. They describe these as the catalyst and containment pathways (Figure 5). The catalyst pathway describes social, behavioural, cognitive and emotional factors that are associated

with an increased *risk* of developing gambling problems, while the containment pathway describes social, behavioural, cognitive and emotional factors that may *protect* individuals from developing gambling problems, or facilitate less risky gambling engagement. These two pathways are built on background factors that influence the development of the containment and catalyst pathways, and include parenting style, environment, structural characteristics, and genetic and psychological vulnerability.

For example, growing up in a family with parents who had a permissive parenting style may combine with exposure to simulated gambling and peer pressure to gamble, placing an individual at higher probability of engaging in commercial gambling and elevated risk of problematic gambling behavior. However, the model proposes that if the same initial risk factors of permissive parenting and exposure are coupled with education and an awareness of risks, this will provide some protection or containment of risk that the individual will engage in risky gambling behaviour. While this work is preliminary and requires further investigation, the model provides a useful framework for continued research into the factors that may facilitate or mitigate risks of simulated gambling and its relationship to commercial and problematic gambling.



Source: King & Delfabbro, 2016

Figure 5: A two-pathway exposure model for simulated gambling: the catalyst and containment models

Gaming addiction

A further consideration that must be made when discussing simulated gambling is the possibility of players becoming addicted to the games themselves. It has been suggested that excessive use of simulated gambling would fall under the classification of Internet Gaming Disorder, a condition that has been included in the most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) as warranting further study (American Psychiatric Association, 2013; Gainsbury et al., 2015).

Regarding simulated gambling addiction, one study found that 37% of adolescent and 25% of adult social gambling gamers reported experiencing problems with these games (Gainsbury et al., 2015). It should be noted, however, that this sample was drawn from individuals at risk of gambling problems—moderate-risk gamblers as assessed using the Problem Gambling Severity Index for adults, and adolescents reporting one or more negative gambling consequences. Therefore these findings must be interpreted with caution as they may not generalise to the broader population of social gambling gamers. These figures contrast with a recent survey conducted in China, that found approximately 7% of the sample (students aged 15 years and over) were addicted to Candy Crush Saga (a popular game with gambling features) as measured by Young's Internet Addiction Diagnostic Questionnaire (Cheng, 2014).

Nonetheless, these studies provide evidence that a proportion of those playing simulated gambling games experience negative consequences associated with their play. The most frequently reported problems experienced by those playing social gambling games included an inability to limit time, and using them to escape from problems or negative emotions (Gainsbury et al., 2015). It was similarly shown that participants in China who played Candy Crush Saga were most likely to develop an addiction to the game if they were lonely, bored or lacked self-control (Cheng, 2014).

Regulation and classification

The evidence that has been presented thus far indicates that some individuals who play simulated gambling games are likely to move to commercial gambling and that a proportion of this group will be at risk of developing gambling problems. This suggests that users and their loved ones would benefit from having clear classification and regulation of simulated gambling games to ensure they have sufficient information to make informed decisions and appropriate safeguards to protect them from possible or actual harm.

Currently, however, there is minimal regulation and inconsistent classification of simulated gambling games. Most games do not carry warnings or provide consumer advice about the potential risks involved in their engagement or excessive play (Gainsbury et al., 2015). This is despite suggestions from experts that, as a minimum, simulated gambling providers should provide relevant information such as the probability of winning, and warnings about the consequences that could follow from playing excessively, as well as providing the option for individuals to exclude themselves from playing the game (Derevensky & Gainsbury, 2015). The International Social Games Association has published best practice principles for social games; however, the only guideline related to simulated gambling simply states that “casino style games should not deliberately lead players to believe that they will be successful at real money gambling games” (International Social Games Association, 2014).

In Australia, regulation currently differs depending on the platform rather than the type of game. There are three main different platforms that offer simulated gambling games: computer-based games, social media and smartphone/tablet devices. The regulation and classification of simulated gambling games in Australia is explained and critiqued below according to these different platforms.

Computer games

Computer games are regulated by the Australian Commonwealth Government through the Classification Board. The categories available for the classification of computer games include

G (General), PG (Parental Guidance), M (Mature), MA 15+ (Mature Accompanied), and R 18+ (Restricted) (Australian Government, 2012). Classifications are made on six elements: adult themes, violence, sex, language, drug use and nudity (Australian Government, 2012). While there is some movement to incorporate simulated gambling as a theme that may limit access to children, this has yet to be put in place.

Gambling comes under the broader heading of adult themes and is generally classified in three ways: for the presence of simulated gambling, gambling references or gambling themes. King, Delfabbro, Derevensky, and Griffiths (2012) examined classifications within Australia in the ten years to 2002 for over 100 retail video games that included simulated gambling. Over two-thirds of these had received a PG rating, with the remaining third receiving a G rating. In addition, this review found that the classifications given and warnings provided in relation to simulated gambling within computer games were inconsistent and inadequate.

Social media, smartphone and tablet apps

Unlike computer games, apps available through smartphones, tablets and social media, are not regulated through the Classification Board, but voluntarily through each provider. The three main providers of these apps are Facebook, Apple and Google. As shown in Table 2, providers do not specify guidelines for the provision of simulated gambling apps, but instead focus most of their attention on commercial gambling. Apple and Google, however, do provide some guidance regarding the classification of games containing simulated gambling. Google has recently brought their classification structure in line with the minimalistic guidelines provided for computer games through the Classification Board, which is outlined above.

Table 2: Regulation and classification on Facebook, Apple and Google

	Facebook	Apple	Google
Store	App Centre	App Store	Google Play Store
Guidelines for the provision of simulated gambling	None	None	None
Guidelines for the provision of commercial gambling	Companies must seek Facebook's written permission beforehand	Apps must be licensed within the location that they are being offered	No commercial gambling apps permitted
Recommended ratings for simulated gambling	Not provided	12+	Only offered to individuals of "medium" or "high" maturity
Comments	Least restrictive platform		Classifications made consistent with Classification Board from May 2015
Source	Facebook (2014)	Apple (n.d.-a, n.d.-b)	Google Play (n.d.-a, n.d.-b)

Comparing classification across platforms

To highlight the diversity with which simulated gambling can be classified across platforms, Table 3 provides an example of a single app, Texas Hold'em, that is available across the four identified platforms.

Table 3: Comparisons of classifications of Texas Hold'em across platforms

	Computer games	Google Play	Apple App Store	Facebook App Centre
	Rating M	M	12+	N/A
	Reasons Simulated gambling, online interactivity	Not provided	Infrequent/mild alcohol, tobacco or drug use or references Frequent/intense simulated gambling	Not provided
	Source Australian Government (2015)	Google Play (2015)	Apple (2015)	Facebook (2015)

As can be seen in Table 3, the rating given to the same game ranges from no rating if accessed through the Facebook App Centre, to 12+ through the Apple App Store, and an M rating through Google Play or computer games. Neither Google Play nor the Facebook App Centre provide reasons for the ratings to guide the user in their choices, while the Apple App Store cites “frequent/intense simulated gambling”, and computer games cite “simulated gambling”.

The classification system as it currently stands therefore fails to provide clear warnings regarding potentially inappropriate content and is inconsistent across platforms. This is in contrast to other similar issues, such as drug and alcohol use. The rapidly evolving technological environment presents a challenge for regulators and industry. The fast-paced development of both games and technological platforms has meant that regulation and classification to provide appropriate consumer protections around these games has struggled to keep up. Solutions must be found to provide effective and efficient protections for users. The most efficient solution to this problem is for there to be consistency in the regulation and classification of games not only provided through consoles and computers, but apps as well. In addition, ensuring that the presence of gambling within games is dealt with more consistently would further ensure that the right information and safeguards are provided to users of these platforms and games.

Types of simulated gambling games

Researchers have articulated a number of key characteristics that differentiate different simulated gambling games (see Gainsbury, King, Delfabbro et al., 2015; Griffiths, King, & Delfabbro, 2014; King, Delfabbro, Zwaans, & Kaptsis, 2012; King et al., 2014; Parke, Wardle, Rigbye, & Parke, 2012). These include the centrality of a gambling theme, the payment model, the social features, and the platform.

Centrality of gambling theme

Simulated gambling can be integrated within a game in a number of different ways, and the centrality of gambling within the game is an important differentiating characteristic. Some games have gambling at the core of their theme and purpose, such as “slots” games (also known in Australia as “pokies”) or poker games. Alternatively, a mini gambling game may be included within a bigger, more complex non-gambling game. Finally, a game that, on the surface, does not appear to have a gambling theme at all can include elements that are commonly associated with gambling (e.g., offering random, intermittent “wins”—something that is known to be reinforcing) (Griffiths et al., 2014).

Availability of payment options

While the majority of simulated gambling games are free to play, many operate under a “freemium” model. This means that the basic game is free, but players can choose to pay to access further content or features to enhance or extend game play (Casual Games Association, 2012; Parke et al., 2012). However, players are generally not able to “cash out” their winnings for real money, and are only able to purchase further virtual goods within the game (King et al., 2014). While commercial data suggest that the majority of players (up to 98%) do not spend any money on simulated gambling activities (Lewis et al., 2012), a study of simulated gambling game players showed that up to half of their sample had spent money while playing these games (50% of adults and 40% of adolescents), usually spending less than \$20 in each sitting, on buying more “credits” or more time to continue playing (Gainsbury, King, Delfabbro et al., 2015). Given the ambiguity in these findings, further research is needed to fully understand the extent and role that the payment model has in simulated gambling.

Nonetheless, it is important not to underestimate how much profit can be made from simulated gambling, even with possibly very small percentages of players spending money. The global social gaming market was valued at US\$5.4 billion in 2012, and is projected to grow to US\$17.4 billion by 2019 (Transparency Market Research, 2015). Griffiths and colleagues (2014) argued that payment models within simulated gambling offer a way for individuals to pay to be entertained rather than to win money; that is, it is the “intrinsic rewards of playing the game itself (e.g. the achievements, the reinforcing pop-ups, and the customization opportunities” that players pay for (p. 333). Research evidence provides some support for this assertion, but also suggests a wider range of reasons for spending money on simulated gambling, including to increase enjoyment, to take up a special offer or receive customised opportunities, to get ahead in the game, to continue play or so that gifts for friends could be obtained (Gainsbury, King, Delfabbro et al., 2015; Griffiths et al., 2014).

Availability of social features

The ability to be social is a very common feature of simulated gambling. Some games contain built-in features such as in-game messaging, but the most common social feature is integration with existing social media platforms such as Facebook and Twitter. Players can instigate social aspects by “liking” a game, or the game itself may initiate social connections through automated prompts to broadcast a player’s progress or wins, or suggesting the game to other users (e.g., players’ friends or “followers”) (Parke et al., 2012). Interestingly, research suggests most people do not actively initiate the use the social features (Gainsbury, King, Delfabbro et al., 2015). Rather, most of these features are instigated by the game, and provide some kind of in-game “reward” for doing so. This suggests that the purpose of the social aspects of simulated gambling is to recruit new players, rather than encouraging social interactions between players.

Available platforms

Simulated gambling can take place on many different platforms. This includes social network sites (e.g., Facebook), smartphone or tablet devices, gaming consoles (e.g., PlayStation®, Xbox®), stand-alone websites and even interactive televisions (Gainsbury, Hing, Delfabbro, & King, 2014; King et al., 2012). To facilitate play, games are often offered across multiple platforms (Gainsbury, Hing, Delfabbro, & King, 2014). Facebook is the only social media platform to offer a platform for social casino gaming (Gainsbury, King, Delfabbro et al., 2015). According to a recent study, Facebook is the most popular platform on which simulated gambling takes place, followed by websites and mobile phone applications (otherwise known as “apps”) (Gainsbury, King, Delfabbro et al., 2015).

Typology

The characteristics described above converge in various combinations to create a number of different types of simulated gambling. Each type of simulated gambling game is briefly outlined

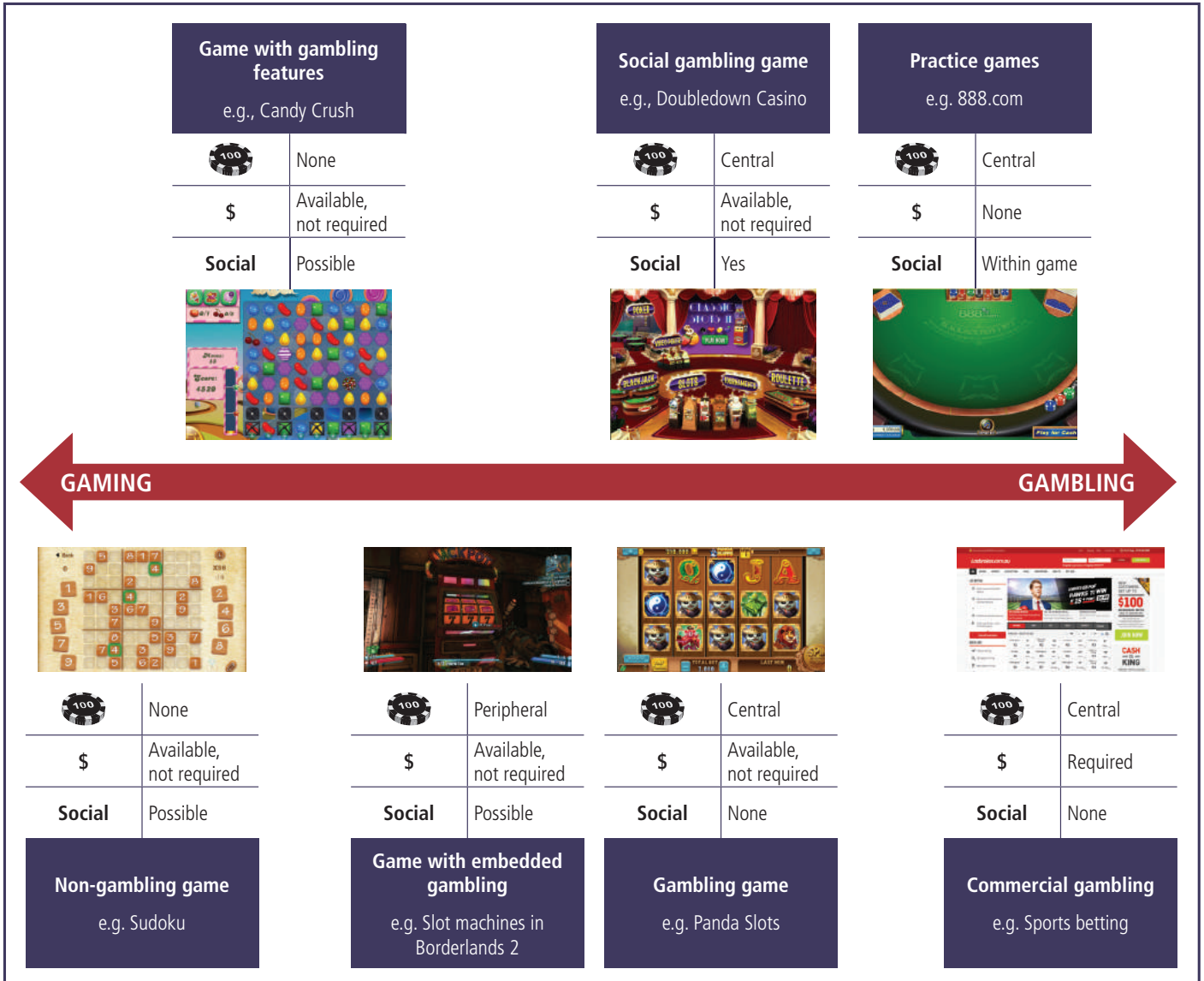


Figure 6: A continuum of simulated and commercial e-gambling

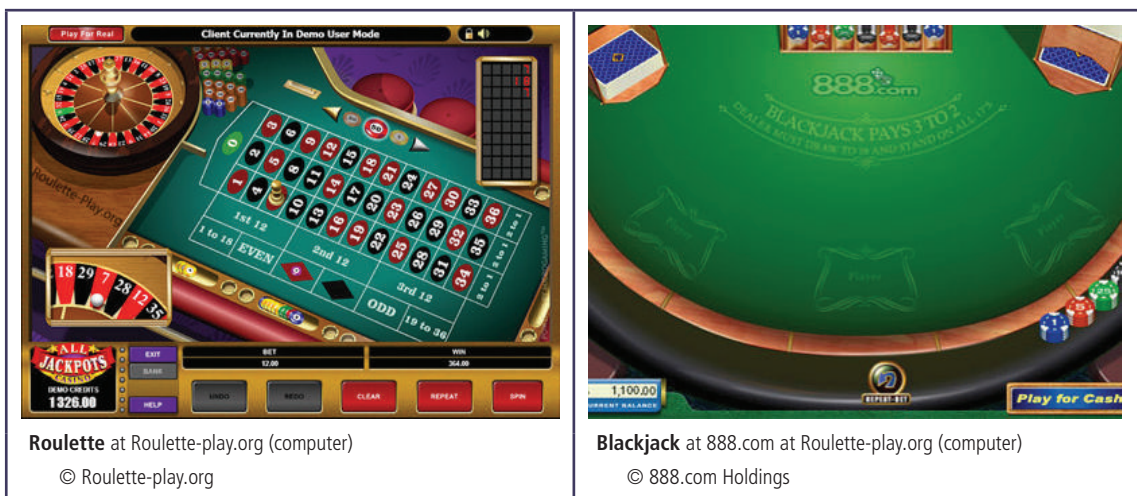


Figure 7: Example practice games: Roulette and Blackjack

below, and Figure 6 shows where each game type sits on a continuum from gaming to gambling. This typology builds on previous work that has been detailed in this area, but does not replicate it. For more information, see the typologies and classification structures published by Gainsbury, Hing, Delfabbro, and King (2014), Gainsbury, King, Abarbanel, Delfabbro, and Hing (2015) and Parke et al. (2012).

Practice game

In a practice game, gambling is central to the theme of the game, but no money is involved (Gainsbury, King, Delfabbro et al., 2015; Gainsbury, Hing, Delfabbro, & King, 2014). While traditionally practice games were played on a computer, they are now also available on mobile and tablet apps. Practice games are often affiliated with a commercial gambling company (Figure 7). Note that while practice games cannot be played for money, many provide clear links to “play for real” or “play for cash”. This allows people to move easily between practice and real-money activities.

Social gambling game

A social gambling game has gambling as a central theme, and there is some kind of link to a social media site (Figure 8). While money is not required to play, it can be used to extend or enhance game play (Gainsbury, Hing, Delfabbro, Dewar et al., 2014). Social gambling games are available on mobile and tablet devices and computers, which provide links to social media. Facebook is the only social media platform that directly provides social gambling games to its users (Gainsbury, King, Delfabbro et al., 2015). At the time of writing, no direct links existed between social gambling games and commercial gambling opportunities; however, commercial gambling companies have begun investing in social gambling games (Schneider, 2012), which suggests the gambling industry sees value in linking games to gambling.

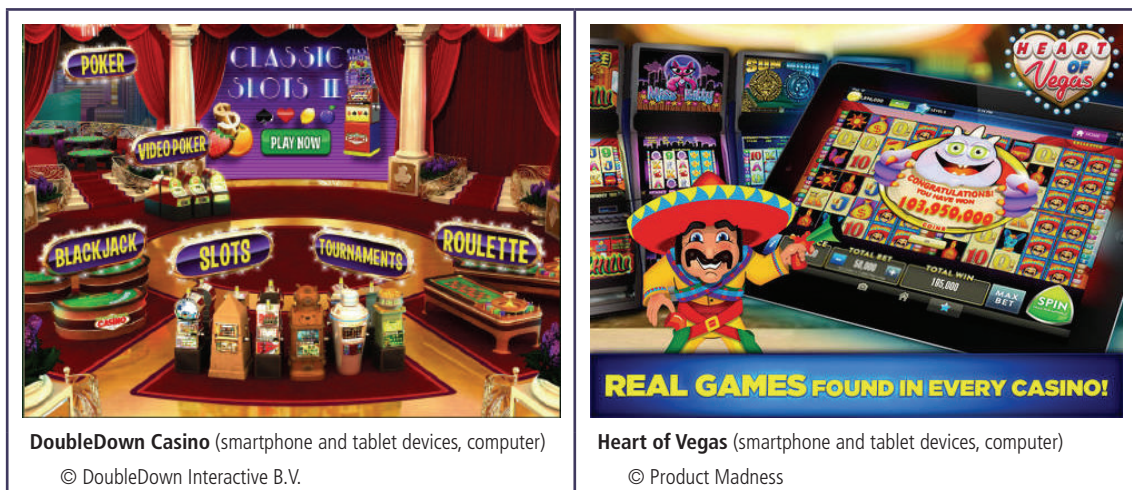
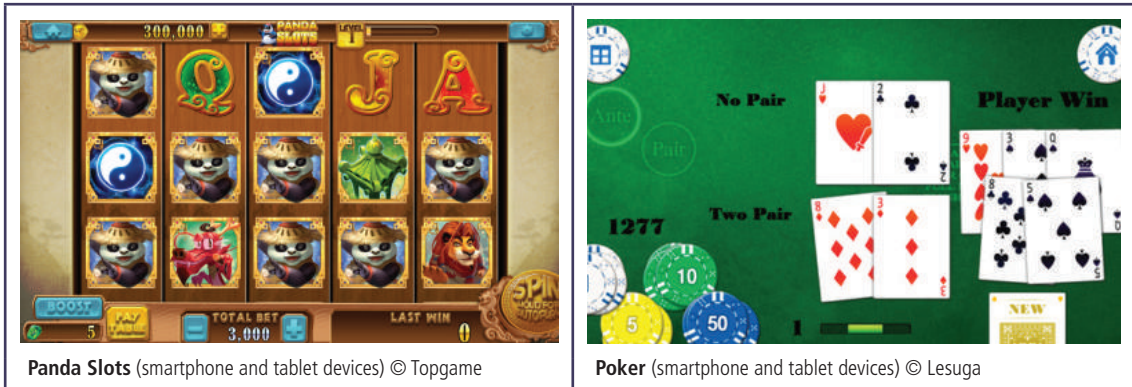


Figure 8: Example social gambling games: DoubleDown Casino and Heart of Vegas

Gambling game

A gambling game also has gambling as a central theme, but there is no link to social media sites, nor does it contain social features (Figure 9). Again, money is not required but it can be used to extend or enhance game play (Gainsbury, Hing, Delfabbro, Dewar et al., 2014). Gambling games are available on many platforms, including mobile and tablet devices, game consoles, and computers. Currently no direct links exist between gambling games and commercial gambling opportunities.



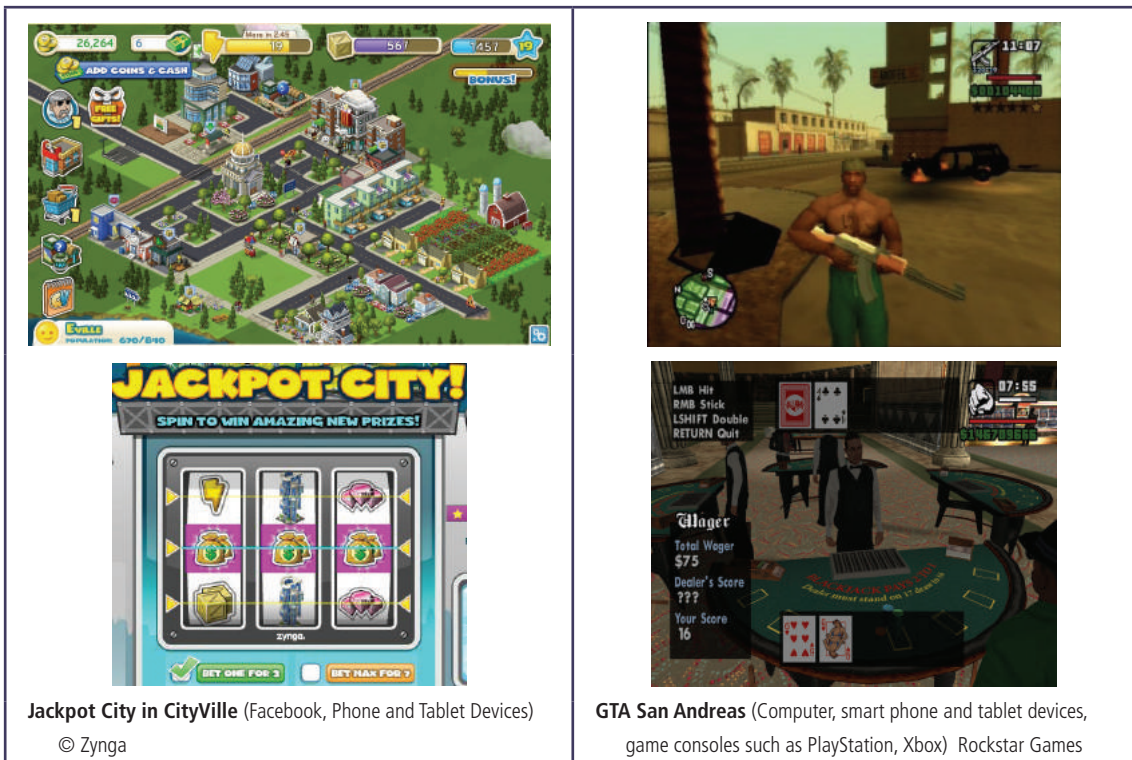
Panda Slots (smartphone and tablet devices) © Topgame

Poker (smartphone and tablet devices) © Lesuga

Figure 9: Example gambling games: Panda Slots and Poker

Game with embedded gambling

A game with embedded gambling does not have gambling as the central theme, but has a minor gambling game or activity inserted into the broader game (Figure 10). Progress in the wider game may be contingent on a certain outcome within this embedded gambling game (e.g., winning a poker game). The game may or may not have a connection with a social media site, and money may or may not change hands to enhance or extend game play. Games with embedded gambling are available on many platforms, including mobile and tablet devices, Facebook, game consoles and computers.



Jackpot City in CityVille (Facebook, Phone and Tablet Devices)
© Zynga

GTA San Andreas (Computer, smart phone and tablet devices, game consoles such as PlayStation, Xbox) Rockstar Games

Figure 10: Example embedded gambling games: Jackpot City in CityVille and Poker in GTA San Andreas

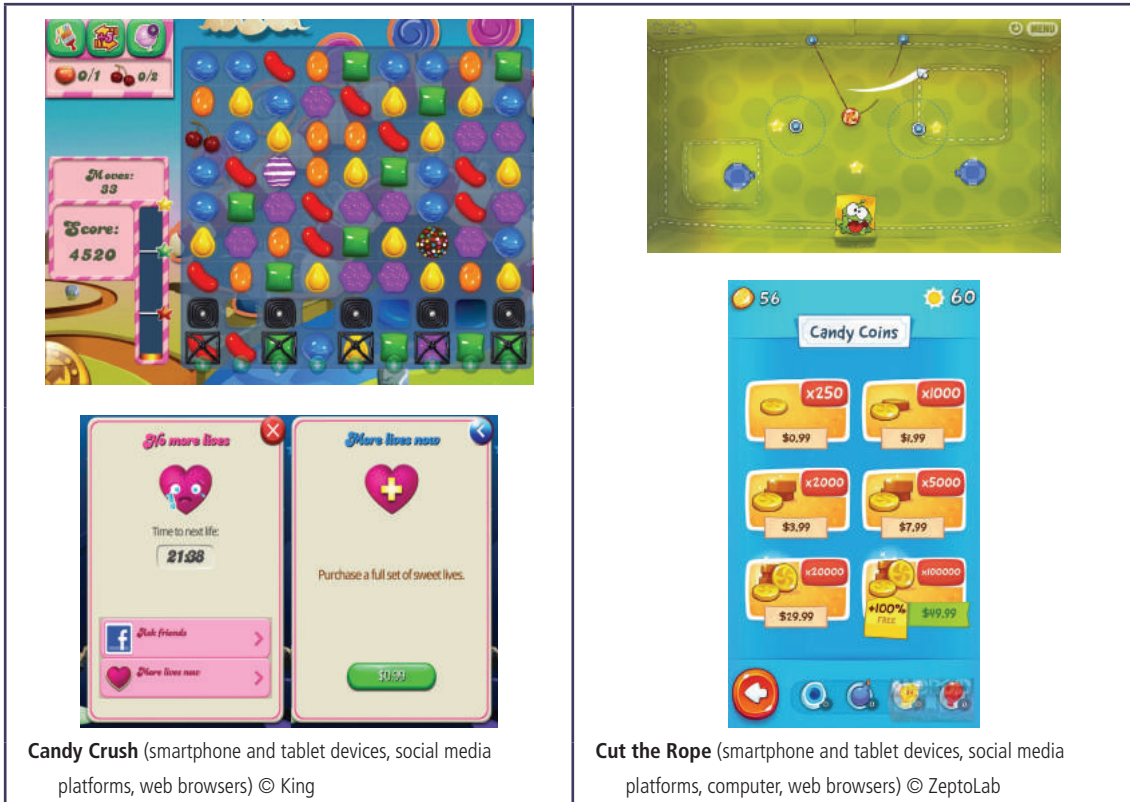


Figure 11: Examples of games with gambling characteristics: Candy Crush and Cut the Rope

Game with gambling characteristics

These games do not overtly include gambling, but have been included as they exhibit some gambling characteristics (Figure 11). The most prominent of these features are the inclusion of reinforcement schedules that are similar to those used in many chance-based gambling activities (Griffiths et al., 2014). These games may also have the ability to use money to extend game play.

Conclusion

Simulated gambling involves games that mimic the characteristics of gambling but do not provide an opportunity to stake, win or lose real-world money. It is a rapidly growing gaming sector that is available through multiple platforms and is proving popular to a wide range of people.

Four characteristics define and differentiate between types of simulated gambling games: how central the theme of gambling is within the game, the payment model used, the social features, and the available platforms. Using these characteristics, there are five different types of simulated gambling games within a typology: practice games, social gambling games, gambling games, games with embedded gambling, and games with gambling features.

People who play simulated gambling games are more likely to gamble commercially and report gambling problems, but reasons, pathways and causality for this co-occurrence have yet to be established. Evidence to date suggests there are various reasons for movement between simulated and commercial gambling and that it is bi-directional.

A number of issues have been identified by academics and the public regarding simulated gambling. The convergence of gambling and gaming alongside an increase in advertising has led to increased exposure to, and possible normalisation of, gambling as a leisure activity. Further, increased risks

of gambling harm may arise depending on the motivations for moving from gaming to gambling and the development of false beliefs about gambling based on game experiences. A new catalyst and containment model has been proposed to examine this area more holistically, however further research is required to substantiate and refine the model.

Finally, the issue of addiction to the games themselves has been identified. Improved classification of simulated gambling games would assist consumers to make informed decisions about participation and this, in turn, would facilitate the development of consistent and clear regulation of consumption by both minors and adults alike.

Next steps

- Research is needed to better understand ways that involvement in simulated gambling may increase gambling risk, including convergence, normalisation of gambling, and the development of false gambling beliefs.
- Research to extend our understanding of the pathways between simulated and commercial gambling would also be valuable, in particular the circumstances in which moving between simulated and commercial gambling is protective or problematic.
- Research should also examine whether and how advertising of simulated gambling influences subsequent gambling behaviour, including whether players' perceptions of influence are accurate.
- The regulation system for simulated gambling games as it currently stands appears inadequate and inconsistent. Strengthening and standardising classification of games and advisory warnings would provide more protections to users.
- A better understanding of addiction to simulated gambling is needed, including more accurate information regarding prevalence rates in the wider population of simulated game players and the reasons behind their engagement.

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