



## **Play-for-Fun/Social-Casino Gambling: An Examination of Our Current Knowledge**

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### ABSTRACT

This report presents the results of a review of literature of our current knowledge of social casino-simulated gambling played on social networking platforms, its similarities between actual gambling, and an examination of the limited research available concerning the potential impact upon vulnerable populations. Social gambling (simulated online forms of gambling) represents one piece of the social media phenomenon, and continues to expand at an astronomical rate with operators claiming millions of participants playing daily for virtual money. Of concern is the convergence between simulated forms of gambling and actual gambling for money, especially among underage populations. We have attempted to examine the scant literature on social gaming with respect to the potential risk and protective factors for young people. Issues associated with regulatory and social policy practices are addressed. Researchers have only begun to empirically examine the impact and consequences of this new form of gaming.

Social games, using a ‘freemium’ model, were initially developed to emphasize the social element of entertainment and player interaction. Many individuals are reportedly purchasing large amounts of virtual credits after their initial free funds are depleted. From an industry perspective, social games that are either solely simulated gambling games (e.g., blackjack, slots, poker, roulette etc.) and those games that are more social but incorporate simulated forms of gambling are amongst the fastest growing segment of this market (the estimated growth rate is 100% annually). Gambling-related games incorporate similar high tech graphics, are predicated upon intermittent reinforcement schedules, and have similar structural and situational characteristics to those forms of gambling found in land-based casinos and Internet gambling sites. Gambling operators have seen the similarity between simulated forms of gaming and gambling and are rushing into building this medium into their business model, with many looking for convergence between their free online sites and their Internet gaming operations. Estimates suggest that approximately 35 million people play social casino-style games, with individuals playing excessively generating a large percentage of revenues for operators through the purchase of virtual credits.

Young people appear to be highly attracted and actively engaged in playing on these sites and represent a particularly vulnerable population. Some researchers have suggested that the overall number of opportunities for young people to “gamble” on these unregulated sites is “overwhelming.” The review highlights a number of studies suggesting that these games remain highly attractive and popular amongst children and adolescents. Several studies have found a linear relationship between playing on these sites, gambling behavior, and problematic gambling. Of particular concern are the numbers of sites which have unrealistic payout and increased winnings when playing for virtual currency. Such sites may promote an illusion of perceived skill/control and may prompt individuals to want to engage in actual gambling for money. Unlike Internet gambling, most social gaming sites are unregulated, have few age prohibitions, and provide both direct or indirect marketing and advertising to consumers.

Given the scant literature in the field, no definitive conclusions can currently be drawn concerning the potential convergence between playing (or excessive playing) of such gambling simulated social games and actual gambling behavior at this time. However, multiple reports

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highlight that while the relationship between social gambling games and their impact is complex, there is some evidence suggesting potential problems and an urgent need for more research examining the potential impact of these games on vulnerable populations. Given that such sites offer the potential to teach young people to gamble, while providing distorted payout rates may result in more problematic behaviours.

The psychosocial impact of social casino gambling is only just beginning to be investigated by gambling researchers and social policy experts. While individuals playing on simulated gambling sites may gamble for money more frequently both on land-based and online gambling sites, only longitudinal research will be able to address the issues of causality and convergence.

Issues concerning self-regulation by the industry and governmental legislation/regulation are continuing to be raised in many jurisdictions. While much of this review focused upon the potential risks associated with the normalization and convergence between social gambling games via social media networks and potential problems associated with youth gambling, there may be some potential positive learning and educational benefits if such games are developed with that goal in mind. Collaborative efforts between funding agencies, regulatory bodies, researchers and operators will help improve our understanding of the short-term and long-term risk and protective factors associated with social casino gaming.

### INTRODUCTION

There is little doubt that the Internet has profoundly changed our daily behavior. We use the web to purchase and sell products, read the news, acquire information, view television shows and movies, purchase music, search for entertainment, participate in political processes, and as a means of communication. Convenient, easy access to the Internet is almost universal, especially among students. The cost of high-speed computer access has dramatically decreased internationally during the past decade as has the cost of personal computers, laptops, Tablets and smart phones. Ease of access and widespread broadband coverage has resulted in individuals being readily connected/wired to the Internet virtually 24 hours a day, 365 days per year.

One of the biggest changes to the way people have engaged with the Internet over the last few years has been seen in the growth of social networking and user generated websites (Kuss & Griffiths, 2011). The term ‘social media’ describes the technologies, platforms and methods in which users share content online. Social media heavily relies on user-generated content and allows users to share, discuss, and participate in an interactive, virtual conversation. Social networking websites provide an easily accessible platform for like-minded individuals to engage with each other using multiple formats, including text, images, videos, audio, and increasingly, games. The largest social networking site, *Facebook*, launched in 2004, recently announced it has over one billion users. However, it should be noted that *Facebook* comprises less than 30% of the unique visitors to the scores of popular social networks worldwide (iGaming Business, 2011), illustrating the extensive nature of social media. There remains little doubt that the vast expansion and acceptance of social networking platforms attests to its popularity. Not only have the number of platforms and number of users increased but so has the time spent on these social networks increased. Active participation increased by 30% between 2009 and 2010, with individuals spending increasingly more time on these sites (Nielsen Company, 2010).

#### **Social Media Gaming**

Social media gaming is barely five years old and represents a huge, ever-expanding business enterprise (Morgan Stanley, 2012). Social gaming, one piece of the social media phenomenon, incorporates a structured activity that has contextual rules through which users can engage with one another. Unlike more traditional computerized games, these games are primarily driven by the online community rather than strategy per se, and don’t necessarily have an ultimate objective or the completion of a particular stage/level of the game. Rather, the games generate user rewards based upon time and effort as opposed to skill. These games are highly accessible, relatively easy to learn and play, tend not to require specific software, and can be played in very short time increments as well as in lengthy installments. Game genres are many and diverse, including casino-type games, role playing, caretaking and simulation games, puzzles, arcade, hidden object, adventure and tournament games, competitive casual games, dating games, sports games, and innovative and creative games (e.g., *Farmville*). While a number of taxonomies concerning the psycho-structural characteristics of videogames has been developed (see King, Delfabbro & Griffiths, 2010; Wood, Griffiths, Chappell & Davies, 2004), can elucidate the appeal of some of these games, their continued use is far more complex..

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Social games (non-gambling games) were initially developed to emphasize the social element of entertainment and player interaction, in contrast to the potential monetary benefit that players can traditionally expect from gambling. However, as more and more social games incorporate elements of gambling into their game play and players are able to purchase additional 'virtual' credits, the distinction between the two activities is becoming increasingly blurred. Korn, Norman and Reynolds (2010) have argued that governments and operators have yet to define and articulate clear rules and procedures covering 'gambling' on social networking sites, although a number of jurisdictions are beginning to more closely examine this issue.

### **AIMS OF THE REVIEW OF THE LITERATURE**

The aim of this review was to gain insight into the relationship between social media simulated forms of gambling and the possible convergence to actual gambling; both land-based and Internet wagering. In particular there is a concern that young people, who exhibit higher rates of gambling, may be particularly responsive to such gambling simulated games. This review will ascertain all the available information concerning our current knowledge and provide recommendations for future research directions.

### **METHODOLOGY**

PsychINFO, PubMed, Google Scholar, Google Alerts (Gambling) and Web of Knowledge were searched for relevant literature concerning the impact of play-for-fun (non-monetary) simulated gambling activities to better understand their popularity and their relationship to gambling behaviors amongst adolescents and young adults. Key words included the following terms: social gaming, social gambling, freemium models, youth gambling, Internet wagering, online gaming, digital gaming, social gaming regulation, and social casino games. As well, a number of well-established gambling-related research sites having multiple reports were scanned for unpublished reports and manuscripts. The following review encapsulates the available information derived from empirical studies, research reports, industry reports and briefs, and personal discussions with gambling operators.

### **LITERATURE REVIEW**

With respect to play-for-fun, social gambling (non-monetary gambling-style games), an examination of many of these games suggests that they are not substantially different from traditional games found on online gambling sites. Both typically focus on the 'entertainment value', appealing to a widely diverse audience, incorporating high tech graphics and representations as well as simpler graphics suitable for lower-tech devices. They are engaging and promote user interaction. Such games are typically offered using a 'freemium' model where they are free to play, although players can also purchase additional credits to improve the game experience with real money. Players are encouraged to continue to play for non-cash promotional prizes with a growing number of sites actually including the possibility to win cash prizes through random draws. Many of these sites allow the participant to accumulate points or credits which can subsequently be redeemed for prizes. The ability to play (although at lower and less entertaining levels) for free is an essential component of these games. This format currently enables operators to escape regulation as the games are not classified as a gambling activity given that in many jurisdictions three elements are required for a game to be considered 'gambling' - consideration, chance and prize. Nevertheless, these social casino style games have

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come under intense scrutiny with the industry and social policy experts squaring off against each other as to whether or not they require regulation (Alaeddini, 2013). Many of the social games quite closely mimic activities featured on Internet gambling sites (also referred to as iGaming); mainly slots, poker, bingo, blackjack, roulette and sports betting.

According to a recent study by SuperData Research (2012), the global market for social casino games has doubled in size between 2011 and 2012 and is currently estimated to be generating U.S.\$1.6 billion in revenues. Thirty-five million people are estimated to play social casino games, 40% of which are located in the U.S., followed by 27% in Europe (SuperData Research, 2012). Revenues in the social gaming market have been primarily driven by advertising within games themselves, sales of virtual items, and micro-payments. Over half of *Facebook* users (53%) reportedly play games on social media sites, with estimates of 81 million people playing at least one social media game daily. Results released by the Casual Games Association (reported by GamblingData, 2012) indicate that free-play casino games generate average daily bookings per user of between 5 and 10 cents, which represents a significantly higher average daily bookings rate than competing social games genres. Social casino games players reportedly spend nearly twice as much as the average social games player (SuperData, 2012) while only representing approximately 20% of the social gaming industry (Morgan Stanley, 2012). Similar to other social games, those individuals playing gambling games excessively ('whales') typically represent 15% of players, but generate 50% of revenue (GamblingData, 2012). Moderate-paying players typically represent between 25% and 40% of a game's paying users, spend between \$5 and \$10 a month, and account for about 25% of revenue. Low-paying players typically represent between 45% and 60% of a game's paying users, spend between \$1 and \$5 a month and account for approximately 15% of its revenues (GamblingData, 2012). To show the enormity of this population, the Morgan Stanley Blue Paper (Morgan Stanley, 2012) has suggested that there are currently 170 million social gambling players, well over triple that of online gamblers. They also highlight the importance of trying to migrate social casino gamblers to become online gamblers, especially considering that social media gambling has grown 160% since 2010 whereas social gaming (non-gambling games) has increased by 40% (Morgan Stanley, 2012). If migration was possible, even for a small percentage of those playing for free, this would result in an explosion in gambling revenues for online gambling operators. Titles such as *DoubleDown Casino*, *Slotomania* and *Zynga Poker* are amongst the most popular Apps on *Facebook* (SuperData, 2012).

In 2011, casino operator Caesars Entertainment purchased Playtika, the maker of *Slotomania*, a Web slot machine App with 6.7 million monthly visitors. According to personal communications with a representative from Caesar's World, *Slotomania* "in many ways reflects a typical game found on *Facebook*." Like many other games on *Facebook*, one can purchase virtual coins in order to progress or maintain playing a specific game (e.g., *Farmville* where individuals continue to build and harvest a more robust farm by purchasing farm items as they progress to different levels). Other sites such as *Bebo*, *Hi5*, *MySpace*, *Orkut* are popular social media sites where both direct and indirect opportunities to gamble for virtual currency exist (Korn, Norman & Reynolds, 2010). *Slotomania* is perceived to be similar in that virtual coins can be used to unlock and progress to new levels of the game. While only a "tiny fraction" (less than 2%) of players are reported to purchase virtual coins, they must be purchased using *Facebook* credits and paid with a credit card, PayPal or a similar transfer of funds. While no gifts or prizes are awarded from



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playing, it is not viewed by Caesar's executives as a form of gambling, with disclaimers posted on their website. They do nevertheless discourage underage individuals from playing their "branded gambling games." The use of a disclaimer may work well from a legal standpoint but may not be particularly effective for discouraging individuals who are winning. Caesar's Entertainment was not the only industry member to purchase a social media casino gambling site. International Game Technology (IGT), the world's largest maker of slot machines, paid \$500 million in 2012 for *Double Down Interactive*, which runs a Facebook poker game that has 5.6 million monthly users. Other large companies such as *Betfair*, *Paddy Power*, *Bwin Party* and others have been quickly jumping into the market as well. Another popular play-for-fun website focuses on sports wagering. ESPN, the largest sports network in the U.S., which also hosts multiple versions of championship Texas Hold'em poker, has established a game called *Streak-for-the-Cash*. This App, which can be downloaded on one's PDA, Android, iPhone, Blackberry or Tablet, encourages individuals to build the longest streak of correct picks from a daily list of competitive matchups across the world of sports. Players have the opportunity to win upwards of one million dollars. It is reported that there are 3 million participants registered (Taylor, 2010).

Capitalizing upon Mark Zuckerberg's belief that social gaming is the next big thing, gambling operators have been quick to incorporate such platforms into their business model. While poker currently dominates the social gambling industry today, bingo, slots and other casino type games account for 53% of the market (Morgan Stanley, 2012). Globally, the social gambling industry is approximately 5% of the real money online gambling revenues but the enormous potential to migrate customers to real online gambling in jurisdictions where this is permissible has driven the industry to see its potential revenues. Estimates suggest that the growth rate of social gambling customers is approximately 100% per year, with companies such as *Zynga*, *IGT*, *Caesar's*, *Bwin Party*, *888*, *Paddy Power* and *Betfair* accounting for the largest share of customers (Morgan Stanley, 2012). Jeff Tseng, chief executive of *Kontagent* (an information analytics firm), has suggested that among the 780 million social game participants, 98 million are active players of social casino games (GamesBeat, 2012)

There are conflicting industry reports suggesting that the typical social gamer is a middle-age female (Bwin Party Digital Entertainment, 2012; Church-Sanders, 2011) but other data seems to suggest high popularity amongst young males (McBride & Derevensky, 2012). As industry-wide data is not available for scrutiny, some of these figures must be interpreted with some degree of caution. Other data from casual and social gaming sites suggests young adults may be the most significant users of social games and that 13-25% of gamers are aged 10 to 20 (Newzoo, 2012). This may represent the increased use of mobile social games as such games tend to be played by a younger age group. Furthermore, social networking has the highest penetration globally among youth aged 15 to 24, and reports indicate that almost 50% of 18-34 year olds check *Facebook* when they awake in the morning, with 28% checking before even getting out of bed (Pring, 2012). A survey conducted in the U.S. found that 33% of youth aged 12-17 play free gambling-type games online and Canadian studies have reported that half of the youth surveyed reported playing gambling-simulated games on free-money sites (Derevensky, 2012; McBride, Derevensky & Gupta, 2006). Although there is mixed evidence concerning the extent to which youth use social and free-play gambling games, this group clearly have a high exposure to this activity and are actively engaging in these games with few actual restrictions.

Griffiths (2003), in an early thought piece, talked about the potential impact of technology upon gambling. While acknowledging the play and entertainment value, he articulated the important salient factors which may facilitate and/or promote excessive play. In spite of a lack of empirical evidence at that time, he noted that games or gambling on the Internet within a virtual environment have the potential to provide short-term comfort, excitement, entertainment and/or distraction from daily routines. There is a growing body of empirical support for this perspective and concern that individuals may begin to use social media networks and gambling opportunities as a way of relieving boredom (Derevensky, 2012; McBride & Derevensky, 2009a; 2012). Nevertheless, the salient characteristics identified by Griffiths for Internet gambling, that is, accessibility, affordability, anonymity, convenience, escape, immersion, dissociation, disinhibition, quick and repeated event frequencies, interactivity, stimulation, and asocialability, are all present in both the gambling-simulated games as well as on Internet gambling sites using real money. Griffiths and others have argued that as the popularity of social gaming continues to increase and gambling operators become increasingly involved, the ethical questions of whether young users will be in danger of being exposed to/enticed to gamble and whether the risks of 'gambling' on these sites are being trivialised .

Given both social gambling and online gambling sites operate under similar business models, questions about convergence continue to be raised. The Morgan Stanley Research Report (Morgan Stanley, 2012) suggests five primary forms of convergence:

- a) The introduction of real money gambling elements to social gambling.
- b) The cross selling and marketing of social gambling customers to online gambling sites or real casinos.
- c) The introduction of social gaming features to online gambling sites.
- d) The consolidation amongst operators who have the ability to incorporate similar games on both their non-monetary social gambling site and their online gambling site.
- e) The *gamblification* of non-gambling games (while the customer cannot win actual money he/she may win other items of values (e.g., goods, tickets for raffles, etc.).

### **Youth Gambling and Problem Gambling: A Vulnerable Population**

There is clear evidence that adolescents and young adults continue to be engaged in multiple forms of gambling, often beginning at a fairly early age, in spite of legislative prohibitions. The recent Ipsos MORI (2011) study of underage gambling in England and Wales as well as reviews of international studies all report higher prevalence rates of gambling and problem gambling (as currently measured) amongst adolescents in spite of different methodologies and instruments used to assess problem gambling (Volberg, Gupta, Griffiths, Olason & Delfabbro, 2010). While the number of land-based and online gambling venues continue to increase, our prevention efforts toward minimizing problem gambling have not kept pace. There is also evidence that gambling problems amongst teens is not a particular concern to parents and teachers. Amongst thirteen potentially risky adolescent behaviours, gambling was of least concern (Campbell, Derevensky, Meerkamper & Cutajar 2011, 2012; Derevensky, St-Pierre, Temcheff & Gupta, in press). Even amongst adults, there remains ample evidence that the prevalence rates of gambling and problem gambling is highest amongst the youngest adults (ages 18-25) (Derevensky, 2012; Volberg et al., 2010; Welte, Barnes, Tidwell & Hoffman, 2008, 2011).

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There is abundant research suggesting that early onset of gambling behavior in general is a risk factor for problem and gambling-related harm (Derevensky, 2012; Derevensky & Gupta, 2004; Rahman, Pilver, Desai, Steinberg, Rugle, Kirshnan-Sarin & Potenza, 2012; Shead, Derevensky & Gupta, 2010; Volberg, Gupta, Griffiths, Olason & Delfabbro, 2010). International surveys indicate that adolescents and young adults are gambling on the Internet at higher rates than other age cohorts (Delfabbro, Lahn, & Grabosky, 2005; Gupta, & Derevensky, 2011; Jackson, Dowling, Thomas, Bond, & Patton, 2008; McBride & Derevensky, 2012; MORI/International Gaming Research Unit, 2006; Petry & Weinstock, 2007; Griffiths & Wood, 2007). Adolescents reportedly gain access to Internet gambling sites by intentionally falsifying their age on sites without identification verification and some use their parent's accounts, either with or without permission (MORI/International Gaming Research Unit, 2006). Young problem gamblers appear more likely to gamble for money online than non-problem gamblers (McBride & Derevensky, 2009a, 2012; MORI/International Gaming Research Unit, 2006; Olason, Kristjansdottir, Einarsdottir, Bjarnarson, & Derevensky, 2011; Petry & Weinstock, 2007). Results from a recent survey of 6,682 Australian gamblers found that being younger was predictive of Internet gamblers being identified as problem gamblers (Gainsbury, Russell, Wood, Hing, & Blaszczynski, 2012). As the online gambling industry has matured, improved efforts have been made by some online gambling sites to identify customers and more accurately verify one's age, which has minimized the ease with which an under-aged person could open an account for gambling and withdraw winnings. However, free-play social gambling sites typically have no minimum age requirement nor age verification procedures.

### **Intersection/Convergence of Social Media and Internet Gambling: Implications for Young People**

There is little doubt that the landscape of gambling has changed dramatically during the past decade. Never before in our history have we seen such widespread expansion and diversity of opportunities to gamble, with online gambling representing the fastest growing segment of the market. As of July 2012, there were reported to be 2,909 online gambling sites, with 780 different owners, operating in 78 jurisdictions (Online Casino City, 2012). The global online gambling market is expected to exceed US\$43 billion by 2015, growing at an annual rate of 12% and representing an increasing portion of the global gambling market (Global Betting and Gaming Consultants, 2011), in spite of its current prohibitions in a number of different jurisdictions. As governments have seen tax revenues decline, they have begun to re-examine their public policy and stance on all forms of gambling due to the huge revenue-generating opportunities. Given the rise in popularity and use of social media sites, gambling operators have sought to capitalise on this trend in several ways including using social media as a platform to engage and interact directly with both existing and potential customers, to advertise their products, and to provide free-play gambling games either directly or in partnership with gaming companies. There is also evidence suggesting an increasing overlap between the structural and situational characteristics between gambling and video games (Griffiths, King & Delfabbro, 2012; King, Ejova, & Delfabbro, 2012; King, Delfabbro & Griffiths, 2010; Wood, Griffiths, Chappell & Davies, 2004).

### Direct Play-for-Fun Gambling: Social Gambling Games

Casino style games and other gambling social games have become the most popular social gaming genre. *Facebook* contains the largest number of free-play gambling opportunities. A review in 2010 found 338 applications that allowed wagers using virtual credits (Korn, Norman & Reynolds, 2010). Together, the top five Facebook casino games attract 49,800,000 monthly active users and 11,240,000 daily active users (AppData, cited by Crowdpark, 2012). Examples of these include *Zynga's Texas Hold'em Poker*, which is amongst the most popular game on Facebook according to social games tracker AppData (June 12, 2012), with 34.8 million monthly players and 6.8 million daily players, and reported US\$47 million in revenue during the first quarter of 2012 (Booton, 2012). As of May, 2013 *Zynga's Texas Hold'em Poker* was ranked number 3 in monthly active users (34.6 million users) and number 6 for daily active users (5.86 million users). While a slight decrease between 2012 and 2013 it remains highly popular (AppData, Sept. 30, 2013). Meerkamper (2010) noted the growth of active Texas Hold'em fans on *Facebook* rose from 159,119 in October 2007 to over 24 million in October 2010, with the number one fan site on *Facebook* in October 2010 being *Zynga Poker* (this site is currently the number 2 site only surpassed by Facebook itself). A survey of nearly 300 gambling operators suggested that slot games are thought to represent the biggest money-making opportunities in the social gaming sector (Gutierrez, 2012). Some of the most popular social slots games are offered by gambling operators Caesars Entertainment (*Slotomania*) and International Game Technology (*DoubleDown Casino*), boasting over 2.1 and 1.3 million daily active users respectively (Krafcik, 2012).

While there currently exist hundreds of social media sites, Korn and his colleagues (2010) sought to identify current gambling opportunities on some of the more popular social networking sites frequented by youth. In particular, they attempted to scan the available gambling opportunities on *Facebook*, *MySpace*, *Orkut* and *Hi5* (see Table 1). They identified numerous social gaming sites incorporating gambling games promoting dice, poker, sports wagering, slots and blackjack where individuals gambled on these sites for credits. Based upon their analyses, they concluded that “the number of opportunities for young people to gamble via social media sites is overwhelming.”

Many online gambling operators have offered free-play versions of their own games for several years, which are marketed as ‘practice’ or ‘instructional’ sites, allowing customers to become familiar with the rules of the games before risking actual money. More recently, free gambling games are typically offered on .net sites, to differentiate these from .com sites that operate real money gambling. This distinction usually enables operators to avoid requiring customers to identify themselves and provide proof of their age, and .net sites can also be advertised with fewer restrictions than sites offering real money gambling (Monaghan & Derevensky, 2008; Monaghan, Derevensky, & Sklar, 2008). However, the advertisement of .net sites has been restricted in several international jurisdictions, such as Australia, in recognition by policy makers of the ‘blatant’ attempt by gambling operators to advertise sites closely tied to actual money sites and increase brand awareness.

In response to regulatory changes and in recognition of the vast popularity of social gaming, the last few years have seen numerous major gambling operators establish social games, including many that have purchased or partnered with major gaming companies, or launched their own

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free-play games. For example, in June 2012, MGM Resorts International launched *myVegas*, a free-play social gaming casino where virtual money is wagered to win virtual prizes. MGM Resorts Senior Vice President of Business Development, Tom Mukulich, reported that this is a way to reach the roughly 30 million members of *MLife*, the casino operator's player loyalty program, engage with them no matter where they are located and to strengthen the connection between customers and their brand (Global Gaming Business, 2012). Similarly, Las Vegas's Riviera Hotel has partnered with Buffalo Studios, the creators of *Facebook's* popular *Bingo Blitz* (Live Casinos, 2012). *Bingo Blitz's* online free bingo games are geared to much younger players than those typically engaged in bingo playing, with half of all players being aged 18 to 34.

As previously noted, while poker and slot games appear to be highly popular on these social gambling/gaming sites, other casino and card games, bingo, and sports betting are all available as free-play games. Given their widespread popularity, it is not surprising that gambling operators are seeking to attract these players as potential future customers. Similarly, although online games have a huge customer base, the current and potential online gambling market is currently valued at approximately US\$35.8 billion (H2 Gambling, 2011), dwarfing the revenue of social gaming. The partnership between gambling operators and free online gaming companies represents a speculative undertaking by the gambling operators in that online gambling's current licensed jurisdictions will expand (a highly likely scenario), which in turn will allow real money gambling to be offered to an existing customer base. However, although free-play gambling games mimic real money gambling in many ways, players spend money in very different ways. Rather than opening a 'gambling account' and spending their own funds, free-play gamers use funds to purchase virtual credits, purchase virtual goods, and unlock additional levels and features. The motivation for free-play gaming is likely to differ from the motivation to gamble with actual money. In free-play games, players tend to focus on competing with each other, in contrast to 'beating the house,' and satisfaction from winning in this context appears to eliminate the need to win actual money. If regulations do change to permit real money gambling on social network sites, games such as *Bingo Friendly* which has been licensed in the U.K. and already offers real money gambling via *Facebook*, will require operators to abide by regulatory statutes.

*Bingo Friendly*, already popular, allows players to gamble for real money on both bingo and slots. Michael Saunders, *Jackpotjoy's* managing director, has suggested that "This marks an exciting turning point for the industry and a milestone for Gamesys' business" (iGaming, 2012). In recognition of the revenue to be made by converting social gamers into gamblers, other companies are establishing partnerships to offer real-money gambling. In October, 2012 *Big Fish Games* announced that they will begin to accept real money bets on their slot machine games, which will be offered through the Apple App Store in the UK (Takahashi, 2012a; 2012b). These key developments will test the waters, but are expected to represent the beginning of sweeping changes in both social game development and the gambling/gaming industry.

In addition to games built exclusively upon gambling activities, many social media games incorporate gambling activities as a feature or incidental element of game play (see Table 2). One such example is *Jetpack Joyride*, a social media game that appears to be marketed to children, in which 'Barry' must fly through bubbles and rainbows and dodge electric fields. Although not the core objective of the game, players can also acquire 'spin tokens' which allow individuals to play a slot machine where acquired rewards are used within the game. However,

the slot machine does not appear randomly, rather it recognizes when users are likely leaving the game (such as following a series of losses) and provides incentives to continue playing (Rogers, 2012). The long-running online game *Runescape* has been widely criticized for encouraging youth to gamble. This game features ‘Squeal of Fortune’, which allows players to ‘purchase spins’ from a virtual wheel to win prizes. *Runescape*’s owner, Jagex, has been further criticized for changing the terms and conditions at the same time as introducing this feature to ensure that the company is not liable if a player uses someone else’s credit cards (Screen Play, 2012). These games may result in players having an inaccurate impression of the likelihood of winning on slot machines as well as developing favourable views toward slot machine play as a harmless entertainment activity.

The rationale behind the partnerships and mergers of gambling and gaming companies is most likely an attempt to raise the profile of the casino brand among players and ultimately convert free play gamers to real money gamblers. Results from a survey of almost 300 operators of online gambling sites found that the top reasons to launch a social casino game included anticipation of real-money games on *Facebook*, to pursue a new revenue stream, acquire new players, strengthen their brand, and to test new business opportunities (Gutierrez, 2012). Most respondents surveyed expected social casino games to account for upwards of 25% of their revenue and viewed social gaming as a long-term business opportunity. Although there is increasing competition in this sector, social gambling-style games are outperforming other popular game genres on social networking sites (Gutierrez, 2012).

### **Indirect Gambling: Advertising, Promotions, Customer Interaction, Branding, and Engagement**

Recognizing the popularity of social media and that a large proportion of their customers are active users of these sites, gambling operators are using social media opportunities to engage with players, promote gambling opportunities (both off and online) and support the company’s brand recognition. In addition to direct free-play gambling opportunities, social networks also allow gambling companies to advertise directly to large numbers of potential customers relatively inexpensively. In 2010 the average Internet user in the U.S. reportedly engaged with 9.8 brands via email, 2.6 via Facebook, and 0.2 via Twitter (eMarketer, as reported by iGaming Business, 2011), suggesting that virtual engagement is a highly successful way of marketing to customers. In 2011, Facebook changed its advertising policy to allow gambling operators to advertise directly to users, provided that the product advertised was legal in the country where the advertisement was being displayed. However, there does not appear to be any restrictions on social gambling sites.

A review of social networks popularity amongst youth found that *MySpace* and *Orkut* contain the largest number of indirect gambling opportunities with over 1,000 links to commercial gambling websites that allow real money wagers (Korn et al., 2010) (Table 2). Social networks currently host hundreds of discussion forums, groups, and chat rooms focussed on gambling, often endorsed by gambling operators. As these sites are not designated as gambling sites, they typically have no age restrictions, contain no mention of responsible gambling, or information about the risks of excessive gambling, including gambling problems. A report evaluating the UK’s top ten betting sites based on social media engagement in terms of a company’s social reach, time spent on websites and related revenue found that all sites engaged strongly with

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*Facebook* and *Twitter*, with an average of 62,084 likes and 30,594 followers (QuBit, 2012). Social networking sites cannot simply replicate online gambling sites, rather they are used to portray a brand's personality to fully engage and excite their communities (Knight, 2012). This is achieved through interesting content as well as exclusive promotions and odds that drive customers toward conversion and active betting. Caesars Entertainment's social media strategy involves the use of multiple platforms, encouraging fans to upload photos, and awarding more than 90,000 prizes having a value exceeding \$2 million in a single campaign (Masterminds, 2012). Users could log into games using their loyalty cards and gain accesses to points tied to all purchases and receive secret codes to win prizes. As a result of the campaign, loyalty program membership increased 20 percent, *Facebook* fans increased by 93 percent and the *Twitter* account received a 101 percent increase in followers. This is just one example of how land-based and online gambling operators are using social media to increase customer engagement, strengthen relationships, and increase active customer numbers.

### **Is Gambling on Social Media Sites Harmful to Young People?**

Given the popularity of social media sites and the gambling-style games, the question remains as to whether the intersection between social media and gambling represents a potential risk, particularly for young people, irrespective of the lack of financial investment. Many of the play-for-fun gambling games are primarily designed to enhance the playing experience and encourage ongoing play and provide individuals with an easily accessible gaming experience, incorporating elements of socialization and competition. This may create an opportunity for individuals to practice gambling without the risk of losing actual money and develop favourable attitudes towards gambling, potentially based on an inaccurate understanding of the actual odds of winning. A number of free-play gambling games attempt to drive participants to actual gambling-for-money sites or land-based venues while others have been developed by gaming operators merely for their own play value (Griffiths, King & Delfabbro, 2012; King, Delfabbro & Griffiths, 2010; Bednarz, Delfabbro, & King, in press).

One concern is that simulated gambling on practice sites may build self-confidence and potentially increase one's perceived illusion of control in predicting gambling outcomes, thus resulting in motivating their participation in gambling for real money (Parke & Griffiths, 2011a, 2011b; 2012). There is also evidence to suggest that the possibility to play without money makes games more attractive, reduces barriers to play, and may undermine attempts to discontinue playing (Blaszczynski, Sharpe, & Walker, 2001). Furthermore, such free gambling sites have been identified as potentially fostering future gambling problems and are frequently accessed by adolescents identified as either at-risk for gambling problems or those already experiencing gambling problems (Derevensky, 2005; McBride & Derevensky, 2009a, 2009b; Griffiths, Derevensky & Parke, 2012).

Practice and play-for-fun sites remain concerning and are troubling given their high rates of use amongst adolescents (both males and females), as these sites familiarize youth with gambling, and such sites may encourage individuals to play on money sites (Derevensky & Gupta, 2007; McBride, Derevensky & Gupta, 2007, McBride & Derevensky, 2009a). Incentives such as bonuses and bet-backs (where funds are returned for specific losing bets) for creating accounts and betting with actual gambling sites have been shown to be effective tools in acquiring players. For youth, the decision to begin playing on free gaming sites may not be perceived to be risky

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given no actual money is being wagered. However, a number of sites post messages to players focusing on their 'wins' during these practice games. These messages are thought to give individuals an illusion of control (e.g., practice makes perfect) or help reinforce erroneous beliefs about their abilities (e.g., based upon one's playing skills) (Sevigny, Cloutier, Pelletier & Ladouceur, 2005). Some sites have been shown to have exaggerated payout rates on the play-for-fun site compared to their actual gambling site. Sevigny and his colleagues reported that 45 of the 117 sites visited (39%) provided a payout rate exceeding 100% on the play-for fun part of their website. They also reported that some of these sites used marketing strategies reinforcing erroneous beliefs concerning the notion of chance and randomness/independence of events. The fact that free-play gambling-style games are not regulated allows these games to be designed with more flexibility than online gambling games, for example, the chances of winning may change throughout the game in response to play behaviour. Free-play games generate money by encouraging players to purchase more chips, with chances of winning being optimized so that players spend their chips at a rate that keeps them engaged and wanting to play more. Not unexpectedly, these unrealistically high rates are not maintained when playing for actual money, so individuals may be overconfident, miscalculate the chances of winning and bet more than they can afford to lose.

In a study amongst college students in Canada, the U.S. and Hong Kong, 49.9% of males and 35.0% of females indicated having played on Internet play-for-fun gambling sites (McBride & Derevensky, 2009a). Amongst those playing on these sites, 22.4% were non-gamblers, 57.0% social gamblers, and 86.4% were problem gamblers (based upon DSM-IV scores of >3). As such, there appears to be a clear linear relationship between playing on a practice site, actual gambling behavior and problem gambling. The most frequently engaged in activities were poker playing, blackjack and slot machines on the play-for-fun sites. Of importance was the finding that the median age for beginning playing gambling activities for fun was 16-17 for males, but 14-15 for females.

In a number of studies with adolescent and college age students, a clear relationship was found between time spent on the play-for-fun sites and Internet use in general (Tsitsika, Critselis, Janikian, Kormas & Kafetzis, 2011) and problem Internet gambling (Brunelle, Grenier, Leclerc, & Dufour, 2008; Griffiths, Parke, King & Delfabbro, 2010; McBride & Derevensky, 2009a, 2009b, Olason et al., 2011; Tsitsika et al., 2011). Griffiths and Wood (2007), in a preliminary examination of the national adolescent study in the U.K., noted that amongst youth who gambled online, 29% reported playing free games while Meerkamper (2010) in a more recent national Canadian study reported 33% of underage Canadian youth have engaged in online play-for-fun sites, with 8% reporting having gambled online for actual money. The reasons expressed for engaging and playing on the play-for-fun sites included to relieve boredom (59%), entertainment (49%), helps with free time (30%), it's on a social network site (e.g., *Facebook*) (22%), thrill and excitement (15%), peers and friends are involved (14%), and it represents a good way to improve one's skills for money games (11%). A small percentage of these youth (7%) reported migrating over to online gambling for money sites. Similar reasons for engaging in play-for-fun sites were found for all youth, with problem gamblers providing higher levels of endorsement (McBride &



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Derevensky, 2009a, 2009b). Most recently, King (2013) reported that approximately 10% of Australian youth had played simulated gambling games, with males being approximately twice as likely to do so.

The recent Ipsos MORI National Young People Omnibus 2011 survey of underage children (for gambling) (ages 11-15) in England and Wales revealed that approximately one in seven (15%) children have played on practice gambling games in the past week (it should be noted that past week playing represents a very conservative measure and data was unavailable for past month or past year playing) (Ipsos MORI, 2011). Overall, 11% of children reported playing on *Facebook* and other sites such as *Bebo*, with the most popular play-for-fun games being accessed through *Facebook*. Given the overall findings of underage gambling in general, and that a sizable portion of youth were playing free gambling-style games, they interpreted the data to suggest that play-for-fun sites may have been encouraging young people to engage in gambling for money. They further suggested that children may get the same ‘buzz’ and level of excitement from playing free games as gambling for money. There was also evidence that children who play simulated gambling games are more likely to gamble with real money. Half of the children (51%) who played free online gambling games reported gambling for real money compared with only 18% of youth who had not played on the free games (similar to other studies using children of a similar age; boys being more likely to report having played on these gambling-style games than girls; 21% vs. 9%, respectively). This pattern was found to continue across all forms of gambling (e.g., with those playing on the free sites more likely to engage in actual gambling on the National lottery – 26% vs. 8%; wagering at a betting shop – 14% vs. 1%; and playing bingo for money at a club – 14% vs. 1%). Had a longer time framework been included for playing on the play-for-fun sites (e.g., past month, past year), it is quite likely that the rates of reported gambling on the play-for-fun sites would have been considerably higher. The Ipsos MORI report cautioned legislative and regulatory bodies of the necessity to monitor the play-for fun gambling sites. They suggested that policies will need to cover a broad range of websites that are particularly popular and attractive to children and adolescents. Similar recommendations have been made by regulatory organizations in Australia (DBCDE, 2012) and gambling lobby groups in the U.S. (National Council on Problem Gambling, 2012).

In a preliminary qualitative investigation, Gupta, Derevensky and Wohl (2013) conducted six focus groups including 51 university students, ages 18-24, to examine factors influencing participation, maintenance and cessation of social media sites, and online gambling. In examining social gambling sites, a number of youth suggested that there is a general progression which starts with pure social games, evolving into social gambling sites and ultimately to online gambling for money. While only using a small sample, there is evidence of an easy transition between the social gambling sites and migration to actual online gambling sites for money. One student responded, “I didn’t understand how I got from one place, from playing for fun to being in trouble.” The fact that these social gambling sites become an excellent venue/opportunity for “learning how to gamble” such that individuals perceive they acquire the necessary skills to become competent gamblers attests to the potential transition to actual gambling for money. While this small sample may not be representative of the college age population, Gupta and her colleagues reported approximately 30% played on social gambling sites in contrast to 5.9% that were online gamblers. A considerable number of these youth commented on how they learned to gamble on *Facebook* indicating it served as a “poker training ground.” Those youth with

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extensive online gambling experiences were a bit more skeptical about the migration between the social gambling opportunities and actual online gambling, although several expressed concerns about differentiating virtual and real money, the two becoming blurred given the similarities between social media gambling sites and actual online gambling sites. This qualitative study is currently being followed up by a large-scale longitudinal examination of social gambling experiences amongst college students. In a very large study of college student athletes (N=23,000) in the United States, Paskus and Derevensky (2013) reported that 28.1% of male and 10.2% of females engaged in simulated gambling activities during the past year via social media gambling sites.

In their review of literature, Parke Wardle, Rigbye and Parke (2012) highlighted some additional risk factors that may place young social gambling players at risk for future problems in spite of the very limited research. They suggested that the *freemium* model, while free, can encourage young players to pay for access to more games, with some research suggesting that gambling in the presence or alongside others may increase one's intensity of gambling behavior; the social rewards (e.g., bragging rights) derived from social gambling may be just as powerful or more powerful than monetary rewards as a motivator for continued gambling; where winnings in social gambling games use virtual currency and have little monetary value for the operator, operators may encourage continued playing through longer winning sequences (higher payout rates) and larger prizes; these games may encourage chasing behavior; these games in and of themselves create a sense of normalization of gambling (see also Downs, 2010) and is a ripe environment for advertising online gambling sites; and, there is a heightened risk for convergence between similar looking games (simulated social gambling activities with real online gambling opportunities) given psychological research focused on transfer of learning. King, Delfabbro and Griffiths (2010) have suggested that given our current knowledge of the psychological factors that promote adolescent gambling that there is little doubt that a convergence between social gambling games and online gambling likely exists. They suggest that this new medium of social casino gambling (a) makes gambling more readily accessible and attractive to young people, (b) likely promotes factually incorrect information to young people about gambling, (c) provides an easy escape from mental health, familial and social problems, (d) creates an environment that easily facilitates peer pressures to gamble, (e) parental attitudes toward gambling are easily transferred, and (f) ultimately makes gambling more ubiquitous and socially acceptable. Most recently, King (2013) suggested that when playing slots on several social casino gambling online sites he was unable to lose all his virtual money in spite of his attempts to do so.

In an interesting study, Parke and his colleagues (2012) seeking to examine the relationship between social gambling behavior and problem gamblers distributed a survey to 21 organizations that provide counselling services in the U.K. to gain a better understanding of whether social gambling (for fun or virtual money) had been discussed with their (adult) clients. Less than a third (31.6%) of treatment providers reported that none of their clients reported engaging in social gambling, over half (52.6%) indicated a few of their clients had participated, and 15.8% indicated that approximately half of their clients reported gambling on social media gambling sites. Parke and his colleagues concluded that in spite of the small sample size and exploratory nature of the study, both social gambling games and gambling-related Apps are reported as contributing to gambling problems. They also suggested that such sites may potentially mitigate

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the harms associated with actual gambling for individuals experiencing gambling problems. Although there were more responses concerning the potential risks associated with playing these social gambling games, a small number of treatment providers suggested that they may hold some protective features given there is no potential monetary loss associated with these games. Parke and his colleagues cautioned over-interpretation of these findings due to the small sample size and concerns related to retrospective recall of social gambling participation by clients. It should also be noted that many clinicians and treatment providers may not ask their clients about this form of gambling given one can play these games without monetary losses and as such they may not be viewed as gambling per se. Still further, no longitudinal studies have been conducted to date to determine whether or not playing on simulated-gambling sites actually leads to more gambling.

What still remains unclear is whether a causal relationship exists between playing simulated gambling games, actual gambling for money, and problem gambling. Are youth who gamble more likely to access such pay-for-fun sites or are individuals who engage in play-for-fun sites more like to initiate gambling as a result of their engagement in play-for-fun websites? The national British adolescent study revealed that 29% of adolescents reported playing free gambling-style games (Griffiths & Wood, 2007). Using statistical modelling of the Ipsos MORI 2009 data set, playing gambling-style games for fun was found to be the single most important predictor of whether the child had gambled for money and one of the most important predictors of problem gambling (Ipsos MORI 2009). However, again, caution must be exercised as the data only lent itself to use of a correlational model and not a causal model. Clearly, further research is required before definitive conclusions can be drawn. Nevertheless, it is also important to note that there may be some negative consequences independent of gambling-related problems associated with spending excessive time on these play-for-fun sites (see King, Delfabbro & Griffiths, 2010 for further discussion). Excessive time on such sites precludes youth from engaging in academic and social pursuits. One further point is necessary to be considered. While this review examines the impact of social networking simulated gambling sites on youth gambling, other concomitant and predictive factors (e.g., parental and societal attitudes) may play an interactive and mediating role. However, it is interesting to note that one of the conclusions from the Morgan Stanley (2012) report on social gambling suggests that these sites offer the potential to “teach young people to gamble.”

Adolescents represent a vulnerable population for the acquisition of multiple risky behaviors, including problem gambling. The current available data would suggest a positive correlation and linear increase between playing-for-fun and gambling behavior in general and problem gambling in particular. Early onset of gambling has also been shown to be one other important risk factor for gambling problems (Shead, Derevensky & Gupta, 2010). If one can delay the onset of gambling, then possibly the risks of developing gambling problems may be minimized (Derevensky, 2012; Derevensky & Gupta, 2004). In all likelihood there is an interaction between the play-for-fun sites and early gambling. This coupled with the fact that youth gambling does not appear to be a major concern for parents (Campbell, Derevensky, Meerkamper & Cutjar, 2011), indicates that these play-for-fun games accessed through social media networking sites may be potentially problematic. The Ipsos MORI Omnibus study recommended that careful monitoring of children’s access to free games needs to be established.

### **The Use of Social Media Gambling Sites for Advertising**

Practice sites provide an avenue for gambling operators to advertise, particularly in jurisdictions that prohibit advertising of gambling sites. Professional, high-profile gamblers are often paid to wear clothing that market practice sites during televised poker tournaments. Advertisements for 'free sites' appear frequently on Internet sites as well as on television, magazines, billboards, and radio stations that value and target a youth audience. The adoption of *Facebook*, *Bebo*, *Twitter* and other social media sites represents a direct avenue of access to our youth. While these sites stress the fun and 'educational' nature, some have argued they may be a 'Trojan Horse' strategy used by online gambling companies to acquire players who will eventually transfer to the actual money gambling sites (Moses, 2006). Monaghan, Derevensky and Sklar (2008) argued that advertisements for both online gambling websites and 'practice' sites should be subject to similar regulations described for advertisement of other gambling venues. In addition, they argued that free or practice sites should be prohibited from containing advertisements and direct links to online gambling sites; both of which should have identical payout rates as actual gambling sites.

Of significant concern is whether or not the adoption of social marketing networks and advertising may impede future licensing of Internet providers, in particular in the emerging American market. There are clear indications that provincial governments in Canada are using play-for-fun sites on their own government sites. The caveat is that these sites are prohibited to underage players and they are not currently using social media networking sites to drive young people to their Internet gambling sites. Within the U.S., there is no indication that *PokerStars*, *Party Poker* or *Full Tilt Poker* were chastised for their social marketing and advertising strategies in spite of their closure and prohibition by the U.S. Department of Justice. Yet, from a corporate social responsibility perspective one can make the argument that targeting young people to promote gambling is irresponsible.

### **Predicted Trends and Impacts of Social Media and Social Gambling-Free-Play Gambling**

Predicted trends for social gambling games include further monetization of games, an increase in the types of games available, growth and development of games for mobile devices (including smart phones and Tablets), with both gambling and non-gambling operators entering the market. One key trend predicted to continue and to impact social gaming is the continued convergence of social games with online gambling in an effort to pursue new revenue models for both activities. The rate of growth of both social gaming and online gambling remains high, the activities are potentially complementary and both industries can learn from each other's experiences. Social gaming also represents an attractive market for potential customers for land-based gambling operators. More and more Internet wagering companies have purchased and/or invested heavily in social media development corporations. Similarly, social gaming companies such as *Zynga*, are welcoming partnerships with gambling operators in an attempt to create a more lucrative revenue source. Lazard Capital Markets estimates gambling could add \$640 million a year to *Zynga's* revenue (Edwards & MacMillan, 2012). Strong ties already exist between gaming and gambling operators and many are poised to offer real money gambling via social games once the necessary regulatory approval has been given. With players interested in both free play and real money gambling, companies will continue to explore business opportunities. While *Zynga* initially decided to enter the online gambling business, as they have done in the U.K., they have now reversed their position.

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Part of what is restraining the convergence of social gaming and gambling are the legal and regulatory uncertainties. The issue of whether elements of social gaming can be classified as gambling could become a focus of attention if virtual currency is deemed to have monetary value or can be used to obtain real money or items of significant value. If sites start to offer real money prizes in an attempt to attract and retain players in an increasingly competitive environment, this may also move these games closer to gambling and prompt regulatory scrutiny. If regulation is enacted that would enable real-money gambling on social games, operators would have to make major changes to their sites, games and business models to abide by necessary regulation, including age restrictions, limits on time and monetary expenditure, and demonstrate the fairness of games. Although a few social gaming sites are beginning to offer real money gambling in the UK, until legal boundaries are clarified in various other jurisdictions, notably the US, many operators are concentrating on free-play gambling and customer engagement.

Partnering with gambling operators may leave gaming companies open to criticism of exploiting their young players, particularly children and adolescents. While there is little doubt that parents should play an important role in monitoring their children's online activities, relatively few parents are doing so and are tend to be concerned with other 'more risky behaviors' (e.g., cyber-bullying, sexting and sexual exploitation). Gambling, in general, tends to be rated the least concerning activity amongst 11 other risky adolescent behaviors (including drug use, violence in schools and bullying, spending too much time online, negative body image, alcohol use, excessive video game playing, depression, unsafe sexual activities, smoking, obesity and eating disorders, drinking and driving) by parents (Campbell, Derevensky, Meerkamper & Cutajar, 2012), teachers (Derevensky, St-Pierre, Temcheff & Gupta, in press) and mental health professionals working with youth (Temcheff, Derevensky, St-Pierre, Gupta & Martin, 2013). There is a growing body of evidence suggesting a convergence of simulated gambling games and gambling behavior of underage youth. Whether these play-for-fun simulated gambling sites are accessed through social network websites or through more traditional forms of videogames (there is ample evidence that young people are also playing many simulated gambling games such as blackjack, poker, and roulette via their videogame consoles – e.g., *Sony PlayStation, X-Box, Wii*), there appears to be a clear linear increase between the play-for-fun websites/videogame use, gambling behavior and problem gambling (King, Delfabbro, Derevensky & Griffiths, 2012).

There is growing concern that social gambling sites are being developed for easier use on mobile platforms through the use of Apps, smartphones, laptops, and Tablets. Mobile gambling has been growing dramatically in the past decade. H2 Gambling Capital (reported by Morgan Stanley, 2012) estimates that the mobile gambling market share represented 7.4% of the global gambling market in 2012 but it is projected that it will reach 14.3% by 2013 and 16.6% by 2015. With increasing numbers of young people having access to smartphones and Tablets, their accessibility to social gambling games will dramatically increase (Griffiths, 2011).. Even if one wanted to do age verifications, who would be the target of such verifications? The contract holder? The end user? Given most mobile contracts are held by the parents of teenagers, how would we verify which mobile device is being used by the teenager versus the parent?

### A Call for Self-Regulation?

As long as gambling-style games do not pay real money prizes to players, they are likely to largely escape a rigorous level of regulation, such as is imposed on the gambling industry. Social gambling and its regulation remain amongst the hottest topics in the gambling industry. Alaeddini (2013) has argued that social gambling is not new. There is a real concern about protecting vulnerable populations, especially underage youth. Whether one believes that social media gambling sites and or social media gambling Apps are grooming young children to gamble remains open to debate. In Australia, where the government's review of the Interactive Gambling Act has suggested that public policy and regulation may be needed because such gambling simulated sites normalize gambling, incorporate unrealistic odds, and may provide a false sense of winning. As a result, Clubs Australia has formed its own panel to help tackle the issue of social media gambling after a government review found simulated poker and blackjack on *Facebook* and via downloadable Apps were both popular and highly accessed by young children in spite of reported warnings suggesting they are not appropriate for underage children (King et al., 2012).

Simulated gambling sites and Apps are the fastest growing segment of social gaming with casino style games mimicking traditional gambling. Whether or not they meet the operationally defined definitions of gambling, the onus of responsibility for underage youth should not merely be placed upon the parent but upon the operator and industry as well. Rather, what is new is the way in which it has evolved with its transition to the Internet and social networking sites attracting a new demographic population. Because of its widespread acceptance and popularity, the issue as to whether or not it truly constitutes gambling is a hotly debated topic, with the industry vehemently defending its non-gambling position and social advocates taking the opposite side. Calls for regulation of these activities have met with opposition from operators who claim that customers are only paying/playing for entertainment. Regulators also appear wary of attempting to impose restrictions on this sector given the existing difficulties they face in regulating Internet gambling, which arguably represents a greater problem. However, many of the gambling-style games available are particularly attractive to underage youth, often featuring cartoons, animated graphics, and/or including popular celebrities. In recognition of the increasing intersection between real and non-monetary gambling, some operators are discussing self-regulation and codes of conduct to demonstrate their corporate social responsibility and the need to protect vulnerable groups. Partnering with gambling operators may leave gaming operators and companies open to criticism of exploiting their younger players, particularly children and adolescents. Alaeddini (2013), a gaming attorney, has suggested that the major battleground for social gaming centers on the provision of casino-style games. Such games, such as *DoubleDown* and *Yazino* are reportedly played by upwards of 173 million players monthly. These casino-types of games are accounting for a growing percentage of the social gaming market and are attracting considerable interest and debate (King et al., 2012). Our current knowledge and data would support Rose's (2013) contention that the social gambling industry needs to self-regulate themselves or they will become government regulated.

### CONCLUSIONS

While social gambling/casino type games represent the fastest growing segment of social gaming industry (SuperData, 2012), we have little empirical knowledge of their associated risks and/or possible protective features. Our research in this area remains in its infancy. Funding agencies

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and regulatory boards would be wise to help fund research as quickly as possible to help shape responsible policy decisions. In the interim, a code of standards should be established on key issues including value for money, transparent financial processing, and age restrictions to match local gambling regulations to help protect vulnerable populations.

Gaming providers have long suggested that underage youth are not targeted when providing these play-for-fun simulated gambling sites. Their primary argument is predicated that play-for-fun social games are merely for entertainment only. In general, many of these sites are particularly attractive to underage youth. The authors argue that it is an inappropriate strategy to engage youth in games that mimic real money gambling and are closely related to gambling sites. If free play games are to be provided by gambling operators and gaming companies, it is strongly recommended that underage minors are not targeted, that the graphics should not be childlike, that underage minors be prohibited from playing on such sites given the overall lack of parental supervision, and that warnings should be included stating that winning on such sites does not mean that individuals will also win when gambling for actual money. Responsible gambling frameworks used in relation to real-money gambling should similarly apply to gambling-style games, such as the provision of appropriate information of the chances of winning, and warnings about negative consequences of excessive play. Significant advances have been made in behavioural tracking software such that one can incorporate such programs (e.g., *Mentor*, *Playscan*, *BetBuddy*) as a form of both education and harm minimization on sites and platforms offering simulated forms of casino games.

Monaghan, Derevensky and Sklar (2008) argued that advertisements for both online gambling websites and free-play social media gambling sites should be subject to similar regulations described for advertisement of other gambling venues. In addition, Monaghan and her colleagues argued that free gambling-style games should be prohibited from containing advertisements and direct links to online gambling sites; both of which should have identical payout rates as actual gambling sites. Prizes, promotional materials and/or inducements should be restricted to only adults. Some industry bodies have already adopted similar codes. For example, provincial governments in Canada are using play-for-fun sites on their own government-run online gambling sites. As aptly noted in the Ipsos MORI (2011) report, it is strongly recommended that the use of social media networks to advertise or permit play-for-fun simulated gambling activities be carefully monitored and that research be conducted examining whether or not such games are in actuality a pathway to online gambling.

The psychosocial impact of social casino gambling is only just beginning to be investigated by gambling researchers and social policy experts. The fact that we see growing numbers of underage youth gambling on such sites for virtual currencies is problematic given the lack of government regulation and oversight, and self-regulation by the industry. Does gambling with virtual currencies encourage more positive attitudes toward gambling? As questioned by Griffiths (2013), will this increase the overall prevalence of gamblers and increase the number of problem gamblers? An analysis of the data from the 2009 British adolescent gambling study amongst 8,958 youth between ages 11 and 16, suggests that playing on the money free gambling sites was the single most important predictor of whether the child reported gambling for money and one of the most important predictors of problem gambling for this age group (Forrest, McHale & Parke, 2009).

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The examination of social gambling games and their potential impact is indeed complex as the real world environment in gambling can be found both in a digital internet environment as well as in land-based operations. Whether one views Thorndike's notion of transfer of learning to be more generalizable, one may have to look at the type of gambling activity itself. Still further, other individual determinants such as gender, personality, experiences, cultural, familial and attitudinal values may be important. The review of the limited number of studies to date seems to suggest a growing number of individuals are engaged in playing simulated forms of gambling activities. While individuals playing on simulated gambling sites may gamble for money more frequently both on land-based and online gambling sites, only longitudinal research will be able to address the issues of causality and convergence.

There remains little doubt that at the very least there is an identifiable number of individuals for which there is a convergence between social media gambling sites and actual online gambling sites. The fact that *Facebook* now is the platform for *Bingo Friendly* and *Slots Friendly* in Europe attests to the business model convergence between gambling for pure entertainment and gambling for money. While *Gamesys*, a software developer and the company behind these new games, has partnered with *Facebook*, the company says it has "no intention of marketing to kids." This is little solace given the furry cartoon creatures whose vivid colors and large eyes make them look "eerily child friendly", even bearing resemblance to the characters in *Moshi Monsters*, a social game developed for children (Olson, 2012).

Finally, while much of this review focused upon the potential risks associated with the normalisation and convergence between social gambling games via social media networks and potential problems associated with youth gambling, there may be some potential positive learning and educational benefits if such games are developed with that goal in mind. Parke et al. (2012) have suggested that a better understanding of the context and jurisdiction in which social gambling games are offered needs to be considered. Still further, de Freitas and Griffiths (2008) have argued that while digital technology (e.g., social media gambling games) may be blurring the line between social media and actual gambling, such applications may be useful as a way of educating youth through specific messaging, altering odds to reduce the probability of winning, and through the incorporation of behavioural analytics as a way of providing feedback to the user. While no known sites have done this to date, it nevertheless does not preclude socially conscience operators from doing so. Future research should also explore the extent to which the popularity and use of gambling-style games can be developed to have positive educational benefits and facilitate responsible attitudes towards gambling. Games that teach young people about gambling, including the independence of chance events, probabilities of winning, and house advantages, may reduce the development of commonly held irrational beliefs about gambling. Such games could employ harm minimization strategies by teaching young people to think carefully about whether they want to gamble, and if so, ways in which they should gamble in a responsible manner.

The field is in desperate need of more empirical research. Collaborative efforts between researchers and operators may help better understand the dynamics between social simulated forms of gambling and online gambling. Some gaming operators already have this data. Whether or not they are willing to share this information remains unknown. More empirical research may help allay some of the concerns and fears raised. Only time will tell.



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**TABLES**

## Play-for-Fun/Social-Casino Gambling: An Examination of Our Current Knowledge

**Table 1: Direct Gambling Opportunities**

Search Term	Site	Classification	#	Training or Play	Types of Games	Wagers	Engagement	Interactivity
Gambling	Facebook	Applications	23	Both	Poker/Slots/Casino	Credits	People & Computer	Yes
	MySpace	Games/Apps	4	Play	Dice/Slots/Poker	Credits	Computer	No
Poker	Facebook	Applications	338	Both	Poker/Slots/Casino	Credits	People & computer	Yes
	MySpace	Games/Apps	88	Both	Poker/Slots/Casino	Credits	People & computer	Yes
	Orkut	Applications	32	Play	Poker	Credits	People & computer	Yes
Sports Betting	Facebook	Applications	16	Both	Sports betting	Credits	People & computer	No
	Orkut	Applications	2	Play	Sports betting	Credits	Computer	No
Casino	Facebook	Applications	116	Both	Poker/Casino/Dice	Credits	People & computer	Yes
	MySpace	Games/Apps	33	Both	Poker/Casino/Slots	Credits	People & computer	Yes
	Hi5	Games	3	Play	Poker/Bingo/Pull-tabs	Credits	People	No
	Orkut	Applications	8	Play	Slots/Casino	Credits	Computer	Yes
Slots	Facebook	Applications/Pages (That link to Applications)	81	Play	Slots/Roulette/Poker/Casino	Credits	Computer	Yes
	MySpace	Games	32	Play	Slots/Casino Games/Poker/Blackjack	Credits	N/A	No
	Orkut	Applications	9	Play	Slots/Poker	Credits	N/A	No

(Korn et al., 2010).

## Play-for-Fun/Social-Casino Gambling: An Examination of Our Current Knowledge

**Table 2: Indirect Gambling Opportunities**

Search Term	Site	Classification	#	Training or Play	Types of Games	Wagers	Affiliated Links
Gambling	Facebook	Pages/ Groups/ Applications/ Events	Over 500	Both	Poker/ Blackjack/ Keno	Credit/Money	Zynga poker, www.problemgambling.org.nz, www.twistedspade.com
	MySpace	People/ Music/ Videos/ Images/ Games	Over 1000	Both	Poker/ Roulette/ Blackjack/ Slots/ Sports	Money	www.iCASiNO.com, www.atlanticcasino.com, www.blackjackballroom.com
	Hi5	Groups/ People	484	Both	Slots/ Roulette/ Blackjack/ Poker/ Keno/ Craps/ Baccarat	Credits/Money	www.freelotmachine.ca
	Orkut	Topics/ Communities	Over 1000	Play	Poker/ Roulette/ Blackjack/ Slots/ Sports	Money	www.iCASiNO.com
Poker	Facebook	Pages/ Groups/ Applications	Over 500	Train and Play	Poker/ Roulette/ Slots	Credit/Money	www.fulltiltpoker.com, www.pokerstars.com, www.poker.com
	MySpace	People/ Music/ Videos/ Images/ Games	Over 1000	Train and play	Slots/ Blackjack/ Roulette/ Poker	Credit/Money	www.pokerstars.com, www.gamble.com, www.pokerpages.com
	Hi5	Groups/ Games	1310 + Games	Train and Play	Poker	Credit/Money	www.raiseandfold.com, www.pokerbankrollonline.com, www.nopaypoker.com
	Orkut	Users/ Communities/ Applications	Over 1000	Train and Play	Poker/ Slots/ Horse Betting/ Sports/ Blackjack/ Roulette/ Casino	Credit/Money	www.talkpoker.com, www.bodogpoker.com, www.faircasinozone.com

(Korn et al., 2010)

**APPENDIX A**

**SOME EXAMPLES OF SOCIAL GAMING .NET SITES**

- <http://www.partypoker.net>  
This website does not permit players to wager real money. Chips in players' accounts have no monetary value, and cannot be exchanged for anything of value. Any and all references in the website to "pots," "limits", "betting" or the like are solely for instructional or illustrative purposes and do not involve wagering real money.
- <http://www.fulltiltpoker.net/>