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Internet Gambling: Past, Present and Future

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Key Words
gambling, Internet gambling, online gambling, legality, problem gambling

Glossary

Problem gambling**:** gambling to the extent that it causes significant harm to the individual or people within that person's immediate social network

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Introduction

Beginning in the early to mid-1990s, as Internet access expanded into workplaces and private residences, gamblers in Western societies were introduced to a new realm of Internet-based gambling opportunities. Indeed, all of the traditional forms of gambling, widely available in land-based venues, soon appeared in electronic format over the Internet, and have since been easily accessible to any person with an Internet connection and means of electronically transferring money. Virtually mediated casino games, slot machines, bingos, lotteries, sports wagering, horse race betting, and skill games are all now readily accessible, with new forms of gambling and new sites being added each year. Moreover, the number of peripheral or supporting sites is also growing, including gambling website portals, information pages containing odds and payout figures, and pages for sports handicappers.

The proportion of people who actually gamble online remains relatively low, but is growing as more jurisdictions regulate and legalize Internet gambling opportunities, and as Internet gambling becomes more socially acceptable. While Internet gambling is becoming more and more a normalized activity, the expansion of Internet gambling is out-pacing peoples' understanding of the phenomenon, as well as outpacing many of the laws that are supposed to regulate gambling activity. Consequently, we find ourselves in a situation where we have insufficient knowledge of Internet gambling, including the characteristics of gamblers, the social and psychological dynamics of Internet gambling behavior, the potential link between Internet gambling and problem gambling, and the most appropriate regulatory and legislative stance to take with respect to Internet gambling.

In light of continued and rapid expansion, and in light of existing ambiguities and gaps in current knowledge, this chapter seeks to highlight the major trends and issues associated with Internet gambling today. This is not meant to offer a definitive answer to all questions and issues that are emerging from the current state of Internet gambling. Instead, recognizing that much more research is needed in most areas, this chapter merely seeks to highlight crucial domains of knowledge and research on Internet gambling, as well as any resulting implications.

History of Internet Gambling

Three important developments set the stage for the emergence of Internet Gambling in the 1990s. The first was the small Caribbean nation of Antigua and Barbuda creating a 'free trade zone' in 1994 that effectively allowed U.S. bookmakers (based in Antigua) to accept bets by phone on horse racing and sports, theoretically immune from U.S. gambling prohibition laws. The second was the development of gambling software by Microgaming in 1994/1995. The third was the development of encrypted communication protocols by CryptoLogic in 1995 that allowed secure online monetary transactions.

In 1995 a few sites (e.g., Gaming Club) began offering casino gambling games online without real money being wagered. Sports books (e.g., Intertops Casino and Sports Book) also started posting odds online as well as toll-free numbers to call to place bets. In 1996 InterCasino, based in Antigua, became the first online casino to accept a real money wager online (4 Online Gambling.com, 2006; Schwartz, 2006). [1] It did not take long for other Caribbean islands (e.g., Turks and Caicos; Netherland Antilles) and other online sportsbooks and casinos to follow suit. To better ensure legal protection, most online gambling companies chose to base their operations in small Caribbean or European jurisdictions with permissive

gambling legislation. Prosecution of some prominent online companies with connections to countries having clear online gambling prohibition reinforced this trend (e.g., Starnet Communication in Canada in 1999). By the end of 1996 about 15 online sites accepted wagers. A year later, over 200 sites existed. By 1999 this had increased to 650. By 2002 it was approximately 1,800 sites (Schwartz, 2006). Revenues had similar increases. Hammer (2001) estimated that Internet gambling generated $2.2 billion US in 2000, compared to only $300 million several years earlier.

For the most part, this expansion was initiated by new companies not associated with any land-based gambling venues. In 1999 Lasseters in Alice Springs, Northern Territory (Australia), became the first land-based casino to go online. U.K. based William Hill and Ladbrokes are established land-based sports/racebooks that went online in 1999/2000. Tentative forays were made by a few other land-based companies (e.g., MGM Mirage, Aspinalls, Kerzner International). However, because of the grey legal status of online gambling, most established companies opted not to do anything that might jeopardize their licenses.

The initial online sites were exclusively sports/racing books and online casinos, with sports betting accounting for more than half of Internet gambling revenues in 2001 (American Gaming Association, 2006a). The first online poker room (planetpoker.com) went online in 1998. A major expansion of online poker began in 2003 when the World Series of Poker became a popular televised show in the United States. Many of the entrants for the World Series qualified via online poker tournaments, and both the 2003 and 2004 champions were online poker players. In 2003 the estimated revenue from online poker was $365 million, which increased to approximately $2.4 billion in 2006 (Christiansen Capital Advisors, 2005). Another type of gambling that was later introduced was online lotteries where people could either purchase tickets for land-based lotteries or play virtual lotteries or instant win tickets. Online bingo games were also added, partly to attract more females to online gambling (Henderson, 2005). The most recent additions have been 'skill game sites' and 'betting exchanges'. Skill game sites offer a wide range of word games; puzzle games; strategy games (e.g., mahjong, chess); sports games (e.g., billiards, mini golf); card games (e.g., solitaire); arcade games (e.g., carnival shootout); video games; and trivia games. Most typically, players pay a fee to enter a tournament, with the winner(s) collecting the majority of the entrance fees. Sometimes the contest can be with another specific individual and sometimes it can be against your own previous 'high score'. Betting exchanges are sites that create a marketplace for bettors whereby they post potential wagers on certain events (with accompanying odds and stake size) in the hope that someone will take them up on their offer(s). These wagers are primarily on sporting and horse racing events, but also include wagers on politics or reality television events, etc.

Current Situation

In October 2006 there were over 2,500 Internet gambling web sites owned by 465 different companies listed at www.online.casinocity.com.[2] A few of these companies are publicly traded on the London Stock Exchange, but most are privately owned. The online sites consist of 1083 online casinos, 592 sports and racebooks, 532 poker rooms, 224 online bingos, 49 skill game sites, 30 betting exchanges, 25 lottery sites, and 17 backgammon sites (Casino City, 2006). A unique aspect of online gambling is the availability of 'free play' at most of these sites, ostensibly to familiarize the person with the game and to improve their skill. However, research suggests that a more nefarious purpose is sometimes to deceive players into

thinking the odds of winning are better than they actually are (Sévigny, Cloutier, Pelletier, & Ladouceur, 2005).

These online sites operate in 42 different jurisdictions, with the main ones being Costa Rica (382 sites), Antigua and Barbuda (366 sites), Kahnawake Mohawk Territory in Quebec (344 sites), Netherland Antilles (Curacao) (334 sites), Gibraltar (170 sites), United Kingdom (103 sites), Malta (87 sites), and Belize (55 sites). The jurisdictions with the highest volume of online transactions are, in order, the United Kingdom, Kahnawake Mohawk Territory, Antigua and Barbuda, Gibraltar, Costa Rica, Netherland Antilles, Malta, and the United States (Casino City, 2006). Many companies have developed their own gambling software. Many others use commercial software with the most popular ones being from Microgaming (161 sites), World Gaming (134 sites), Playtech (119 sites), Tribeca Tables (117 sites), and 24hPoker (92 sites) (Casino City, 2006). Some sites require software downloads to play, while others allow playing on instant online software such as JAVA.

Revenues are very difficult to determine, but have been estimated at about $12 billion in 2005 by Christiansen Capital Advisors (2005). This perhaps represents 4 - 6% of the worldwide gambling market (Bowsher, 2006; London Stock Exchange, 2005). There have also been widely different estimates of the proportion of the market accounted for by different types of gambling. Consistent with these estimates, however, is the fact that sports and horse race betting, online casinos, and poker account for about 95% of the total share (London Stock Exchange, 2005; RS*e*Consulting, 2006). There are no reliable figures on market share of revenues by country. The United States is believed to be the single largest market, at 26%. The Asia Pacific region is estimated to be 54% and Europe is estimated to be 20% (RS*e*Consulting, 2006).

Prevalence of Internet Gambling

The actual number of people who gamble online has been estimated to be between 14 – 23 million, with between 28-35% (4 million) of these being U.S. citizens, 49% (7 million) being from the Asia-Pacific region, and 23% (3.3 million) from Europe (with the U.K. accounting for 1/3) (American Gaming Association, 2006b; RS*e*Consulting, 2006).

The prevalence of online gambling in the general population tends to be quite low, but growing. The 1999 the British Gambling Prevalence Study found that 0.2% of the population had gambled online (Sproston, Erens, & Orford, 2000). In 2006 it was estimated that 2% of U.K. adults had gambled online in the past month (Gambling Commission, 2006). In 2005 3.5% of Internet users (age 18 – 55) in the Netherlands (who comprise roughly 60% of the population) stated that they had participated in online gambling (Motivaction International, 2005). This was a reduction from 5.3% in the previous year. In New Zealand in 2000 approximately 1.3% of adults had gambled on the Internet in the past year (Amey, 2001). A national study of gambling behaviour in the United States in 2000 found a past year Internet gambling prevalence of 0.3% (Welte, Barnes, Wieczorek, Tidwell, & Parker, 2002). More recent surveys of the general U.S. adult population in 2006 have found rates of 3% (Rasmussen Reports, 2006) and 4% (American Gaming Association, 2006c). Provincial studies in Canada from 1999 to 2003 found past year Internet gambling prevalence to be between 0.2 to 2.0%, with an average of 0.6% (Canadian Partnership for Responsible Gambling, 2004).[3] The most recent Canada-wide study in 2006 has found rates of 1.5% - 3.1%, with the higher estimate

including high risk stocks and day trading, and the lower estimate excluding these (Wood & Williams, 2006).

The Comparative Legality of Internet Gambling

The legality of Internet gambling is quite complex, varying from country to country, from jurisdiction to jurisdiction within countries, and from year to year (Cabot, 2006; Rose & Owens, 2005). There are many countries where no laws exist with respect to gambling or online gambling. Other countries have legalized online gambling, permitting both residents and nonresidents to gamble on all forms of online gambling both within and outside the country. Almost all online sites are currently based in one of these two types of countries. Some countries have legislation making certain online forms legal (most typically lotteries, sports/race books, and 'skill games') and other forms illegal (most typically casino games). Some countries prohibit *nonresidents* from accessing jurisdiction-based online gambling sites (e.g., Finland, Canadian provinces). Some go further in also prohibiting residents from accessing online gambling sites located outside the country (e.g., Netherlands). Other countries prohibit *residents* from accessing jurisdiction-based online sites (e.g., Australia prohibits Australians from accessing their online casino site). Several Muslim countries prohibit all forms of gambling, including online gambling (e.g., Pakistan, Saudi Arabia, etc.).

United Kingdom

In the United Kingdom (UK), Internet gambling is regulated by the national Gambling Commission. Online sports betting, horse race betting, betting exchanges, and games of skill can be legally operated in the UK and played by UK residents. It is currently illegal to establish and operate Internet casino, bingo, or gaming-machine sites because current legislation (the 1968 Gaming Act and the 1976 Lotteries and Amusements Act) dictates that a customer must be present in the room in which gaming takes place. However, UK citizens may place bets at offshore Internet casinos without breaking any British laws (Gambling Commission, 2005). Lotteries may not be conducted online, but the purchase of traditional lottery tickets may be aided by Internet and email technologies provided there remains some action by a human operator.

A new national Gambling Act takes effect in September 2007. At that time all forms of Internet gambling may potentially operate from UK soil, conditional upon regulation and licensing.

Other European Countries

Online lottery ticket sales are permitted in Sweden, Germany, and Liechtenstein. Finland allows online horse race betting. Austria permits online lottery sales, casino games, skill games and bookmaking. Holland Casinos was recently granted a license to conduct online gambling in the Netherlands. It is unlawful to facilitate participation in 'foreign games of chance' in the Czech Republic, Denmark, Germany, Hungary, the Netherlands, Slovakia and Sweden. Cyprus, Greece and Portugal explicitly prohibit the granting of online gambling licenses.

Australia

Online gambling in Australia is regulated at the federal level by the Interactive Gambling Act of 2001. However, the different Australian states have the ability to formulate state-specific gambling policies and legislation (Woolley, 2003). Federal legislation permits online sports and race books, poker rooms, and skill game sites to be legally operated in Australia and to be played by Australian residents. Online lotteries are permitted except for keno-style games, scratch tickets, and instant lotteries. Australia does not permit Australian residents to gamble at its government licensed online casino (Lasseters).

New Zealand

The New Zealand government has granted exclusive operating rights for online racebooks and sportsbooks to the Racing Board, formerly known as the Totalisator Agency Board (TAB). Online Lotteries may be run by the Lotteries Commission. It is illegal to organize, manage, or promote any other source of online gambling in New Zealand.

Canada

Canadian federal law has been interpreted by provincial governments as allowing them to legally operate an Internet gambling website as long as the patronage is restricted to residents within that province (Jepson, 2000; Kelley, Todosichuk, Azmier, 2001; Shap, 2002). Thus, the provincially-owned gambling operators in the Atlantic provinces (Atlantic Lottery Corporation, ALC) and British Columbia (British Columbia Lottery Corporation, BCLC) provide online sports betting, online 'interactive' lotteries, and the online sale of land-based lottery tickets to residents of their respective provinces. ALC began providing online services in August 2004 and BCLC in October 2004. Horse-racing in Canada is regulated by the Canadian Pari-Mutuel Agency under the federal Department of Agriculture. In 2003 the federal agriculture minister made a rule change permitting horse-racing bets to be placed not just by telephone but by "any telecommunication device." As a consequence, in January 2004, Woodbine Entertainment, a Toronto based horse-racing track operator, began accepting online bets from across Canada. The legality of Canadians placing bets with online sites outside of their province is unclear. Thus far, no Canadian resident has been prosecuted for such activity.

Certain Aboriginal groups (e.g., most notably the Kahnawake First Nation in Quebec) have taken the position that they are sovereign nations able to enact their own gambling legislation. Although the Quebec government has indicated they consider this illegal, there has been no prosecution of these operations. Kahnawake has been hosting sites since 1999 and is now one of the world's largest online gambling hosts with 344 sites currently offering all forms of online gambling. Other First Nations groups have indicated their intent to also issue online gambling licenses (Six Nations in Ontario, Alexander First Nation in Alberta).

United States

Most online gambling is prohibited in the United States by means of federal and state laws. In October 2006 the federal Internet Gambling Prohibition and Enforcement Act came into effect, which makes it illegal for all "financial transaction providers" to make fund transfers to online sites that take bets or wagers on "outcomes of a contest, sports event or a game subject to chance." It also makes it illegal for Internet gambling providers to accept money transfers from potential U.S. online gamblers. Although many analysts would contend that non-U.S. based companies are not subject to this law, there has been previous successful prosecution of

non-U.S. based sites under the federal Wire Act using the contention that Internet gambling occurs in both the jurisdiction that takes the bet and issues the bet. As a consequence, a significant number of online gambling sites have stopped taking bets from U.S. citizens (about 25% in November 2006) (Casino City, 2006). Major gambling software companies (e.g., CryptoLogic, Boss Media) have also announced that their software platforms can no longer be used to provide gambling services to U.S. residents (Vallerius, 2006). This new law is not directed at individual bettors, and there have only been rare cases of prosecution of U.S. citizens for placing an Internet bet (Rose & Owens, 2005). There is speculation that U.S. players will begin using non-U.S. bank accounts for betting or will make more use of offshore financial transaction intermediaries to place bets or transfer money (e.g., NETeller, FirePay, or Citadel) (American Gaming Association, 2006a).

This new legislation exempts online intra-state sales of lottery tickets (via terminals in retail outlets), inter-state horse race betting, and other types of intra-state online gambling, as long as the individual state does not prohibit it (several states have explicitly prohibited Internet gambling). California permits online wagers on horse racing, and also accepts wagers from other nonprohibited states. It is unclear whether this legislation applies to 'skill games'. There are currently 29 online skill gambling sites operating within the United States that have opted to continue taking bets from other states that do not specifically prohibit online gambling.

Demographic Characteristics of Internet Gamblers

While a number of studies have documented the characteristics and correlates of gambling in land-based venues, there has been far less research on the characteristics of people who gamble on the Internet. Recent research is beginning to shed light on this issue. Studies of Internet gambling conducted in Australia in 2001 and 2002 suggest that rates of Internet gambling are higher among men, younger adults, people with professional or managerial occupations, and people who earn above average incomes (Woolley, 2003; McMillen & Woolley, 2003). Some suggest that this is indicative of a "digital divide," with Internet gambling occurring at higher rates among skilled professionals, whose jobs rely upon familiarity with and competent use of the Internet (Howard, Rainie, & Jones, 2001; Woolley, 2003). These Australian studies, however, tend to focus on sports betting, which makes it difficult to generalize these demographic characteristics to all Internet gamblers.

Higher prevalence rates have been found among youth. A study in Nova Scotia, Canada found that 6% of 15-17 year olds in the province reported playing poker online for money in 2006 (Gillis, 2006). LaBrie, Shaffer, Laplante, and Wechsler, (2003) obtained a rate of 1.9% among U.S. college students. A recent study found that 9% of Montreal, Quebec high school students reported having gambled for money on the Internet and 6% of a sample of Canadian and U.S. college and university students reporting having done so (Derevensky, Gupta, & McBride, 2006).

An online study of 552 Internet gamblers commissioned by the American Gaming Association in 2006 found that 68% were male; 70% were under 40 years old; 61% had at least a college degree; 41% earned more than $75,000 a year; almost all of them used the Internet for other activities; and 70% had only began gambling online in the past 2 years (American Gaming Association, 2006c).

In 2004 the present authors recruited a sample of 1,920 Internet gamblers via an advertisement at an online gambling portal (Wood & Williams, in press). The findings of this

study replicate the above studies in many respects. Slightly more than half (56%) of the Internet gamblers were male. Most were U.S. citizens (87%), and another 10% were Canadian. The average age was 34 years, just over 60% had at least some post-secondary education, and 65% reported being comfortable conducting business and purchasing transactions over the Internet. Interestingly, 12.3% of the sample described themselves as "disabled," thereby implying that issues of access and physical environment might play a role in prompting at least some people to gamble online, as opposed to gambling in land-based venues.

Game-Play Patterns

One of the more under-researched issues is the actual game-play patterns of Internet gamblers, including frequency, duration, and preferred type of play. Given the characteristics of Internet gamblers, and given the immersive and convenient nature of the Internet gambling interface, it is reasonable to expect that Internet gambling offers a fairly unique range of experiences and patterns that are worthy of investigation.

Woolley (2003) surveyed three samples of Internet gamblers, and found that roughly half of them reported placing bets online at least on a weekly basis. He also found that between 44.1% and 65.5% reported routinely using more than one site for Internet gambling. Wood & Williams (in press) found that Internet gamblers, on average, reported gambling online a total of 5 hours per week, although 4% reported gambling online in excess of 20 hours per week. When asked about the location of the computer they used most often to gamble online, 86.6% of the respondents claimed they most often used a computer located in their own home. Only 4.3% claimed that their primary gaming computer was located in their workplace. When asked more specifically about workplace gambling, a total of 16.3% indicated they gamble from the workplace at least occasionally. When asked which single game they played most often, respondents identified blackjack (28.3%), slot machines (25.2%), video poker (15.7%), bingo (12.1%), and sports betting (6.2%). In the American Gaming Association (2006c) study, the casino games people usually played online were blackjack (78%), video poker (65%), slot machines (60%), roulette (37%), craps (29%), pai gow poker or Let it Ride (24%), and baccarat (18%). Texas Hold 'em was by far the most popular type of poker game.

Why do People Gamble on the Internet?

Internet gambling has some attributes that clearly distinguish it from land-based gambling. The most obvious one is much greater convenience, as people can gamble anytime of the day from their home. Another one is that online venues tend to offer better payout rates, due to very low overheads and because competition for patronage is much stiffer, as people can switch venues in the few seconds it takes to click a mouse. A third one is that certain forms of online gambling (e.g., betting exchanges) do not have any land-based equivalent. Griffiths (2003, 2006) has also identified multi-lingual service, faster play speed, and the ability to pretend to be the opposite sex as significant advantages. Females pretend to be the opposite sex in order to be taken more seriously and for a greater sense of security, and males pretend to be females, supposedly to give them a tactical advantage.

In the American Gaming Association (2006c) study the main reasons respondents actually reported for betting online were convenience (48%); fun/exciting/entertaining (24%); more comfortable, don't have to drive (24%); able to win money (9%); and enjoy the anonymity

and privacy (6%). To relieve boredom and for excitement were the most common reasons cited by youth (age 12 – 24) in the Derevensky et al., (2006) study. In the Wood & Williams (in press) study, the primary reasons respondents gave for gambling on the Internet were: 1) the relative convenience, comfort, and ease of Internet gambling; 2) an aversion to the atmosphere and clientele of land-based venues; 3) a preference for the pace and nature of online game-play; and 4) the potential for higher wins and lower overall expenditures when gambling online (Wood, Williams, & Lawton, submitted for publication).

Problems with Internet Gambling

Unfair or Illegal Business Practices

Online gambling sites are not as well-regulated as land-based venues. There have been many cases where online sites have apparently not paid winnings, have cheated players with unfair games, or have absconded with player deposits (Games and Casino, 2006). The ability for players or governments to seek recourse is limited because of the foreign jurisdiction of these sites and/or lax regulatory enforcement within these jurisdictions. Also, as mentioned earlier, another deceptive practice is providing favourable odds on the 'free play' sections of online gambling sites to encourage people to play for real money (Sévigny, Cloutier, Pelletier, & Ladouceur, 2005).

It is unclear how widespread these problems currently are. Security concerns (51%) and legitimacy (49%) were the main reasons for not playing online in an Ipsos Reid study of 2,167 U.S. poker players (Ipsos Reid, 2005). Even among people who play online, 55% believe that online casinos cheat players (American Gaming Association, 2006c).

The online gambling industry itself has made several attempts to create industry standards. The latest attempt is "E-Commerce and Online Gaming Regulation and Assurance" (eCOGRA). This is an industry organization launched in 2003 which certifies online sites as having prompt payments, safe storage of information, random games, honest advertising, and responsible gambling practices. Currently, eCOGRA has only certified about 100 sites (eCOGRA, 2006). It should also be noted that prior organizations have attempted to ensure player protection and have failed to gain widespread acceptance.

Unfair or Illegal Player Practices

Interestingly, the American Gaming Association (2006c) survey also found that 46% of online gamblers believed that *players* have also found ways to cheat. One way of doing this is by means of collusion between online poker players playing at the same table. Another technique is employing computer programs using optimal play ('poker bots') against other players (e.g., Brunker, 2004). Hackers have been known to successfully alter online sites to pay wins (Reuters, 2001; RS*e*consulting, 2006). However, industry representatives usually report their greatest problem to be individuals and criminal organizations demanding payments so as not to disrupt the site's online service prior to major sporting events, tournaments, etc. Reports indicate that online sites pay out millions of dollars in extortion money each year (Current Digest, 2006; Ksherti, 2005; RS*e*consulting, 2006). The lack of clear legislation in many countries about these 'denial-of-service' attacks complicates this problem.

An additional serious concern is money laundering. There are several ways in which this can be done either by the player or the site itself (RS*e*consulting, 2006; U.S. General Accounting Office, 2002). The magnitude of this problem is unknown, but the potential is real,

especially considering the lax regulatory structure of most jurisdictions where online gambling occurs.

Internet Gambling by Prohibited Groups

Online sites are typically required to bar certain people. These include employees of the site, underage gamblers (most sites ban individuals younger than 18), and people who have banned themselves from playing on the site. Their ability to accomplish this, however, is questionable. It would seem to be a relatively easy matter for employees or banned individuals to set up accounts under a different name, although cross-referencing against address and banking details are potentially useful deterrents.

Underage gambling is of particular concern considering that Internet use tends to be highest among teenagers, and they commonly access the free play sections of online gambling sites. For example, approximately 50% of high school and college/university students in a North American sample reported having played on 'free play' online gambling sites (Derevensky et al., 2006). There appears to be reason for concern in light of findings from several studies. A study in 2004 by NCH (Children's Charity), GamCare and CitizenCard in the U.K. found that a 16 year old with a debit card was able to place bets online on 30 out of 37 sites tested (NCH, 2004). A European survey that found that 17% of visitors to online gambling sites were aged 17 or under (NetValue, 2002). A study in Nova Scotia, Canada found that 6% of 15-17 year olds in the province reported playing poker online for money in 2006 (Gillis, 2006). Derevensky et al. (2006) found that 9% of a sample of Montreal, Quebec high school students reported having gambled for money on the Internet.

It seems clear that underage online gambling is a problem, although its magnitude is uncertain. The present ability of online sites to prevent this appears limited due to the wide legal availability of credit and debit cards to underage youth, and the fact that banks and credit reference agencies rarely provide reliable details on a person's age to a third party. Addressing this problem is likely going to require greater cooperation from financial institutions plus efforts by parents to block Internet gambling sites either through normal browser content controls or specialized software (e.g., 'BetStopper'; Canada News Wire, 2006).

Problem Gambling

The ease of access to Internet gambling, coupled with the relative comfort enjoyed by the Internet gambler may lead to a higher frequency of play compared to a land-based venue (Griffiths & Wood, 2000). Furthermore, some researchers argue that the immersive, visual, and aural qualities of the Internet gambling interface may cause Internet gamblers to devote more time to online gambling activity than they might otherwise devote in a land-based venue (Griffiths, 1996; Schull, 2005; Shaffer, 1996). Together, more frequent and longer play is likely to create greater gambling losses. In an immediate sense, these losses may be felt less acutely, if, as some observers speculate, the psychological value of electronic cash is less than that of "real" cash (Griffiths & Wood, 2000). An exacerbating factor is the ability of online gamblers to play under the acute influence of drugs or alcohol, something that is more difficult to do in a land-based venue, and something that has a well established link to excessive and disinhibited play (Baron & Dickerson, 1999; Ellery, Stewart & Loba, 2005; Kyngdon and Dickerson, 1999)

There is, in fact, good evidence that online gamblers are significantly more likely to be problem gamblers. As a reference point, 14 countries have conducted national prevalence surveys of problem gambling between 1998 and 2005. Past year prevalence ranges from 1.1 –

5.4%, with an average of 2.5% (AGRI, 2006) [4]. By comparison, in an online study of 422 self-selected online poker players, 18% of the sample was classified as problem gamblers using DSM-IV criteria (Griffiths, Wood, & Parke, 2006). In a study of disordered gambling among university students, Ladd and Petry (2002) found that the mean South Oaks Gambling Screen (SOGS) score (7.8) among university Internet gamblers was over 4 times higher than the mean SOGS score (1.8) for non-Internet gamblers. A 2005 study of 12,717 Dutch Internet users between 18 and 55 years old found that 14% of online gamblers were 'at risk' of problem behaviour but no one actually evidenced problematic behaviour (Motivaction International, 2005).[5] Among an online sample of 1,920 Internet gamblers the present authors found an astounding 23% to be moderate problem gamblers on the Canadian Problem Gambling Index and another 20% to be severe problem gamblers (Wood & Williams, in press). These researchers used logistic regression to identify characteristics differentiating problem from nonproblem gamblers and found the former to spend more time gambling, to be male, and to be more likely of South or East Asian ancestry or African ancestry. Age, marital status, employment status, religion, and education were not predictive of problem gambling status.

While there appears to be a relationship between online gambling and problem gambling, the causal connection has not been established. There is a good argument that Internet gambling may provide a unique interface and an overall experience that facilitates the development of gambling problems (Griffiths, 2003; Griffiths, 1999; Griffiths & Parke, 2002; Griffiths & Wood, 2000; LaRose, Mastro, & Easton, 2001). However, it is also quite plausible that problem gamblers gravitate to this new and more convenient form of gambling.

This relationship between problem gambling and online gambling creates a potential ethical problem for jurisdictions contemplating legalization. Research has shown that problem gamblers contribute approximately 1/3 of revenue from all types of gambling (Productivity Commission, 1999; Williams & Wood, 2004a, 2004b). It would appear that this is likely to be even higher for online gambling.

Lack of Responsible Gambling Practices

The above discussion highlights the general lack of responsible gambling practices and safeguards that are more typically found in land-based venues. A study of "social responsibility" practices among UK Internet gambling providers found that only half of the 30 websites investigated made meaningful efforts to verify age of majority, and only 7 made explicit reference to the risks of uncontrolled gambling (Smeaton & Griffiths, 2004). A recent review of 60 popular Internet poker, casino and sports-betting sites revealed wide variations in the extent and types of player protection strategies. At one end, some sites simply provided a statement concerning age limits or a link to a Gamblers Anonymous site. At the other end, there were sites that provided self-exclusion options, an on-site counsellor and opportunities for setting time, money and loss limits (Wiebe, 2006).

Some of this variation has to do with jurisdictional regulatory differences. Some jurisdictions require that online players be allowed to bar themselves from the site, or to set loss or betting limits, or limits on the size of the deposits they can place into their account. Some jurisidictions (e.g., Alderney in the Channel Islands) allow exclusion of a gambler in response to a petition from a family member (American Gaming Association, 2006a). Similar to land-based gambling, the Netherlands has the most proactive responsible gambling measures of any jurisdiction. In addition to bans and spending limits, Holland Casino Digitaal has a maximum play limit of €100 per week for ages 18 – 23; also allows players to impose limitations on *visit*

frequency; and will potentially intervene with players observed to have sudden increases in gambling expenditure or frequency (Holland Casino, 2006; Williams, West, & Simpson, in press).[6]

The eCOGRA list of recommended responsible gambling practices is as follows (eCOGRA, 2006):

- Presence of mechanisms to try and ensure that people under 18 do not play.
- A clearly identified self-exclusion program that operates for a minimum of 6 months with no promotional materials going to that person during that time period and the option of a third party making an application.
- A link to a Player Protection and Responsible Gaming page which provides an accepted and simple self-assessment process to determine problem gambling risk and other details about self-exclusion, deposit limits, and other responsible gambling practices offered by the site.
- The ability for players to make limitations on their daily, weekly, or monthly deposits.
- A clock on the screen at all times.
- The denomination of each credit clearly displayed.

Future of Internet Gambling

Future trends are difficult to predict. Nonetheless, the following trends seem well established:

Continued strong revenue growth.

Forecasts are for a compound annual growth rate of about 20% to 2008 as Internet use expands, the richness of the Internet interface increases (e.g., live video-streaming), confidence and familiarity with Internet gambling increases, and with increasing legalization of online gambling (London Stock Exchange, 2005).

Particularly strong growth among the Asian market and female gamblers.

Major increases in the Asian market relative to other markets will occur because of a) current online sites orienting away from the U.S. market; b) the increasing use of the Internet in Asia; c) the illegality of land-based gambling in many Asian countries; and d) the popularity of gambling in these countries. The Asian market has been slower to develop because of difficulties moving money in and out of certain countries and the lack of reliable telecommunications infrastructure (RSeconsulting, 2006). Advertising will pose a challenge due to the illegality of gambling in many of these Asian countries.

Strong growth in Betting Exchanges.

Continued strong growth of betting exchanges is likely due to the better odds for customers and lower cost structures for operators.

Market consolidation.

As the market matures, it is likely that the larger players will attempt to acquire greater dominance through acquisition. In 2005 there were 32 instances of market consolidation, compared to just 9 in 2004 (RSeconsulting, 2006).

Growth of 'mobile gambling'.

Mobile gambling is done on a wireless connected device such as a laptop, mobile phone, and other devices. Some online casinos and online poker cardrooms currently offer mobile options as do some land-based venues in Nevada (Cabot, 2006).

Movement toward legalized and regulated markets (with later regrets?).

Many people believe that prohibition of online gambling is not feasible because of the difficulty in blocking individual players and the difficulty in prosecuting offshore companies (Parke & Griffiths, 2004). They sometimes cite the widespread societal disregard for alcohol prohibition as a model of what would happen with online gambling prohibition. This is part of the reason why many Western jurisdictions are either inching towards (e.g., Canada) or making conscious legal changes toward some form of regulated free market (e.g., UK, Netherlands). Other reasons include the belief that regardless of whether it is good or bad for society, it is better for it to come under some form of legal regulatory control. [7] The loss of revenue to offshore jurisdictions, as well as European Union challenges to restrictive gambling laws are other pressures.

However, an argument can be made that regardless of how difficult it is to enforce, that official prohibition may still be the more appropriate stance considering the a) unsatisfactory business and responsible gambling practices of many online sites; b) the difficulty in ensuring these sites ever meet minimum standards in these areas; c) the significant contribution problem gamblers likely make to online gambling revenues; and d) the high potential that online gambling has to increase both the rates and numbers of problem gamblers. This last point merits special consideration. The lesson of land-based gambling is that legalization increases legitimacy and availability, which strongly increases both gambling and problem gambling in the general populace. And, as many jurisdictions are now realizing, it is very difficult to put the genie back in the bottle once it is out.

The efforts of the United States government in the next couple of years will determine the feasibility and utility of prohibiting online gambling. Alcohol prohibition is not a good model, as prohibiting something that the majority of the populace uses (e.g., alcohol) is much different than prohibiting something where only 2 or 3% currently use. Furthermore, there are other online activities that pose challenges in terms of control (e.g., child pornography, sites promoting illegal, defamatory or hateful content). Nonetheless, legal efforts to block, limit and prosecute these types of sites are helpful, and certainly preferable to permitting unfettered promotion and access.

In any case, there is some inevitability to the legal expansion of online gambling in Western jurisdictions, regardless of its positive or negative impact. In the past 30 years, whenever a new form of gambling or regulatory practice has been introduced in one jurisdiction, most other jurisdictions have followed suit. As some of the larger jurisdictions begin legalizing and regulating online gambling there will be some movement toward basing online operations in these jurisdictions. Although taxes will be higher and regulations more stringent, there are advantages of a stable political environment, capital markets, reliable communication infrastructure, and a large pool of skilled workers (American Gaming Association, 2006a). Competition between sites will continue to make profit margins very tight. Competitive advantage will depend, in part, on reputation, which is related to registration in a reputable jurisdiction requiring more stringent rules around business practices, age verification measures, and other responsible gambling policies.

Increasing rates of problem gambling.

As previously mentioned, the inherent nature of Internet gambling would seem to make it conducive to increasing the rates of problem gambling. Although responsible gambling practices within the more highly regulated jurisdictions will mitigate this to some extent, there will always be 'rogue' sites in less regulated jurisdictions without these safeguards willing to accept any patron with money. The increasing patronage of online gambling sites will also increase the actual numbers of problem gamblers in the general population.

Increasing prevalence of online counselling services.

Some researchers posit that Internet gamblers might be particularly receptive to Internet-based counseling or other online interventions (Horton, Harrigan, Horbay, & Turner, 2001; Wood & Williams, in press). Online counselling is currently being offered in the UK on a pilot basis. Supported by the Responsibility in Gambling Trust, GamAid provides "instant, real-time, one-to-one professional guidance for remote gamblers whose gambling activities are out of control or for those who wish to better understand the concepts of responsible gaming" (Wood & Griffiths, 2006). Early findings indicate that while only 1% of online gamblers accessed the link button from participating gambling websites, women in particular found the service to be helpful.

Researching Internet Gambling

Our understanding of Internet gambling is still quite limited. Considerably more research is needed to understand the advantages and disadvantages of different regulatory and legal structures; the most effective ways of ensuring fair business practices; the most effective means of minimizing harm; the nature of Internet gambling; and the nature of Internet gamblers.

Researching Internet gamblers poses some unique challenges. Traditionally, researchers have used computerized assisted (CATI) random digit telephone dialing (RDD) to select and study representative samples of gamblers. Although RDD surveys exclude a small minority of people without telephones, in most Western societies the technique has the potential to generate a large and highly representative sample (Singleton and Straits, 2005; Volberg, in press). However, a significant impediment to conducting RDD surveys of Internet gamblers is the relatively low prevalence rate of Internet gambling. With current prevalence rates in the range of 1 – 3%, tens of thousands of people have to be contacted to generate a few hundred eligible Internet gamblers. Typical RDD refusal rates of 50% then decrease the final sample by at least half. Thus, for many researchers of Internet gambling, RDD techniques might prove to be very inefficient as well as cost prohibitive.

In recent years, market research companies (and a few academic researchers) have begun using 'online panels', composed of tens of thousands, hundreds of thousands, or even millions of individuals who have agreed to receive online solicitations from the company to participate in various consumer-oriented Internet-based surveys in return for compensation (e.g., eligible for a prize draw) (Göritz, Reinhold, & Batinic, 2002). Membership in these panels is structured to better ensure a representative sample of the population. The main advantages of online panels to gambling researchers is that a) the 'yield' of Internet gamblers will always be higher among Internet users, b) the results can be obtained in a much shorter period of time compared to RDD surveys, and, c) the automated online administration of the survey is very efficient. The *cost*

efficiencies of automated administration tend to be offset by the programming costs of the survey as well as the need to provide participant compensation. It should also be noted that this strategy is unsatisfactory for studying other types of gambling because it does not sample non-Internet users. The main problems with online panels are that a) response rates tend to be lower than RDD surveys, with a bias towards people interested in that particular topic, and b) the prevalence rate of Internet gamblers among online users is still quite low.

Perhaps the most efficient strategy for recruiting large samples of Internet gamblers is via online advertisements ('banner ads') or direct email solicitation, with these ads and/or emails providing a direct link to an Internet-based questionnaire administered over a secure server (e.g. Griffiths, Wood, and Park, 2006; Wood and Williams, in press; Woolley, 2003). The present authors (Wood and Williams, in press) recruited 1,920 people using banner advertisements seeking 'Internet gamblers' on online gambling portals, which are websites containing information and links to a variety of Internet gambling venues. This strategy can generate a large sample of appropriate respondents, since potentially millions of Internet gamblers are exposed to these ads. An important difference between this technique and RDD or online panel sampling is that the obtained sample will typically consist of Internet gamblers from many different countries, rather than country-specific Internet gamblers. For this reason, having your survey translated into several different languages is likely important (most online gambling sites also offer services in various languages).

Unfortunately, the overall response rate with this technique tends to be very low because of its passive nature and because banners usually represent commercial advertising that people ignore. Response rates may be improved through incentives; the promise of short completion times for questionnaires; and guarantees that participation will not result in future solicitation (Cho and LaRose, 1999; Trouteaud, 2004). Response rates can also be improved with direct email solicitation to people with a known interest in your area of research (e.g., subscribers to an online gambling newsletter). Nonetheless, the obtained sample still remains relatively self-selected and potentially non-representative of the larger population of Internet gamblers. The other problem is that people who do not use gambling portals (e.g., always go directly to their favoured online gambling venue) or do not subscribe to that particular online gambling list serve (for mass email) are also missed. Unfortunately, it is also usually not possible to weight the sample to correct biases, as nothing is known about the population of Internet gamblers unless a corresponding RDD sample is obtained at the same time.

Some could argue that issues of representation are at least partially offset by the potential for respondents to answer more honestly when completing computer administered online questionnaires. When dealing with sensitive and potential illegal behaviours, such as Internet gambling, respondents may be inclined to distort or mask their responses in order to create a socially desirable presentation of self, especially when completion of the questionnaire requires direct interaction with a researcher. Thus, others who have conducted research into sensitive issues have found that self-administered, impersonal, computer-based questionnaires tend to produce more valid results than researcher administered questionnaires (Brohn, 2001; Lipsitz et al, 2001; Treuer et al, 2001; Van der Heijden et al, 2000). It remains to be seen, however, whether this is indeed the case for studies of Internet gambling, and further comparative research is required before any decisive conclusions can be drawn about the validity of Internet-based versus researcher administered studies of Internet gamblers.

One final set of challenges encountered by researchers of Internet gambling stems from the varied legal status of the activity, across and within national jurisdictions. Indeed, as we

have explained in the present chapter, what is legal and regulated in one country or state is often strictly prohibited in another, and very few jurisdictions offer legal protection to researchers or their subjects. Thus, researchers may find themselves in the ethically contentious position of asking respondents to admit to and describe their participation in illegal behaviour. This situation is made all the more problematic when researchers may be offering incentives or honorariums in exchange for participation in the survey.

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Footnotes

1. The first online stock trade was facilitated by E*Trade Financial in 1983 (E*Trade, 2006). However, online trading continued to be uncommon until the Internet became more widely accessible to the general public and some of the major companies began offering online trading (Charles Schwab in 1996).
2. The high number of sites relative to owners is due to a) Owners creating multiple sites so as to create a larger presence on the web, and b) The tendency of some of the larger companies to build sites which are then sold to another company to run. The first company still retains ownership of the site and takes a percentage of the profits.
3. This excludes the Centre for Addiction and Mental Health (CAMH) surveys of 2000 – 2003 which found rates of 3 - 7% for Ontario adults. The CAMH studies are flawed due to not reading a 'never gambled on the Internet' option when asking 'In the past 12 months how often did you bet money over the Internet' (i.e., people had to go out of their way to indicate 'never', because it was not a provided option).
4. This would be higher if just looking at the prevalence among gamblers, which typically represent two-thirds to three-quarters of the population.
5. It is not clear how 'at-risk' and 'problem behaviours' were defined.
6. One of the significant advantages of online casinos compared to most land-based venues is the automatic identification and tracking of all player activity (giving the potential to proactively intervene).
7. Even if online gambling does prove to be cause problems, there is some evidence that, after time, populations may adapt (to some extent) to the presence of problematic substances or products (e.g., Shaffer, LaBrie, & LaPlante, 2004).