

Internet Gambling:
A Comprehensive Review and Synthesis of the Literature

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INTRODUCTION

This review is an attempt to comprehensively identify and synthesize the literature concerning Internet gambling. Search terms used for the literature review included but were not limited to the following keywords and subject headings / descriptors: *gambling, gaming, Internet, online, remote, e-gaming, e-gambling, egaming, egambling*. The search was limited to articles published in English. The electronic databases searched were as follows:

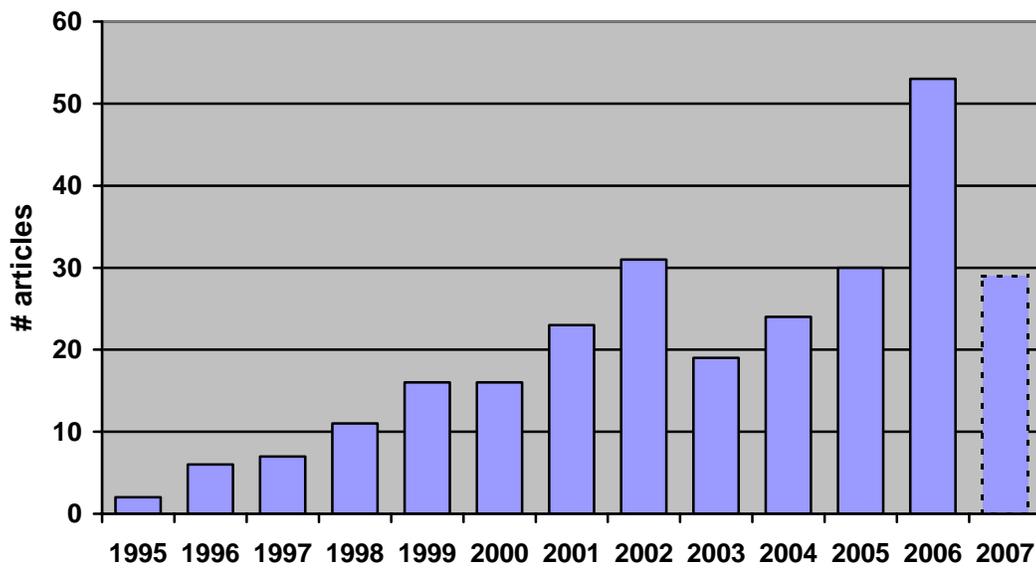
- ABI/INFORM Global (ProQuest)
- Academic Search Premier
- AGRI DSPACE Repository @ the University of Calgary
<https://dspace.ucalgary.ca/handle/1880/79>
- Australian Gambling Research Secretariat
<http://www.gamblingresearch.org.au/CA256DB1001771FB/HomePage?ReadForm&1=Home~&2=~&3=~>
- Expanded Academic ASAP
- Gambling Literature Online Database <http://gaming.uleth.ca/>
- Google News
- Google Scholar
- Google Web
- IngentaConnect (Ingenta)
- ISI Web of Knowledge
- LexisNexis
- Medline
- PsycINFO
- Science Direct
- Sociological Abstracts
- SPORTDiscus
- Westlaw

Existing literature reviews (Stevens, 2006) were also used to identify sources, as were the reference lists from obtained articles.

A total of 269 articles specific to Internet gambling were identified, with slightly more than half from peer-reviewed academic journals, and the rest from industry reports, government reports, conference presentations, news stories, and websites devoted to gambling-related issues.¹ Although the academic journals spanned a wide range of subject areas, law-related journals (especially *Gaming Law Review*) had the most articles. As expected, the first article on Internet gambling did not appear until 1995, since the first online gambling sites only began operation in that year. As seen below, the number of articles has tended to increase every year since 1995, and 2007 will likely have the most (2007 numbers reflect articles up to July 15, 2007).

¹ This is not an exhaustive list, as many other short, technical, and/or more peripherally related industry reports, magazine articles, government reports, news stories, websites, legal decisions, etc. exist on this topic.

Internet Gambling articles as a function of Year



The present paper provides a synthesis of this above literature followed by an exhaustive bibliographic list of these studies.

HISTORY OF INTERNET GAMBLING

When public and commercial use of the Internet began in early and mid 1990s, it soon became apparent that this could also be a medium used for gambling. Two other developments helped set the stage. The first was the creation of gambling software by Microgaming in 1994/1995. The second 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. Some sports books (e.g., Intertops Casino, Sports Book, Ladbrokes) also created websites that listed their odds as well as toll-free numbers to phone to place bets. The first case of money actually being wagered over the Internet by the general public appears to be the online purchase of lottery tickets from the International Lottery in Liechtenstein for a manual drawing that occurred on October 7, 1995 (Romney, 1995).²

Rapid expansion followed, with most of the new online gambling sites being sport/race books and casinos basing their operations in Caribbean and Central American countries with permissive gambling legislation, low taxes/fees, and relatively lax enforcement. In January 1996, InterCasino, based in Antigua, became the first online casino to accept a wager online (4 Online Gambling.com, 2006; Business Wire, 2005). In 1996 and 1997, several other Caribbean islands (Netherland Antilles; Turks and Caicos; Dominican Republic; Grenada; St. Kitts & Nevis) and Central American countries (Costa Rica; Belize; Panama) began licensing, or at least hosting, online sports/race books and/or casinos. In the United Kingdom, Eurobet began offering online sports/race betting in 1996 (Eurobet, 2007). In Australia, Centrebet in the Northern Territory also began offering online sports betting in 1996, with three more sports/race books in operation by the end of 1997 (Senate Information Technologies Committee, 2000). A few more online lotteries emerged when Finland granted a license to operate online lotteries to The National Lottery of Finland in 1996 (van der Gaast, 2001) and the Coeur d'Alene tribe in Idaho began an online lottery in February 1997. The next couple of years saw other jurisdictions enter the game, most notably Gibraltar in 1998 and the Kahnawake Mohawk Territory in Quebec in 1999.³ By the end of 1996 it is estimated that about 15 online sites accepted wagers, increasing to over 200 by the end of 1997, 650 by the end of 1999 and 1,800 by the end of 2002 (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.

Most of the new Internet gambling sites as well as most of the expansion in the early years consisted of new companies not associated with any land-based gambling establishments. This was largely because established gambling providers did not want to do anything that might jeopardize their land-based licenses because of the grey legal status of Internet gambling.⁴

² In 1983 the first online stock market transaction was facilitated by E*Trade Financial (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 (e.g., Charles Schwab in 1996).

³ Mauritius and Swaziland were other jurisdictions that began hosting sites.

⁴ Prosecution of some prominent online companies with connections to countries having clear online gambling prohibition reinforced this trend. In Canada this was best illustrated by the 1999 prosecution of Starnet Communication (Kyer and Hough, 2002).

There were some exceptions, such as some European countries that allowed their sole gambling monopoly to extend services online, existing U.K. based sports/race books that went online (e.g., Eurobet in 1996; William Hill in 1998; Ladbrokes in 2000), and some existing Australian sports/race books and casinos that started legally adding online services in the late 90s.⁵ This has changed in recent years, as several countries now permit their established lottery operations and/or sports/racebooks to offer services over the Internet (e.g., Hong Kong Jockey Club, Atlantic and British Columbia Lottery Corporations in Canada, several European countries, etc.).

As indicated, the initial online gambling sites were lotteries, sports/racing books, and online casinos. The first Internet bingo site (QuadCard; www.ibingo.com) started offering cash prizes in 1998. The first Internet poker room (www.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).

The most recent additions to online gambling have been ‘betting exchanges’ and ‘skill game sites’.⁶ Betting exchanges (e.g., ‘BetFair’ <http://www.betfair.com/> being the largest) 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. Several of these sites have expanded to include person-to-person gambling on traditional casino games. Skill game sites offer a wide range of skill-oriented 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); trivia games; and video 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’.⁷

⁵ In 1999 Lasseters in Alice Springs, Northern Territory (Australia), became the world’s first land-based casino to go online.

⁶ Part of the reason for the expansion of skill game sites has to do with the belief that these sites do not violate gambling prohibitions in jurisdictions that define gambling as ‘games of chance. An example of this is Skill Palace <http://www.skillpalace.com/splash/splash.asp?#>, which purports to be registered in Ontario, Canada.

⁷ Another type of online skill gaming that could be potentially construed as ‘gambling’ involves paying a subscription to join a role-playing skill site (e.g., Lineage2) where the accumulation of virtual money and property can be bought and sold in the real-world (e.g., \$2500 virtual dollars = \$1 real dollar). A second grey area of online gambling concerns role-playing sites (e.g., Second Life <http://secondlife.com/>) where your avatar may gamble with virtual money (having some value in the real-world marketplace) at a virtual casino (Williams, 2007).

CURRENT WORLDWIDE SITUATION

In July 2007 there were 2,069 Internet gambling web sites owned by 436 different companies listed at www.online.casinocity.com.⁸ 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. A few of these companies are publicly traded on the London Stock Exchange, but most are privately owned. The online sites consist of 793 online casinos, 466 poker rooms, 420 sports and racebooks, 258 online bingos, 53 skill game sites, 31 lottery sites, 22 betting exchanges, and 16 backgammon sites (Casino City, 2007).

These online sites operate in 45 different jurisdictions. Table 1 lists the top 20 jurisdictions by number of sites hosted and by highest volume of online transactions (Casino City, 2007).

Table 1. Top 20 Online Gambling Jurisdictions in July 2007

Jurisdiction	Volume of Transactions (Rank Order)	Number of Online Gambling Sites	Year First Hosted Online Gambling
Gibraltar (British overseas territory)	1	126	1998
United Kingdom	2	99	1996
Antigua and Barbuda	3	197	1996
Malta	4	146	2000
Kahnawake Mohawk Territory (Quebec)	5	377	1999
Alderney (British Channel Island)	6	36	2001
Hong Kong (special administrative region of China)	7	1	
Netherland Antilles (Curacao)	8	299	1996
Philippines	9	14	
United States	10	28	
Costa Rica	11	236	1996
Kalmykia (republic in Russian Federation)	12	2	
Australia	13	18	1996
Isle of Man	14	9	2001
Sweden	15	6	1999
Russian Federation	16	13	
Austria	17	9	2000
Belize	18	49	1996
Aland Islands (province of Finland)	19	1	2001
Seychelles	20	3	2003

⁸ Online.casinocity.com is probably the world's most comprehensive and widely used online gambling portal. It provides a continually updated listing and access to the 2,067 available online sites, as well as ranking of their relative popularity based on monitoring and measuring the actual site usage of millions of online users. The portal also provides a comprehensive listing of online gaming jurisdictions, online gaming site owners, online gambling software, and online gambling news. While it is not possible to independently verify their rankings of gambling site popularity, the present authors and others (e.g., McNeal, 2006) have found most of their other information to be fairly accurate.

Many companies have developed their own gambling software. Many others use commercial software with the most popular ones being from Playtech (177 sites), Microgaming (169 sites), Electracade (115 sites), Net Entertainment (93 sites), World Gaming (105 sites), and 24hNetwork (98 sites) (Casino City, 2007). 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) and \$15.2 billion in 2006. A temporary downturn is expected in 2007 due to the U.S. prohibition of online gambling. These amounts are thought to represent 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; RSeConsulting, 2006). There are no reliable figures on market share of revenues by country. The United States and the Asia Pacific region are believed to be the largest markets, followed by Europe (RSeConsulting, 2006).

REGULATORY FRAMEWORK FOR INTERNET GAMBLING IN DIFFERENT JURISDICTIONS

In many countries, no clear legislation exists or applies to online gambling. In some cases, online gambling operators have taken advantage of this lack of clarity to set up operation in such jurisdictions (Balestra and Cabot, 2006; Rose and Owens, 2005). Widely divergent legislation exists in countries that have enacted legislation (Hutto, 2005). Several countries explicitly prohibit most or all forms of online gambling: United States, Russia, Pakistan, Saudi Arabia, Greece, Portugal, Bermuda. At the other end of the spectrum, some countries have either completely legalized (or at least permit) all forms of online gambling, allowing both foreign and domestic companies to operate, and both residents and nonresidents to gamble within and outside the country: Gibraltar, Antigua & Barbuda, Malta, Netherland Antilles, Panama.

In the middle are countries that put restrictions on online gambling. For example, some countries (e.g., Sweden, Finland, Germany, Hong Kong, Liechtenstein, New Zealand) allow certain forms of online gambling (most typically lotteries, sports/race books, and ‘skill games’) and make other forms illegal (most typically, casino games). Other countries restrict patronage of their online sites to residents only (e.g., Finland, Austria, Netherlands, Canadian provinces). Some go further in also prohibiting residents from accessing online gambling outside the country (e.g., Netherlands, Czech Republic, Denmark, France, Germany, Hong Kong, Hungary, Italy, Slovakia, Sweden). A few countries operate online gambling, but prohibit their own residents from accessing these sites (e.g., Australia, Papua New Guinea).

Current jurisdictional-specific regulations, in countries where this information is available, are as follows:

North America

United States

In October 2006 the federal Unlawful Internet Gambling Enforcement Act (UIGEA) came into effect, which made 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.”⁹ It is also illegal for Internet gambling providers to accept money transfers from potential U.S. online gamblers. Although some legal observers 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 (Kramer, 2001). As a consequence, approximately 25% of online gambling sites stopped taking bets from U.S. citizens immediately after the law took effect (Casino City, 2006). Currently, 50% of all online gambling sites do not accept wagers from U.S. residents (Casino City, 2007). The Major gambling software companies (e.g., CryptoLogic, Boss Media) also announced that their

⁹ Many of the major companies involved in online money transfer (e.g., PayPal) and most credit card companies (Visa, Mastercard, American Express, Discover, Citibank) had already taken independent steps to prohibit money transfers for the purpose of online gambling (Rose, 2003).

software platforms could no longer be used to provide gambling services to U.S. residents (Vallerius, 2006).

The UIGEA 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 and Owens, 2005). Anecdotal information suggests that many U.S. players are circumventing the UIGEA by depositing money into non-U.S. financial transaction intermediaries to place bets (e.g., FirePay, Citadel) (American Gaming Association, 2006a).¹⁰ Furthermore, many online gambling sites ensure that credit card and/or banking statements do not indicate that the transaction was for gambling.

The UIGEA exempts online within-state sales of lottery tickets (via terminals in retail outlets), between-state horse race betting, and other types of within-state online gambling, as long as the individual state does not prohibit it (several states have explicitly prohibited Internet gambling)¹¹. 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 28 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.

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. The Kahnawake Gaming Commission (KGC) was created in 1996 and has been a major host of online sites since 1999. When the UIGEA was passed in October 2006, many Caribbean and Central American based sites moved their operations to the Kahnawake Territory, presumably in the belief that the U.S. would be less likely to prosecute individuals from this jurisdiction. Kahnawake currently hosts more Internet gambling sites (n = 374) than

¹⁰ New financial transaction providers continue to fill the void left by providers who withdraw their services for online gambling.

¹¹ The states of Illinois, Michigan, Indiana, Nevada, Oregon, South Dakota, Washington, and Louisiana have all passed legislation that specifically prohibits unauthorized forms of Internet gambling.

any other jurisdiction in the world. This is partly due to their established presence as an Internet gambling provider since 1999, partly due to their very low fees (annual fee of \$10,000, with no corporate or gambling taxes), and partly due to having one of the best hosting and bandwidth capacities. The Quebec government has indicated they consider the Kahnawake operation illegal, and several investigations have been initiated by both the provincial and federal governments as well as the provincial police. Nonetheless, there has been no prosecution of these operations.

In November 2006 the Alexander First Nation in Alberta created the Alexander Gaming Commission to provide “leadership in evolving and enforcing comprehensive, socially responsible Internet gaming regulations” (Gaming News, 2006). In July 2007 casinocity.com lists a handful of online sites that have apparently registered their online gambling operations on the Alexander First Nation.

Tentative forays into online gambling have also been made by other Canadian First Nation groups. In 2000, the Ochapowace Band in Saskatchewan briefly operated the online White Buffalo Casino (www.whitebuffalocasino.com). In 1996 the Six Nations of the Grand River Territory near Brantford, Ontario established a gaming commission to guide licensing of Internet gambling sites. From 2003 to October 2006 at least three online gambling sites (including Absolute Poker, one of the world’s largest online poker sites) operated from servers on the reserve, despite not having official band endorsement (Hamilton Spectator, 2006). Media attention has recently caused these sites to move the registration of their operations to the Kahnawake territory. Nonetheless, Six Nations Chief David General has proposed a community-wide referendum to settle the issue of whether the Six Nations should formally enter the business of online gambling (Hamilton Spectator, 2006).

Europe

Austria

Austria licenses Austria-based companies to offer lottery services and sports betting via remote channels (Internet, mobile phones, and interactive television) as an extension of land-based operations. Only Austrian residents are allowed to play at these sites. Both domestic and foreign-based license holders are permitted to offer online gambling services.

Finland

Finland's 2002 Act on Gaming permits only one license holder to operate offtrack betting on horseracing, and one license holder to operate slot machines and casino games. Domestic company Veikkaus holds the license for sports betting and lotteries and has launched products for Internet and mobile phone, while domestic company Fintoto holds the license for horserace wagering and has also launched products on Internet and mobile phone. A third domestic company holds the license for slot machines and casino games, but the Act on Gaming does not permit such products to be offered via remote channels.

France

France's monopolistic gambling provider, the Française des Jeux, provides online lotteries, skill games, casino table games, and horse/sports betting. Foreign online operators are not permitted to either base their operations in France or to take bets from French citizens.

Germany

Sports betting, horse race betting, and online lottery sales are permitted in Germany under a monopolistic regulatory regime that prohibits foreign operators.

Ireland

As in the United Kingdom, Ireland's bookmakers operate Internet-based services under the terms of their bookmaking licenses. Currently, sports betting, horse race betting, betting exchanges, poker, and skill games are offered online.

Liechtenstein

Only online lotteries operated by the International Lottery in Liechtenstein Foundation are permitted. The foundation is government controlled.

Netherlands

Holland Casinos was recently granted a license to conduct a full range of online gambling in the Netherlands, available only to residents of the Netherlands.

Sweden

Sweden's monopoly gambling provider Svenska Spel is authorized to provide an online lottery, poker room, bingo room, and sports betting. Foreign providers are not permitted.

United Kingdom

Online sports betting, horse race betting, betting exchanges, and games of skill can be legally operated in the UK and played by UK residents. 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. It is currently illegal to establish and operate an Internet casino or bingo site. However, UK citizens may place bets at offshore Internet casinos without breaking any British laws (Gambling Commission, 2006). A new national Gambling Act takes effect in September 2007 (Gambling Commission, 2007). At that time all forms of Internet gambling may potentially operate from UK soil, conditional upon regulation and licensing. However, the 15% Online Gaming Tax will be a potential financial deterrent for companies considering location in the U.K.

Russian Federation

Besides banning land-based casinos in all but four regions of Russia, a bill that was sent through the State Duma and then signed by President Putin in December of 2006 also bans gambling over the Internet.

Asia Pacific Region

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. Federal legislation permits individual states and territories to offer online sports and race books, poker rooms, and skill game sites to both Australian and non-Australian residents. Online lotteries are also permitted except for keno-style games, scratch tickets, and instant lotteries. The Interactive Gambling Act does not permit Australian residents to gamble at its government licensed online casino (Lasseters) or residents from countries that have asked not to be served.

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. New Zealanders are not prohibited from wagering with offshore providers.

Hong Kong

In 2002 the Hong Kong Legislative Council passed the Gambling (Amendment) Ordinance which banned Hong Kong residents from engaging in online gambling with operators outside of Hong Kong. However, the Hong Kong Jockey Club – the legal gambling monopoly – can, and does offer online lottery play, sports betting (soccer), and horse race betting to Hong Kong and non-Hong Kong residents.

India

India has an online lottery.

South America

Argentina

Argentina has licensed one online casino.

Brazil

State governments are permitted under Brazilian law to allow lotteries to offer betting and gambling via the internet and cell phones. Several lotteries currently offer these online and cell phone options. Brazil also has one online Bingo site.

Venezuela

Venezuela hosts three online casinos and operates the Venezuelan national lottery online.

PREVALENCE OF INTERNET GAMBLING

The actual number of people who currently 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; RSeConsulting, 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, and 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 Norway it is estimated that 6.5% of the adult population participated in gambling in 2006 (Sandven, 2007). 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, Wiczorek, Tidwell, and 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).¹² The most recent Canada-wide study in 2007 has found past year rates of 1.5% - 3.1%, with the higher estimate including high risk stocks and day trading, and the lower estimate excluding these (Wood and Williams, 2007b).¹³

¹² 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 providing a 'never' or 'not at all' option when reading out the response options to the question 'In the past 12 months how often did you bet money over the Internet' (i.e., people who responded 'never' were actually indicating a response option that was not listed).

¹³ Studies of particular segments of the population have found online gambling rates of 36.5% among Detroit casino patrons (Woodruff and Gregory, 2005); 6.9% - 8.1% among Connecticut health care seekers (Ladd and Petry, 2002; Petry 2006); and 1.2% among Connecticut health care employees (Petry and Mallya, 2004).

DEMOGRAPHICS 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 currently gamble on the Internet. Recent research is beginning to shed light on this issue.

Consistent in all studies is the fact that Internet gambling is more common among men. However, the proportion of men depends very much on the particular type of Internet gambling. In 2001 and 2002 Woolley (2003) sent an email survey link to customers of an Australian TAB company (sports and horse race betting) in two studies, and recruited participants through a banner add on the website of a second Australian TAB company. The final sample sizes were 704, 1,276 and 518 respectively. He found that 85% - 90% of survey respondents were male. It must be noted, however, people self-selected to participate, so it is difficult to judge the representativeness of the sample. This was not a problem for a recent study by Labrie et al (2007) wherein the demographics of 100% of people opening an account with a European online sportsbook (bwin Interactive Entertainment AG ¹⁴) in February 2005 were analyzed (n = 40,499) and found to be 92% male. In contrast, a more equal gender ratio tends to be found for online casinos. McMillen and Woolley (2003) report that the percentage of males at one well-established Internet casino was only 50%. Similarly, in a worldwide online (self-selected) sample of 10,865 online casino and/or poker gamblers from 96 countries, 58% were male (with a majority of casino players being female) (eCOGRA, 2007b). In an undifferentiated sample of U.S. online casino players, poker players, and sports bettors (n = 522), the American Gaming Association (2006c) found that 68% were male. In another undifferentiated (self-selected) sample of all types of worldwide online gamblers (n = 1920), Wood and Williams (2007a) found 68% of the sample to be male. Among a sample of 473 British university students, 85% of the Internet gamblers were male (Griffiths and Barnes, 2007).

It is also clear that online gamblers tend to be younger. 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). A recent study found that 9% of Montreal, Quebec high school students reported having gambled for money on the Internet, and that 6% of a sample of Canadian and U.S. college and university students reporting having done so (Derevensky, Gupta, and McBride, 2006). Similar high rates of online gambling on college campuses are reported by Brown (2006), Griffiths and Barnes (2007), and Helstron, Bryan, and Hutccison (2007). However, LaBrie, Shaffer, Laplante, and Wechsler, (2003) only obtained a rate of 1.9% among U.S. college students. Here again, the average age of online gamblers appears to be somewhat of a function of game type and perhaps country. Woolley (2003) found that 35 – 54 was the most common age group among the sports and horse race bettors in his studies, and that younger people (18 – 24) and older people (65+) were underrepresented relative to their proportion in the population. Labrie et al (2007) found the average age of European sports bettors to be 31 (SD = 10). eCOGRA (2007b) found the most common age group for online poker players to be 26 – 35, but the average age of online casino players to be 46 – 55. In undifferentiated samples of

¹⁴ An Austrian company registered in Gibraltar. Transactions in Euros only. Said to be the 20th largest Sportsbook by Casino City (2007).

online gamblers the average age was 34 in Wood and Williams (2007a), and mid 30s in the AGA study (American Gaming Association, 2006c).

Socioeconomic status of online sports and horse race bettors was found to be higher than the Australian average in the studies by Woolley (2003), with a notable percentage of people belonging to professional or managerial occupations (whose jobs rely upon familiarity with and competent use of the Internet). The AGA (2006c) study found that 61% of their sample had at least a college degree; 41% earned more than \$75,000 a year; and almost all of them used the Internet for other activities. Wood and Williams (2007a) found that 60% of their sample had at least some post-secondary education, and 65% reported being comfortable conducting business and purchasing transactions over the Internet.

Of final note, 12% of the Wood and Williams (2007a) 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 PREFERENCES AND GAME PLAY PATTERNS OF INTERNET GAMBLERS

One of the more under-researched issues is the actual game-play patterns of Internet gamblers, including the frequency, duration, and preferred type of play.¹⁵ 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 and Williams (2007a) 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 computer for gambling 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.

The gambling behaviour of 40,499 online sports bettors who opened an account with bwin Interactive Entertainment AG (<https://www.bwin.com/default.aspx?pid=626>) in February 2005 was documented for an eight month period by Labrie et al. (2007). The median length of play from first to last bet was four months for fixed-odds bettors. The median betting behavior of these 39,719 fixed-odds bettors was to place 2.5 bets of €4 every fourth day. This typical pattern incurred a loss of 29% of the amount wagered. The median betting behavior of the 24,794 live-action bettors was to place 2.8 wagers of €4 every fourth day during the median duration of 6 weeks at a loss of 18% of the amount wagered. While the gambling behaviour of the large majority of these bettors was of modest proportions, the top 2 or 3% of bettors wagered considerably more than the rest (~ €10,000) in this 8 month period, with the top 1% having a particularly high number of bets and amount wagered. Interestingly, an analysis of this top 1% found them to also have a lower overall percentage loss on their bets compared to other players.

In the study by eCOGRA (2007b), 90% of online gamblers played primarily at home, with the most popular time of day being in the evening (72%), followed by late night (53%). The modal pattern of play for Internet casino players was to gamble 2 – 3 times per week (37% of sample), to play for between 1 – 2 hours per session (27% of sample), and to wager between \$30 - \$60 per session (18% of sample). The modal pattern of play for Internet poker players was to gamble 2 – 3 times per week (27% of sample), to play for between 1 – 2 hours per

¹⁵ Preferred type of play can be inferred to some extent by the relative prevalence of the different types of online gambling available.

session (33% of sample), to play one (24% of sample) or two (24% of sample) tables at a time, to play at minimum stake levels of \$.50 to \$2.00 (61% of sample), and to play with 6 – 10% of their bankroll at a table at anyone time (23% of sample).

MOTIVATIONS FOR INTERNET GAMBLING

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. Among a small sample of British university online gamblers, the primary reasons given for gambling online were: ease of access (84%), flexibility of use (75%), 24 hour availability (66%), because friends do (67%), large gambling choice (57%), advertising (40%), anonymity (25%), demo games (21%), and because family members did (14%) (Griffiths and Barnes, 2007).

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 and Williams (2007a) 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, and Lawton, in press).

In the eCOGRA (2007b) study, the most important things that people wanted from Internet casino websites were: good bonuses (76%), a variety of games (62%), good deposit methods (57%), and a site with a solid reputation (57%). Fun and entertainment tended to rank above the profit motive as reasons for play. Internet casino players from the primary 14 countries reported losing money on average each month. However, there were significant country differences, with people from Ireland, Japan, and China reporting the smallest losses. Interestingly, poker players from 11/14 countries claimed to be *winning* money on average each month, with the players from Sweden, Germany, and New Zealand claiming to be winning the most.

PROBLEMS WITH INTERNET GAMBLING

Unfair, Illegal, or Irresponsible 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. The extent of these problems is currently unclear. Many online gambling sites use commercial software from reputable companies to allay concerns about the fairness of the games. However, there still exists a high degree of suspiciousness among players. 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). Among a large sample of over 10,000 Internet casino and poker players from 96 countries, eCOGRA (2007b) found that over 1/3 of people claimed to have a dispute with an Internet casino or poker website, and the majority of respondents reported that operator responsiveness to player complaints needed to be improved.

A related problem concerns the ‘free play’ sections of many of these sites, ostensibly to familiarize the person with the game and to improve their skill. However, research suggests that there is a more nefarious purpose, as the odds on free play sites tend to favour the player rather than the casino (Sévigny, Cloutier, Pelletier, and Ladouceur, 2005).

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 116 sites (eCOGRA, 2007a). 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. Here again, it is unclear how common an occurrence this is. In the world of online skill *game* (i.e., not gambling) sites, criminal theft and fraud are not uncommon occurrences (Chen et al., 2005).¹⁶ For online gambling, there are several case reports of hackers having successfully altered online sites to pay wins (Reuters, 2001; RSconsulting, 2006). Online poker appears to be particularly susceptible to deceptive player practices. One way of doing this is by means of collusion between online poker players playing at the same table (i.e., several of the players are actually in

¹⁶ Most typically, identify theft, or the theft of virtual money or other assets that can be sold in the real-world marketplace.

the same physical room using different computers). Another technique is employing computer programs using optimal play ('poker bots') against other players (e.g., Bruner, 2004).¹⁷

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; Kshetri, 2005; RSeconsulting, 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 (RSeconsulting, 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 (Hugel and Kelly, 2002; Mills, 2001).

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)¹⁸, and people who have banned themselves from playing on the site. Online sites' 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 (Derevensky and Gupta, 2007; Messerlian, Byrne, and Derevensky, 2004; Mitka, 2001). 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, Gupta, and McBride, 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

¹⁷ Most online gambling sites prohibit the use of poker-bots and other automated software programs. However, it is very difficult to detect the presence of these non-human players.

¹⁸ This is of particular concern to U.S. legislators, as the legal age to gamble in most U.S. states is 21.

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

There are several aspects of Internet gambling that may increase the risks for problem gambling. These include the much greater convenience and ease of access; the relative comfort of playing at home; the greater anonymity; the solitary nature of the play; the immersive nature of the interface; the fact that gamblers are playing with 'electronic' cash; and the ability of online gamblers to play under the acute influence of drugs or alcohol¹⁹ (Griffiths, 1996; Griffiths, 2003; Griffiths and Wood, 2000; King, 1999; King and Barak, 1999; Schull, 2005; Shaffer, 1996).

There is, in fact, good evidence that online gamblers are significantly more likely to be problem gamblers. As a reference point, 15 countries have conducted national prevalence surveys of problem gambling between 1998 and 2006. Past year prevalence ranges from 1.1 – 5.4%, with an average of 2.5% (AGRI, 2007)²⁰. By comparison, in an online study of 422 self-selected online university poker players, 18% of the sample was classified as problem gamblers using DSM-IV criteria (Griffiths, Wood, and Parke, 2006). Internet gamblers were also significantly more likely to be problem gamblers in another study of university students by Griffiths and Barnes (2007). 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 none actually evidenced problematic behaviour (Motivaction International, 2005).²¹ Among an online sample of 1,920 Internet gamblers, Wood and Williams (2007a) found 23% to be moderate problem gamblers on the Canadian Problem Gambling Index, and another 20% were found to be severe problem gamblers. 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 a relationship between online gambling and problem gambling appears to exist, a causal connection has not been established. As mentioned above, 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 and Parke, 2002; Griffiths and Wood, 2000; LaRose, Mastro, and Easton, 2001). However, it is also quite

¹⁹ Substance use while gambling has a direct link to excessive and disinhibited play (Baron and Dickerson, 1999; Ellery, Stewart and Loba, 2005; Kyngdon and Dickerson, 1999).

²⁰ This would be higher if just looking at the prevalence among gamblers, which typically represent two-thirds to three-quarters of the population.

²¹ It is not clear how 'at-risk' and 'problem behaviours' were defined.

plausible (and likely) that some existing problem gamblers gravitate to this new and more convenient form of gambling.

The 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 (Australian Productivity Commission, 1999; Williams and Wood, 2004a, 2004b, in press). It would appear that this is likely to be even higher for online gambling. (However, the revenues may not be as regressive, in that lower socioeconomic groups will be under-represented among Internet users).

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 and Griffiths, 2004). A recent review of 60 popular Internet poker, casino and sports-betting sites by Wiebe (2006) 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 (Sychold, 2003; Wiebe, 2006). It is important to note, however, that while the majority of online gamblers believe responsible gambling features are useful (eCOGRA, 2007b), they are not as enthusiastic about having them automatically applied to everyone.

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 jurisdictions (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). Sweden has a voluntary system that allows a player's behaviour to be monitored and analyzed (Sveriges Radio International, 2007). Once a person is identified by the system as being at risk, they do not receive any more advertising and they are urged to consider their gambling habits, work out a gambling budget, and take a test for gambling addiction. 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 (van Kastel, 2006; Williams, West, and Simpson, 2007).

One of the significant advantages of online gambling compared to most land-based gambling is that all activity is electronically recorded and linked to an identifiable individual. This provides the potential for implementing automated limitations or restrictions on gambling for that individual (by the individual himself/herself or by the venue) and/or analyzing player behaviour for risk patterns. However, one of the significant disadvantages of online gambling is

that if the player does not like the intervention or restrictions, he/she has over 2,000 other sites to choose from.

The eCOGRA list of recommended responsible gambling practices is as follows (eCOGRA, 2007a):

- 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.

A temporary downturn in the overall market may occur in 2007 due to the U.S. prohibition of online gambling. However, long term growth is still expected to be very positive as Internet use expands, the richness of the Internet interface increases (e.g., live video-streaming), with increasing legalization of online gambling, and with increased confidence and familiarity with Internet gambling. Christiansen Capital Advisors (2007) projects revenues of \$24 billion by 2010. Internet gambling represents a potentially very large untapped market in that the large majority of adults in Western countries gamble, yet only 1 - 4% have currently accessed the Internet to gamble. That being said, it is important to note that Internet gambling's low market penetration after 12 years of existence despite its convenience and offering better odds is much lower than the penetration that occurred with other forms of gambling when they were first introduced. Internet gambling may end up filling a small market niche rather than replacing or supplementing land-based forms. To date, there is not much evidence of a negative impact on land-based revenues.

Particularly strong growth among the Asian market.

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 and Skill Games

Continued strong growth of betting exchanges is likely due to the better odds for customers and lower cost structures for operators. Skill games will experience strong growth because they offer a new type of gambling experience.

Market consolidation.

Market consolidation naturally occurs with time, as certain sites become more dominant, and weaker ones sell out to larger companies or end operations altogether. In October 2006 there were approximately 2,500 sites in existence with 465 owners. This compares to 2,069 sites and 436 owners in July 2007. Further consolidation is expected.

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 (Balestra and Cabot, 2006).

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

Many people have pointed out that it is nearly impossible to effectively prohibit online gambling because of the difficulty in blocking individual players’ online access to these sites and the difficulty in prosecuting companies that legally provide these services from other countries (e.g., Andrie, 2004; Eadington, 2004; Friedrich, 2003; Parke and Griffiths, 2004; Watson et al., 2004). While this is true, it is insufficient justification by itself for legalization. There are several other online activities that are very difficult to control (e.g., child pornography, sites promoting illegal behaviour, sites containing hateful content toward certain groups). There are also many laws to which the general public does not strictly adhere (e.g., illicit substance use, drinking and driving, declaring all taxable income, etc.). Nonetheless, legal efforts to limit these activities are somewhat helpful, and certainly preferable to no action and no legal prohibition. In the end, it must be remembered that the purpose of legislation is not to conform to people’s behaviour, but to help shape it.

Better arguments for legalization are similar to the arguments put forward for legalization of illicit drugs, prostitution, and euthanasia, and to the historical arguments for the legalization of gambling and alcohol. For one, it is never a good thing to have laws that are widely disregarded as it may foster disregard for the general rule of law.²² Some people would also argue that it is not the job of the state to shape people’s leisure behaviour, even if engagement in this behaviour does harm some people (i.e., people should have the freedom of choice). An argument can also be made that regardless of whether online gambling is good or bad for society, it is better for it to come under some form of legal regulatory control so as to accrue the economic benefits (gambling revenue, tax revenue, employment, decrease the flow of money leaving the jurisdiction), and to better ensure player protection (fair games, responsible gambling practices, etc.). Finally, even if online gambling does exacerbate rates of problem gambling, the evidence from land-based gambling suggests that after time, populations adapt to some extent to the presence of new problematic products and develop some degree of ‘inoculation’ from further harm (e.g., Shaffer, LaBrie, and LaPlante, 2004).²³

However, there are also some good arguments for prohibition, which concern the a) unsatisfactory business and responsible gambling practices of many current online sites; b) the difficulty in ensuring these sites *ever* meet minimum standards in these areas; c) recognition that legal domestic sites (with better business and responsible gambling practices) will only be

²² Some commentators cite the widespread societal disregard for alcohol prohibition as a model of what would happen with online gambling prohibition. However, alcohol prohibition is probably not a good example, as prohibiting something that the majority of the populace uses is much different than prohibiting something only 1 - 4% currently use.

²³ For example, rates of problem gambling in the Western world appear to have stabilized in the past several years, despite ever increasing availability of gambling.

patronized to the extent they offer a competitive advantage to the consumer (which may be difficult to achieve, see below); d) the significant contribution problem gamblers likely make to online gambling revenues; e) the optics of legally sanctioning such a contentious product²⁴; and f) 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. A final argument concerns the fact that it is a common policy for governments to restrict access to forms of a product perceived to be more harmful than other forms (e.g., automatic weapons and handguns versus hunting rifles; cocaine, methamphetamine, heroin versus alcohol). Clearly, online gambling is the form of gambling with perhaps the highest potential to cause problems (Williams, West and Simpson, 2007).

Of course, there are intermediate solutions between prohibition and legalization (several of which are currently being used in some jurisdictions). For example, less contentious forms could be legalized (e.g., purchase of online lottery tickets); or access to foreign-based sites could be prohibited; or only nonresidents could legally access domestic sites. In the end, the 'best' solution will depend somewhat on the individual jurisdiction. Jurisdictions with highly vulnerable populations (high rates of Internet usage, high rates of other addictions) may be better suited to continued legal restrictions. Small jurisdictions will have proportionally greater economic benefits to legal online gambling compared to large jurisdictions, as the majority of their gambling revenue will come from outside the jurisdiction (i.e., U.S., China, European countries with large populations), and represent a true influx of wealth rather than just domestic money being redistributed.

Regardless of the pros versus cons of legal online gambling, expanded legal availability is likely to continue in Western jurisdictions. 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. Court challenges to restrictive gambling laws that interfere with the free flow of goods and services are other pressures contributing to this trend. The World Trade Organization has recently ruled that the U.S. ban on Internet Gambling violates the General Agreement on Trade and Services (Kelly, 2006; Rose, 2007; Wunsch-Vincent, 2006). The European Union Commission has recently threatened court action if certain countries (i.e., France, Sweden, Greece), do not end their state-run sports betting monopolies (Vincent, 2007). The European Union Commission already has proceedings underway against Austria, Denmark, Germany, Hungary, the Netherlands, Italy and Finland concerning their gambling monopolies (Keuleers, 2005a,b; Littler, 2006; Vincent, 2007).²⁵

²⁴ There is a lack of information concerning worldwide attitudes toward Internet gambling. However, a recent survey in Canada found that the large majority of Canadians opposed all forms of Internet gambling, including the forms that are currently offered in some provinces (Decima Research, 2007).

²⁵ The position of the European Commission is that a European Union member state does not have to allow gambling. However, if a country does allow gambling, it cannot run a state gambling monopoly and prevent other European gambling companies from providing competition.

As more jurisdictions begin to legalize and regulate online gambling, existing domestic operators of land-based venues will likely enter the market. Some current online gambling operators may also choose to relocate from ‘offshore’ jurisdictions to these new jurisdictions. Relocation will probably be fairly limited, however, as many of these new jurisdictions will likely attempt to enact regulations favouring domestic/monopolistic operators. Existing ‘offshore’ jurisdictions will also still retain a strong competitive advantage because of their longer established presence as an Internet gambling host, fewer regulations, less stringent enforcement of these regulations, and having much lower fees and taxes (Wilson, 2006) ²⁶. The competitive advantage the larger jurisdictions may possess are: better player protection (fairness of games, responsible gambling practices, etc.), a more stable political environment, better capital markets, better bandwidth and hosting capabilities, and a larger pool of skilled workers (American Gaming Association, 2006a; Wilson, 2006). ²⁷

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. Furthermore, in an open marketplace there will always be competitive pressure for minimal restrictions. For example, when casino gambling was first introduced throughout the United States in the late 1980s, several player protection policies were put in place (e.g., small maximum bet limits, maximum loss limits, no credit, etc.). However, to obtain a competitive advantage, venues opening in neighbouring states tended to be slightly less restrictive. Over time, a level playing field developed with almost no restrictions in any state providing casino gambling (Schwartz, 2006).

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, and Turner, 2001; Wood and Williams, 2007a). 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 and 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.

²⁶ For example, Kahnawake only charges a \$10,000 annual licensing fee, with no taxes. By comparison, the U.K. imposes a 15% online gambling tax.

²⁷ A survey of six of the world’s largest online gambling operators found that their choice of jurisdiction in which to locate their operations in was primarily based on the ability to repatriate funds; bandwidth and hosting capabilities; low gambling taxes; a commercial regulator; clear and comprehensive regulations; stable policy; and low corporate taxes (Mpande Advisors, 2005).

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constructed in the international arena. For various reasons, there have been efforts by members of Congress to create strong prohibitory legislation specifically targeting Internet gambling. The Author analyzes not only whether a domestic prohibition schema is the best model to implement, but also whether such a model could even be truly effective. The Author further shows that an international regulatory model can provide a legitimate method of control while allowing individual countries to maintain discretion over the form of online gambling they allow to their citizens. At the same time, this international regulatory schema would still provide a valid international enforcement net against offenders. Under this regulatory schema, problem gamblers can be protected while still preserving the opportunity for other patrons to get lucky and hit it big.

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- This report presents findings from an online survey of 10,865 Internet gamblers. An additional sample of 94 was recruited for participation in directed focus group discussions. The survey captured data on player demographics, behavior, attitudes, and positive and negative experiences while gambling on the Internet.

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- A short research note, and one of the earlier academic sources which discusses Internet gambling. The author posits that the Internet could constitute a dangerous medium for the problem gambler or potential problem gambler. The author calls for research and close monitoring of the growing Internet gambling phenomenon.

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- Abstract: Technology has always played a role in the development of gambling practices and will continue to play a critical role in the development of increased gambling opportunities (e.g., internet gambling). Although technological advance has long been associated with improved gambling opportunities, there is little written in the literature explicitly pointing out this link and its implications for problem gamblers. This paper therefore reviews this situation and examines the technological implications of situational and structural characteristics paying particular attention to slot machine gambling as there has been more empirical work on this type of gambling than any other technological form. The impact of technology on the sociability of gambling is also examined followed by a more speculative evolution of internet gambling as an area of potential concern.

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Griffiths, M. (2001). Internet gambling: Preliminary results of the first U.K. prevalence study. *eGambling: The Electronic Journal of Gambling Issues* [Online journal] 5. Retrieved July 12, 2007, from: http://www.camh.net/egambling/issue5/research/griffiths_article.html

- Abstract: Technology has always played a role in the development of gambling practices, and new technologies such as Internet gambling may provide many people with their first exposure to the world of gambling. Further to this, Internet gambling could be argued to be more psychologically enticing than previous non-technological incarnations of gambling because of anonymity, accessibility and interactivity. This paper reports on the results of the first U.K. study of Internet gambling; 2098 people were interviewed for their behaviour and attitudes. Results indicated that only 1% of Internet users (n=495) had ever gambled on the Internet and that there was no evidence of problematic gambling behaviour associated with the Internet.

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- Abstract: It has been noted that the introduction of the Internet to gambling activities may change some of the fundamental situational and structural characteristics and make them potentially more addictive and/or problematic. This study examined some of the differences between Internet gamblers and non-Internet gamblers. Based on past literature it was hypothesized the (1) males would be significantly more likely to be Internet gamblers than females, (2) Internet gamblers would be significantly more likely to be problem gamblers than non-Internet gamblers, and (3) males would be significantly more likely to be problem Internet gamblers than females. A self-selected sample of 473 student respondents (213 males; 260 females) aged between 18 and 52 years (mean age = 22) participated in an online survey. All three hypotheses were confirmed. The results suggest the structural and situational characteristics of Internet gambling may be having a negative psychosocial impact on Internet gambling. This is most notably because of increased number of gambling opportunities, convenience, 24 hour access and flexibility, increased event frequencies, smaller intervals between gamblers, instant reinforcements, and the ability to forget gambling losses by gambling again immediately. It is suggested that further research needs to be carried out into the effects that the Internet has in facilitating gambling behaviour.

Griffiths, M.D. and Parke, J. (2002). The social impact of Internet gambling. *Social Science Computer Review*, 20(3), 312.

- Abstract: Analyzes the social impact of Internet gambling. Overview of the social concerns about the advent of Internet gambling; Prevalence of Internet gambling in the workplace; Practices involved in Internet gambling; Comparison between Internet and traditional gamblers; Speculations about Internet addiction and Internet gambling addiction.

Griffiths, M., and Parke, J. (2004, July). Gambling on the Internet: Some practical advice. *Journal of Gambling Issues*, 11 [Online journal]. Retrieved July 12, 2007 from:

http://www.camh.net/egambling/issue11/jgi_11_griffiths_parke.html

Griffiths, M., Parke, A., Wood, R., and Parke, J. (2006). Internet gambling: An overview of psychosocial impacts. *UNLV Gaming Research & Review Journal* 10(1), 27-39.

- Abstract: Technological innovation has always played a role in the development of gambling behaviour, primarily through providing new market opportunities. Early prevalence studies of Internet gambling in the UK, Canada and the US have shown that Internet gambling is not a cause for concern at present. However, this seems likely to change as more people start to use the Internet for leisure activities. After a brief overview of gambling technologies and deregulation issues, this paper examines the impact of technology on gambling by highlighting salient factors in the rise of Internet gambling (i.e., accessibility, affordability, anonymity, convenience, escape immersion/dissociation, disinhibition, event frequency, asociability, interactivity, and simulation). The paper also overviews some of the main social impacts surrounding

Internet gambling, such as protection of the vulnerable, Internet gambling in the workplace, electronic cash, and unscrupulous operators. Recommendations for Internet gambling operators are also provided.

Griffiths, M. and Wood, R.T.A. (2000). Risk factors in adolescence: The case of gambling, videogame playing, and the Internet. *Journal of Gambling Studies*, 16 (2), 199-225.

- Abstract: It has been noted that adolescents may be more susceptible to pathological gambling. Not only is it usually illegal, but it appears to be related to high levels of problem gambling and other delinquent activities such as illicit drug taking and alcohol abuse. This paper examines risk factors not only in adolescent gambling but also in videogame playing (which shares many similarities with gambling). There appear to be three main forms of adolescent gambling that have been widely researched. Adolescent gambling activities and general risk factors in adolescent gambling are provided. As well, the influence of technology on adolescents in the form of both videogames and the Internet are examined. It is argued that technologically advanced forms of gambling may be highly appealing to adolescents.

Griffiths, M., and Wood, R.T.A. (2007). Adolescent Internet gambling: Preliminary results of a national survey. *Education and Health*, 25 (2), 23-27.

- Abstract: The article presents the preliminary results of a national survey on adolescent Internet gambling in Great Britain. The study found that approximately one in 12 young people aged 12 to 15 years said they had played a National Lottery game on the Internet, and that boys were more likely than girls to have played the games. Findings indicate that 2 percent of young people have played National Lottery games online with their parents or with their permission.

Griffiths, M., Wood, R.T.A., and Parke, J. (2006). A psychosocial investigation of student online poker players. *Presentation at the 13th International Conference on Gambling*. Lake Tahoe, Nevada. May 22-26, 2006. Retrieved on July 12, 2007, from: http://www.unr.edu/gaming/13th_Conference_Web_files/Files/Abstracts/index.htm

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- Abstract: The Safe@play Risk Quiz is an internet based self-assessment tool and can be placed on VLT's, interactive slot machines and video kiosks in gambling venues. The present study will help to provide an initial evaluation of the potential for the quiz to render an awareness of the risk factors that may allow users to take control of their individual gambling behaviors. The results of the study will help researchers to evaluate the effectiveness of the Safe@play quiz and determine if on-line assessment tools assist in preventing problem gambling habits among players.

Hugel, P. (1998). Criminal law and the future of Internet gaming. *Gaming Law Review*, 2 (2), 143.

Hugel, P., and Kelly, J. (2000). The Internet, gaming, RICO and credit cards: A legal analysis. *Gaming Law Review*, 4, 135-145.

Hugel, P. and Kelly, J. (2002). Internet gambling: Credit cards and money laundering. *Journal of Money Laundering Control*, 6(1), 57-65.

- Abstract: Contrasts the approaches to offshore Internet gambling taken by the UK and the USA: the Budd Committee recommended that it be permissible under license in the former, but it is arguably illegal for an offshore operator to accept wagers from the USA - and most gaming sites are well outside the USA. Discusses a number of US legal cases, many of them involving the Racketeer Influenced and Corrupt Organizations Act (RICO): *State of New Jersey v RoyalclubCasino.com et al*, *In Re Gaming Lottery Securities Litigation*, *Providian Bank v Haines*, *Jubilirer v MasterCard International*, *Reves v Ernst and Young*, *Marino v American Express*, *Buchal v 3748472 Canada Inc*, *US v Cohen*, *In Re MasterCard*, *US v Truesdale*, *US v Dennis and Joseph Atiyeh*, *United States v \$734,578.82 in United States Currency*. Suggests that the Statute of Anne might be used to minimise Internet gambling by Americans, but concludes that it is doubtful whether Internet gambling can be prohibited and that a licensing system may be practicable.

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Ialomiteanu, A. and Adlaf, E.M. (2001). Internet Gambling Among Ontario Adults. *eGambling: The Electronic Journal of Gambling Issues*, 5 [On-line journal]. Retrieved July 12, 2007, from: http://www.camh.net/egambling/issue5/research/ialomiteanu_adlaf_article.html

- Abstract: The increased popularity of the Internet among the general population is of particular relevance to the area of Internet gambling. This paper describes the prevalence of Internet gambling among Ontario adults. Data are based on a random telephone survey of 1,294 Ontario adults. Overall, 5.3% of the Ontario adults interviewed in 2000 reported having gambled on the Internet during the past 12 months. Although women were more likely to gamble on-line than males (6.3% vs. 4.3%), the difference was not statistically significant. Only marital status was significantly related to Internet gambling. Those previously married (divorced, widowed) were significantly more likely to report on-line gambling compared to those who were married (10.9% vs. 4.9%). There were no dominant age, regional, educational or income differences.

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- Abstract: This paper explores the political and social implications of the emerging online gambling industry and the ability of the existing legal framework to halt the industry's development. Making gambling more broadly available via the networks threatens heightened crime, an increased incidence of compulsive gambling, and cannibalized spending in other areas of the economy. Yet, U.S. state and federal laws are inadequate to deal with the onslaught of virtual gaming. States are unlikely to be able to prosecute out of state casino operators operating in cyberspace. Although they may be able to prosecute their own citizens for gambling on-line, enforcement will be difficult. Federal statutes may criminalize cyberspace casinos, but the U.S. government's ability to prosecute foreign operators is questionable. As existing legal frameworks prove inadequate to deal with a global, intangible entity, new legal, technological, and political solutions will have to be crafted in order to protect Americans from the substantial externalities posed by on-line gambling.

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Jones, P., Clarke-Hill, C.M. and Hillier, D. (2000). Viewpoint: back street to side street to high street to e-street: sporting betting on the Internet. *International Journal of Retail & Distribution Management*, 28(6), 222-227.

- Abstract: Gambling is big business in the UK with an annual turnover of some £25 billion and for the past 40 years betting shops have been the most prominent and visible element within this market. This paper outlines the changes in the general locational pattern and the service environment of betting shops as a prelude to a description of the origins, characteristics and growth of sporting betting operations on the Internet. The paper then discusses some of the issues surrounding sporting betting on the Internet focusing particularly on the challenges it is seen to pose to traditional betting shop businesses.

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- Abstract: The personal computer is a staple of the American home, providing millions of Americans access to the Internet. The broad accessibility of the Internet has impacted numerous commercial markets, including the heavily regulated gambling industry. Over the past couple of years, the gaming industry has experienced the introduction of cyber-casinos, Web sites where subscribers play electronic games of chance, and Internet sports betting parlors. Despite dubious legality, the number of gambling Web sites is growing at a meteoric rate. Sensing that Internet gaming is here to stay, federal and state legislatures, courts, and traditional gaming organizations are attempting to address the future of on-line gambling. This note discusses the political, legal, and social ramifications of the on-line gambling market, and addresses whether Congress and state legislatures should adopt an outright ban. After examining the various arguments on both sides of the prohibition debate, the author concludes that the federal government should regulate, rather than unilaterally prohibit, Internet gambling. Further, the author provides a regulatory model that Congress may adopt to implement some control over the rapidly

expanding Internet gaming market.

Kale, S.H. (2006). Designing culturally compatible Internet gaming sites. *UNLV Gaming Research & Review Journal*, 10(1), 41-50.

- Abstract: Rising e-commerce volumes the world over provide opportunities to global marketers to expand their markets using the Internet. While Internet casinos have had their share of failures, the industry still rakes in three times the revenues as web pornography. Converging web technology allows for Internet gaming operators to expand their markets all over the world. However, appealing to consumers in different countries and regions requires adaptation of websites to the cultural milieu of the various target markets. This paper reviews existing literature on culture and website design and goes on to discuss the impact of culture on designing Internet gaming sites. A series of propositions hypothesizing the impact of culture on consumer responses to online gaming sites have been formulated using Hofstede's cultural dimensions. Theoretical and managerial implications of the proposed framework have also been discussed.

Keller, B.P. (1999). The game's the same: Why gambling in cyberspace violates federal law. *Yale Law Journal*, 108 (7), 1569-1609.

- Abstract: Cyberspace gambling should not be considered different from and should be subject to federal government regulation in the same fashion as traditional gambling activities. The international and immediate character of Internet gambling is more conducive than traditional gambling to the problems to which government regulation is intended to address, such as underage gambling. Existing laws can legitimately and effectively be used to accomplish the regulatory function.

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Kelly, J.M. (2003). Payment problems and new solutions: From national regulation to global solutions. *Gaming Law Review*, 7 (2), 123.

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- Abstract: This article presents an interview with Joseph M. Kelly, former U.S. consultant to Antigua on interactive gambling regulations. When asked about charges filed by the government of Antigua against the U.S., he said Antigua alleged that U.S. prohibition of cross-border gambling and its anti-Internet gambling policies prevented credit card companies and banks from honoring Antigua's online gaming transactions. The U.S.

government insists that any interactive wagering must be legal in both the jurisdiction of the bettor and operator. A panel of the World Trade Organization concluded General Agreements on Trade in Services (GATS) had jurisdiction since the U.S. failed to exclude gambling from its GATS communities.

Kelly, J., Tew, M., and Dubin, L. (2005). The global e-gaming industry: Why London, why now? *Gaming Law Review*, 9 (6), 572-578.

Keuleers, E. (2005a). Gambelli: The need for a European framework for remote gambling. *Gaming Law Review*, 9(2), 134-135.

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- Abstract: This article reviews the difficulties facing national courts in respect of the regulation of online gambling activity in the wake of two recent decisions of the European Court of Justice that, in mixed messages, may be moving towards liberalization of the European gaming market.

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- Abstract: Two areas of Internet behavior, gambling and pornography distribution, are examined for what they reveal about the profound social and psychological changes caused by recent advances in communication technology. The overview of these domains clearly shows that there will be an expected increase in people presenting for treatment with Internet behavior related difficulties, and that their treatment will be, at present, uninformed by any specific empirical research. These two domains are used as examples to illustrate how the Internet is creating a paradigm shift in the basic nature of an individual's relationships to local, state, and federal governments. It is no longer possible for people, even minors, to be fully protected by their governments from material deemed harmful by the community one lives in. This is demonstrated by a review of the current availability, in millions of homes nationwide, of the opportunity to experience Internet casino gambling and to acquire pornographic material not sold in United States adult bookstores. The psychological effect of the increased need for individual responsibility in the access to potentially harmful domains is not well understood at this time. This article is a call for the kind of basic research that will delineate the base rates for pathological involvement in online gambling and pornography, as a means of discovering the potential negative psychological consequences of the inability to regulate Internet content.

King, S.A. and Barak, A. (1999). Compulsive Internet gambling: A new form of an old clinical pathology. *CyberPsychology & Behavior*, 2(5), 441-456.

- Abstract: Focuses on unique and psychologically significant factors that are involved in Internet gambling behavior, in comparison to traditional gambling procedures. Several of the aspects of Internet gambling, which are believed to facilitate excessive online gambling, are examined. These include the practical ease of access to online gambling

and the anonymity and privacy of gambling from one's own home, as well as other factors. An overview of the graphical interface of several typical virtual casinos shows how seductive and realistic the online casino experience can be. The psychologically derived methods used by Internet casinos to make online gambling attractive, accessible, and easily operated are delineated. A review of the literature related to excessive traditional gambling behavior is used as a basis for analysis of online gambling behavior, in order to assess the extent of virtual gambling. Studies of the effects on the psychological welfare of communities that underwent introduction to traditional casino gambling are reviewed, and evaluation is made about how virtual gambling might have negative social influence worldwide.

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LaBrie, R.A., LaPlante, D.A., Nelson, S.E., Schumann, A., and Shaffer, H.J. (2007) Assessing the playing field: A prospective longitudinal study of Internet sports gambling behavior. *Journal of Gambling Studies*. 23(3), 347-362.

- Abstract: Internet gambling is growing rapidly, as is concern about its possible effect on the public's health. This paper reports the results of the first prospective longitudinal study of actual Internet sports gambling behavior during eight study months. Data include recorded fixed-odds bets on the outcome of sporting contests and live-action bets on the outcome of events within contests for 40,499 Internet sports gambling service subscribers who enrolled during February 2005. We tracked the following primary gambling behaviors: daily totals of the number of bets made, money bet, and money won. We transformed these variables into measures of gambling involvement. We analyzed behavior for both fixed-odds and live-action bets. The median betting behavior of the 39,719 fixed-odds bettors was to place 2.5 bets of €4 (approximately \$5.3 US) every fourth day during the median 4 months from first to last bet. This typical pattern incurred a loss of 29% of the amount wagered. The median betting behavior of the 24,794 live-action bettors was to place 2.8 wagers of €4 every fourth day during the median duration of 6 weeks at a loss of 18% of the amount wagered. We also examined the behavior of empirically determined groups of heavily involved bettors whose activity exceeded that of 99% of the sample.

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- Abstract: The authors evaluated gambling behaviors, including Internet gambling, among patients seeking free or reduced-cost dental or health care. Three hundred eighty-nine patients at university health clinics completed a questionnaire that included the South Oaks Gambling Screen (SOGS; H. R. Lesieur and S. Blume, 1987). All respondents had gambled in their lifetimes, with 70% gambling in the past 2 months. On the basis of SOGS scores, 10.6% were problem gamblers, and 15.4% were pathological gamblers. The most common forms of gambling were lottery, slot machines, and scratch tickets. Internet gambling was reported by 8.1% of participants. Compared to non-Internet gamblers, Internet gamblers were more likely to be younger, non-Caucasian, and have higher SOGS scores. This study is among the first to evaluate the prevalence of Internet gambling and suggests that people who gamble on the Internet are likely to have a gambling problem. Results also illuminate the need to screen patients seeking health care services for gambling problems.

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- Abstract: Online gambling utilizes advanced telecommunications technology to provide access to gambling across national borders, presenting unprecedented opportunities for industry and new challenges for government regulation and national sovereignty. It also promises to revolutionize the way people gamble, raising critical issues about social and economic impacts. Nations have taken a variety of approaches to online gambling, ranging from unregulated legalization to prohibition, creating a perplexing and uncertain legal environment. This paper will examine the development of Internet and interactive gambling, the responses by governments and industry, and the issues for policy-makers and regulators.
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McNeal, B. (2006). Website Review: Online Casino City. *UNLV Gaming Research & Review Journal*, 10(1), 105.

- Abstract: The article reviews the Online Casino City website.

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- Executive Summary: With other growth sectors in the gaming and gambling industry, such as online poker and betting exchanges, maturing and with gambling legislations getting more complex the search is on for other as yet unpolished gems. According to many experts, casual gaming and gambling, among them, for example, skill gaming, online bingo, and fantasy sports, will trigger the next growth spurt in the industry. The study includes the results of a survey MECN conducted among more than 60 industry experts who offered their unique insights and assessments. Among key findings were the following insights: The experts estimate the current market size for casual gaming and gambling (skill gaming and online bingo) to be about USD 500 million with more than 8 million regular players playing for cash. By 2010 the casual gaming and gambling market is expected to grow to ca. USD 1 billion. Casual gaming as attractive product option for state lotteries and private operators. Another reason for the growing relevance of the casual gaming sector is that regulations and laws regarding gambling are getting more and more complex and are forcing state lotteries as well as private companies to look for alternative products to their traditional gambling offerings. Millions of potential casual gamers and gamblers are not yet targeted by the industry. As the market for heavy punters and gamblers becomes more and more saturated, the industry begins to focus on casual gamers and gamblers and especially on women. Growing number of investors - Almost every week high-caliber companies, such as media giants Liberty and Burda, as well as private equity companies, such as Apax, are investing in the casual gaming sector. The evaluation of relevant casual gaming sites showed that the number of games offered varies widely, that customer service/support is in some cases not satisfactory, and that only very few sites offer languages other than English. Europe will be the most important region for future growth, according to 91% of the experts.

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the French Financial Commission of the Senate (“Commission des Finances du Sénat”) pleads in favour of an urgent state intervention with a view to legalising and licensing such games on the Internet subject to a number of necessary precautions. It therefore seems the time has come for reform, but before we consider the social and legal parliamentary debate, it is pertinent to examine the status of the law on this subject in order to appreciate the implications of the reforms which are proving necessary.

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Miller, R. (2006). The need for self regulation and alternative dispute resolution to moderate consumer perceptions of perceived risk with Internet gambling. *UNLV Gaming Research & Review Journal*, 10(1), 51-58.

- Abstract: The legislative gaps in international eCommerce and specifically in the gambling industry mean that many consumers face the market condition of caveat emptor (let the buyer beware). In terms of consumer psychology, caveat emptor increases consumer perceptions of risk and slows the diffusion of Internet gambling. This paper discusses the specific risks associated with internet gambling and presents an industry structure designed to off-set consumer perceptions of perceived risk through industry self regulation and alternative dispute management techniques.

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Morse, E.A. (2007). Extraterritorial internet gambling: legal challenges and policy options. *International Journal of Intercultural Information Management*, 1 (1), 33-48.

- Abstract: Casino gambling in the USA is highly regulated. Internet gambling operations circumvent domestic regulatory systems designed to accomplish various policy goals, including protecting minors, enforcing tax laws and preventing money laundering. The absence of international cooperation and legal options for restricting access to internet gambling appear limited to targeting domestic aspects of the internet business model, including advertising and financial services. However, financial intermediaries provide a constantly moving target for regulators. Willingness to pursue more invasive policy options may depend on what social science research reveals about the social harms of internet gambling, as well as security threats from unregulated cash flows.

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Paul Budde Communication (2006, Nov). *Global – Services – Online Gambling and Gaming*. Paull Budde Communication Ptd Ltd. Available at: <http://www.budde.com.au/Reports/Contents/Global-Services-Online-Gambling-and-Gaming-3093.html>

- Abstract: There is currently a lot of interest in both the online gambling and gaming sectors, with both being readily adopted into mobile devices. The increased penetration of high-speed broadband is assisting in the growing popularity, however the regulatory environment is still creating uncertainty in the online gambling sector. The innovation of placing advertisements within games is creating new revenue streams. In this report, a summary of the regulatory environment for online gambling is provided as well as an overview of the video gaming industry, including the major players. Statistics and forecasts are also included for both the online and mobile industries.

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- Abstract: The expansion of legalized gambling poses a number of issues for policymakers. Two related issues that have not been dealt with extensively from a public policy perspective, are examined in this commentary: state responsibility for addressing pathological and problem gambling, and the legal status and regulation of Internet gambling. A review of the recommendations of the 1998 National Gambling Impact Study Commission on pathological and problem gambling as well as state policies and practices indicates that little has been accomplished in dealing with the need for education, prevention, and treatment. Confusing and contradictory legislation and policies abound. Internet gambling flourishes, and federal and state governments are ambivalent about legalizing it. Both problem gambling and regulation of Internet gambling urgently need attention.

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Petry, N.M. (2006). Internet gambling: an emerging concern in family practice medicine? *Family Practice*, 23(4), 421-426.

- Abstract: Background: Gambling problems are rarely brought to the attention of family practice physicians, but pathological gambling can be associated with poor emotional and physical health. Recent availability and easy accessibility of Internet gambling may be associated with pathological gambling status, and Internet gambling may confer health risks., Objective: This study evaluated the prevalence of Internet gambling, its association with pathological gambling, and the relationship between Internet gambling and health status among patients attending medical and dental clinics., Methods: The South Oaks Gambling Screen and Short Form 12 were administered to 1414 adults in waiting areas of clinics., Results: Only 6.9% of respondents reported ever gambling on the Internet, with 2.8% indicating frequent Internet wagering. Almost two-thirds (65.9%) of regular Internet gamblers were classified as probable pathological gamblers, compared with 29.8% of ever-Internet gamblers and 7.6% of non-Internet gamblers. Internet gambling was associated with poor mental and physical health, and this association remained significant even after controlling for age, gender, site and pathological gambling status., Conclusions: These data suggest that Internet gambling is linked to pathological gambling and is independently associated with poor health. Family practice physicians should consider referring patients who gamble on the Internet for further treatment.

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- Rose, I.N. (1998). Internet gambling and police power. *Gaming Law Review*, 2 (2). April 1998.
- Rose, I.N. (2000). The future legal landscape for Internet gambling. *Gaming Law Review*, 4, 399.
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- Rose, I.N. (2006a). Gambling and the law: An introduction to the law of Internet gambling. *UNLV Gaming Research & Review Journal*, 10(1), 1-14.
- Abstract: This article brings to gaming researchers, with or without a legal education, a roundup of major issues and problems in the unsettled field of Internet gaming. By citing laws, cases, articles and treatises this annotated essay leads the reader through the maze of confusion and contradiction that now clutters the legal scene. Topics touched on include: elements of gambling, Federal, state and local gambling regulation, organized crime implications, extraterritorial jurisdiction, police power and advertising. Conclusions are addressed to businesses considering the risks of operating Internet gambling web sites.
- Rose, I.N. (2006b). Congress close to devastating Internet gambling. *Gaming Law Review*, 10 (5), 443-444.

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Rose, I.N. (2007a). Gambling and the Law: The Unlawful Internet Gambling Enforcement Act of 2006 analyzed. *UNLV Gaming Research & Review Journal*, 11(1), 53-56.

- Abstract: This article presents a summary of the U.S. Unlawful Internet Gambling Act of 2006 that was passed by the Congress just before the election period recess. The author also presents his detailed analysis and opinion of the law. Senator Frank R. Lautenberg stated that the Senate-House Conference Committee hadn't seen the final language of the bill before its passage. Congress passed such a law because it found that Internet gambling is a growing problem for banks and credit card companies. It also found that new mechanisms were necessary to enforce gambling laws on the Internet.

Rose, I.N. (2007b). Gambling and the Law: Internet gaming: How to get arrested. *Gaming Law Review*, 11 (1), 4-5.

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Schull, N.D. (2005). Digital gambling: The coincidence of desire and design. *The Annals of the American Academy of Political and Social Science*, 597(1), 65-81.

- Abstract: Drawing on ethnographic research conducted in Las Vegas among game developers and machine gamblers, I correlate a set of digitally enhanced game features with phenomenological aspects of gamblers' experience, demonstrating the intimate connection between extreme states of subjective absorption in play and design elements that manipulate space and time to accelerate the extraction of money from players. The

case of the digital gambling interface exemplifies the tendency of modern capitalism to bring space, time, and money into intensified relation and sheds light on the question of what might or might not be distinctive about the rationalities and libidinal investments of the "digital age."

Schwartz, D.G. (2003). A virtual Pandora's box: Why cyberspace gambling prohibition means to terrestrial casino operators. *UNLV Gaming Research & Review Journal*, 7(1), 59-65.

- Abstract: Recently, there has been increased pressure on the U. S. Congress to act against Internet gambling. While it may be tempting for terrestrial casinos to watch idly as the federal government moves to eliminate a potential competitor, those in the business of gaming must be leery of any federal efforts to halt gambling online. In the final analysis, the same arguments to restrict consumer choice in cyberspace can be easily used against gambling in real casinos—a compelling reason for terrestrial gaming operators to forcefully oppose any federal restrictions on Americans' rights to gamble.

Schwartz, D.G. (2005). *Cutting the Wire: Gambling Prohibition and the Internet*. Reno, NV: University of Nevada Press.

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Screen Digest (2006, July). Online gambling: Forecasts and assessments to 2010. *Screen Digest*, July 2006, 172 pages. Retrieved July 12, 2007, from:

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- Abstract: Strong growth in UK consumer spending on online gambling from 2000 was initially generated by predominantly 'hard core' gamblers. However future growth will be driven by more leisure oriented consumers from 2006 as demonstrated by the emergence and growth of simpler gambling formats targeting the mass market, in particular gaming and lotto. For the first time gambling products are competing with other forms of mass entertainment for consumer attention and spending. This report is essential reading for online gambling operators, investors in the industry, technology providers and sub-contractors as well as media companies looking to generate revenues from broadband services. Screen Digest forecasts that UK consumer spending on online gambling will increase from £660m in 2005 to £1.6bn in 2010. At the same time the number of active UK clients will grow from 1.1m in 2005 to 2.1m in 2010. The report profiles 30 online gambling industry leaders. For inclusion in this study operators must either be based or listed in the UK, or target UK-based gamblers. An historic, cultural acceptance of gambling, a regulatory framework which directly confronts the issues unique to online gambling and the benefits of London as a global financial centre have made the UK an essential base for many of the leading operators. Collectively, these

operators constitute a large proportion of the total market for global online gambling. 2005 witnessed an explosion in industry consolidation with 32 transactions involving online gambling operators worth over £3bn - up from 9 deals worth £200m in 2004. This report reviews the competitive forces driving corporate activity and analyses the key issues which will shape the industry to 2010.

Senate Information Technologies Committee (March 2000). *Netbets: A review of online gambling in Australia (Chapter 2: Online Gambling in Australia)*. Report for the Select Committee on Information Technologies. Retrieved July 13, 2007 from http://www.aph.gov.au/senate/committee/it_ctte/completed_inquiries/1999-02/gambling/report/contents.htm

Sévigny, S., Cloutier, M., Pelletier, M., and Ladouceur, R. (2005). Internet gambling: Misleading payout rates during the "demo" period. *Computers in Human Behavior*, 21, 153-158.

- Abstract: For many gamblers, internet gambling may be an attractive new activity. Knowing that internet gambling follows no specific regulations, it was hypothesized that some sites would use questionable strategies in order to grab any interested potential player surfing the net. This study addressed two research questions: (1) Do some internet casino sites provide inflated payout rates when gamblers play on the slot machine demo games? (2) Will these sites keep the same rates when gamblers play for real money? Results show that 45 (39%) of the 117 visited sites provided inflated payout rates (over 100%) in the demo session. But these unrealistic high rates were not maintained when playing for real money. In addition, some sites used marketing strategies reinforcing false beliefs about the notion of chance and randomness. These findings are discussed in the context of responsible gambling policies.)

Shaffer, H.J. (1996). Understanding the means and objects of addiction: Technology, the internet, and gambling. *Journal of Gambling Studies*, 12(4), 461-469.

- Abstract: This article describes how using new computer technology and the Internet for gambling can represent both the means and object of addiction. However, these technological factors do not represent the cause of addictive behavior. Given the widespread availability of computer technology and the remarkable expansion of the Internet, it is not surprising, however, that these technological advances have become associated with intemperate gambling activities. By discussing the concept of addiction and its associated social setting, neurochemistry, and gaming characteristics, this article suggests that addiction is the result of shifts in subjective experience and that new technology and the Internet can provide relatively reliable and potent contemporary vehicles for changing emotional states.

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Smeaton, M. and Griffiths, M. (2004). Internet gambling and social responsibility: An exploratory study. *CyberPsychology & Behavior* 7(1), 49-57.

- Abstract: Within the last few years, we have seen a substantial increase in the amount of gambling opportunities offered on the Internet. Many concerns have been raised about the activity, including the potential for excessive gambling, and the lack of safeguards for vulnerable populations such as adolescents and problem gamblers. Given these concerns, a representative selection of 30 U.K.-owned Internet gambling sites were studied to examine what safeguards were in place to encourage social responsibility of Internet gamblers. It was found that very few sites were engaged in socially responsible practice and that much more could be done to protect vulnerable groups. The findings from this study were then used to compile a list of recommendations for good practice among Internet gambling operators.

Smeaton, M., Poole, A., Chevis, A., and Carr, J. (2004). *Study into underage access to online gambling and betting sites*. . Retrieved July 12, 2007, from: <http://www.gamcare.org.uk/pdfs/StudyReportFinal.pdf>

Smith, A.D., and Rupp, W.T. (2005). Service marketing aspects associated with the allure of e-gambling. *Services Marketing Quarterly*, 26(3), 83-103.

- Abstract: A recent outlet for gambling that has evolved with the advent of e-commerce is Internet gambling. Internet gambling has become a very popular outlet for betting on all sports or playing online casino games. With the ease of use and increasing accessibility, a gambler does not even need to leave their home to place bets or play the casino games, often with financially devastating results. Other important questions concerning the service marketing of this type of interactive entertainment exists as well. What are the moral implications of operating these gambling websites, and what type of gambler are these websites targeting? In terms of service marketing, the online industry excels in customer service by offering many of the interactive entertainment industries' finest technologies and promotional campaigns through offering outstanding interfaces, variety of games and online chat with other players. However, with Internet gambling, dilemmas to the following exist at the individual, firm, and society levels. These dilemmas also affect the future of the gambling industry as a whole, and Internet gambling in particular. These quandaries include regulatory questions for government, how use of credit card funds for gambling purposes has effected the banking/finance industry, and enticement of gambling to the potential gambling addict. Models of these effects are included

Smith, R. (2006). Regulatory rationale. Presentation at the *Global Remote and E-Gambling Research Institute Conference*. August 31 – September 1, 2006. Amsterdam, Netherlands. Retrieved July 12, 2007, from: http://www.gregri.org/files/conference/Rick_Smith.pdf

Stevens, R. (2006). *Internet Gambling Bibliography*. First prepared July 25, 2001; Updated May 2006. Prepared by Rhys Stevens, Librarian, Alberta Gaming Research Institute. Retrieved July 12, 2007, from: http://www.abgaminginstitute.ualberta.ca/pdfs/internet_gambling.pdf . Also available in *UNLV Gaming Research & Review Journal*, 10 (1), 95-100.

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- In a bid to combat Sweden's growing problem of gambling addiction, state-run betting giant Svenska Spel will use a system that analyses how each player places bets, how much money they bet with, under which circumstances, and how often. The system is voluntary, and is currently designed to monitor online gambling. By comparing how those with a gambling addiction betted before they were hooked, the technology identified individuals with a growing habit, before they become problem gamblers. Once a person is identified by the system as being at risk, Svenska Spel has pledged to shut-off betting advertising to that person, urge them to consider their gambling habits, work out a gambling budget, and take a test for gambling addiction. The person is also offered the chance of shutting himself off from Svenska Spel's betting products.

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Sychold, M. (2005, June). *A legal study of Internet player protection: Problem gambling in the context of consumer protection*. Presented at the 6th European Conference on Gambling Studies and Policy Issues, Malmö, Sweden. Retrieved July 12, 2007, from:

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Tomback, A.E., and DeSimone, A.K. (2001). Every state for itself? Recent approaches to Internet gaming. *Gaming Law Review*, 5, 431-442.

Toneguzzo, S. (1998). Internet gaming – Evidence for Parliament of South Australia, Social Development Committee. In G. Coman, B. Evans, and Wootton, R. (Eds.), *Responsible gambling: A future winner: Proceedings of the 8 National Association for Gambling Studies Conference, Melbourne, 1997* (pp. 369-389). Adelaide, Australia: National Association for Gambling Studies.

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Turner, N. (2002, February). Internet gambling [first person account]. *eGambling: The Electronic Journal of Gambling Issues*, 6 [online journal]. Retrieved July 12, 2007, from:

http://www.camh.net/egambling/issue6/first_person/index.html

United States Department of the Treasury. (2000). *A survey of electronic cash, electronic banking, and internet gaming*. Washington, DC: Financial Crimes Enforcement Network (FinCEN). Retrieved July 12, 2007, from: <http://www.fincen.gov/e-cash.pdf>

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- This report examines the U.S. payments system, particularly credit cards, as it relates to interactive on-line gaming. The report investigates (1) the legal framework for Internet gambling domestically and abroad; (2) the credit card industry's policies regarding the use of credit cards to pay for Internet gambling and actions taken to restrict such usage; and (3) the views of law enforcement, banking regulators, and the credit card and gaming industries on the vulnerability of Internet gambling to money laundering.

Ursel, B., and Morgan, D. (2004, July). A brochure on Internet risk awareness and prevention. *Journal of Gambling Issues*, 11. Retrieved February 1, 2005 from: http://www.camh.net/egambling/issue11/jgi_11_ursel.html

van der Gaast, R. (2001, Sept). *Finland – Internet Gaming Update*. Retrieved July 13, 2007 from http://www.gamblinglicenses.com/PDF/Finland_internet_gaming_update_Sept_2001.pdf

Vallerius, B. (2006, October 20). Gambling sites will change software to stay in U.S. market. *Casino City Times*.

- In the wake of the Unlawful Internet Gambling Enforcement Act, publicly-held gaming software development companies like Playtech, CryptoLogic, Ogame and Boss Media have announced that their software platforms can no longer be used to provide gambling services to people located in the U.S. But some privately-owned gambling site operators such as GoldenPalace.com, FullContactPoker.com and SportsInteraction.com have a prominent US presence and may be betting that the U.S. prohibition will prove unenforceable.

van Kastel, J. (2006). Holland Casino Digitaal: A New Challenge. *Presentation at the Global Remote and E-Gambling Research Institute Conference*. August 31 – September 1, 2006. Amsterdam, Netherlands. Retrieved July 12, 2007, from: http://www.gregri.org/files/conference/Johan_van_Kastel.pdf

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- This research note is one of the earliest existing academic commentaries on Internet gambling. The authors comment on the legal and technical issues associated with Internet gambling websites of the day, suggesting that online venues may be unable to compete with “real world” ones.

Wager (1997, November 4). Perceptions of Internet gambling. *The Wager*, 2(44) [on-line serial]. Retrieved July 12, 2007, from: <http://www.thewager.org/Backindex/vol2pdf/w244.pdf>

Wager (1999, May 18). Online casinos: A closer look. *The Wager*, 4(20) [on-line serial].

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<http://www.basionline.org/backissues/1999/vol4pdf/w420.pdf> .

- This research note provides an early case study of an online casino, identified as Gold Club Casino. The research note focuses on logon as well as pay-out procedures.

Wager (2001, February 7). Gambling on the Internet: Crossing the interstate wire. *TheWager*, 6(6) [on-line serial]. Retrieved July 12, 2007, from:

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- This research note provides a brief overview of the difficulties and ambiguities associated with attempts, in the USA, to regulate Internet gambling using the Interstate Wire Act of 1960.

Wager (2002, April 10). Netizens @ risk: Online gambling and addiction. *The Wager*, 7(15) [on-line serial]. Retrieved July 12, 2007, from:

<http://www.basionline.org/backissues/2002/vol7pdf/wager715.pdf>

- This research note offers preliminary insight into the potential relationship between Internet gambling and problem gambling. Among a convenience sample of 389 individuals, Internet gamblers were roughly four times more likely to be classified as problem gamblers. The authors call for future and more rigorous research into the relationship.

Wager (2007, April 18). Internet gambling: Caught in the web? *The Wager*, 12(4) [on-line serial]. Retrieved July 12, 2007, from:

http://www.basionline.org/backissues/2007/vol12/wager12_4.pdf

- This research note provides a brief overview of existing academic research on Internet gambling. The authors take a particular focus on studies containing prevalence estimates of Internet gambling, as well as those that address the potential relationship between problem gambling and Internet gambling.

Walker, T.C. (2003). *The Online Gambling Market Research Handbook*. Atlanta, GA: Terri C. Walker Consulting.

Walters, L.G. (2003a). The law of online gambling in the United States: A safe bet, or risky business? *Gaming Law Review*, 7, 445-450.

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Walter, L.G. (2006). Investment or conspiracy? Legal concerns about investing in the online gambling industry. *Gaming Law Review*, 10 (2), 96-101.

Wang, S.J., and Ke, H. J. (2004). Curbing gambling activities on the Internet. *IEEE Aerospace and Electronic Systems Magazine*, 19(4), 33-35.

Warren, M.G. (2006). Internet casino-style gambling: Is it legal in Nevada? *UNLV Gaming Research and Review Journal*, 10(1), 21-26.

- Abstract: The State of Nevada, to retain its position as pace setter in U. S. casino gaming regulation, took important legislative steps to prepare for online gambling. When these legal efforts were discouraged or blocked by the U.S. Department of Justice a new direction emerged. This article traces the shift from implementing online gambling across state lines to intrastate gaming within Nevada with hand-held devices in auxiliary areas of a casino complex beyond the casino floor. Regulatory issues are raised and prospects for inaugurating interactive gaming are discussed.

Watson, S., Liddell, P., Moore, R.S., and Eshee, W.D. (2004). The legalization of Internet gambling: A consumer protection perspective. *Journal of Public Policy & Marketing*, 23(2), 209-213.

- Abstract: The complexities of Internet gambling limit congressional efforts to regulate its growth. Therefore, legislative attempts to prohibit Internet gaming may undermine the protection mechanisms that were designed to help people who are susceptible to the social and economic problems linked to gambling. The authors suggest that congressional efforts to prohibit Internet gambling should be reassessed, and they recommend the legalization and regulation of Internet gambling through existing land-based casinos. Finally, the authors present the regulatory guidelines and cooperative policy initiatives that are necessary for such a proposition.

Welte, J.W., Barnes, G.M., Wiczorek, W.F., Tidwell, M-C., and Parker, J. (2002). Gambling participation in the U.S: Results from a national survey. *Journal of Gambling Studies*, 18(4), 313-337.

- Abstract: Demographic patterns of gambling participation in the U.S. were examined. A national telephone survey was conducted with 2,630 representative U.S. residents aged 18 or older. The sample as weighted for analysis was 48% male, 12% black, and 11% Hispanic. Respondents were questioned on 15 types of gambling: how often they played and how much they won or lost. Eighty-two percent gambled in the past year. Lottery was the most commonly played game, while casino gambling accounted for the largest extent of gambling involvement. Men and women were equally likely to gamble in the past year, but men gambled more frequently and had larger wins and losses, particularly on sports betting and games of skill. Blacks were less likely to have gambled in the past year, but blacks who gambled did so more heavily than other racial groups. Blacks and Hispanics were more likely than average to be pathological gamblers. The rate of past year gambling declined with age, but extent of gambling involvement among gamblers

did not vary with age. Rates of participation in most forms of gambling increased with socioeconomic status, but higher socioeconomic status gamblers had lower rates of pathological gambling, and lower extent of gambling involvement, particularly for lottery. New Englanders gambled more heavily than other Americans. Comparison with past studies showed an increase in overall gambling participation in the U.S., and large increases in rates of participation in lottery and casino gambling.

Whybrow, J. and Reed, C. (2002). Internet law: Will online gambling become lawful? *Computer Law and Security Report*, 18(1), 53-55.

- Abstract: Currently most online gambling sites breach Great Britain's criminal laws, except for pools and online betting. This may soon change if the Budd Report's recommendations are implemented by the Government. Not only would this change make online gambling a lawful activity, but the new regulatory regime proposed by the Report would be likely to make the UK a favoured location for establishing cross-border online gambling operations.

Whyte, K. (2005). *The paradox of Internet wagering: Increased risk for problem gambling but more potential for responsible gaming?* Retrieved July 12, 2007, from: <http://www.igamingnews.com/articles/files/paradox-white.pdf>

Wiebe, J. (2006). Internet gambling safeguards: What are online gaming sites doing to protect customers? *Newslink, Fall/Winter 2006*, 4-6. Published by the Responsible Gambling Council. Retrieved July 12, 2007, from: <http://www.responsiblegambling.org/articles/NewslinkFallWinter2006.pdf>

Williams, I. (2007, April 5). FBI checks out Second Life casinos: Agency investigates legality of virtual gambling. *Vnunet.com*. Retrieved July 12, 2007, from: <http://www.vnunet.com/vnunet/news/2187288/fbi-checks-second-life-casinos>

Wilsenach, A. (2002). Alderney: Leading regulated electronic gambling. *Gaming Law Review*, 6, 491-493.

Wilson, M. (2003). Chips, bits, and the law: An economic geography of Internet gambling. *Environment & Planning A*, 35, 1245-1260.

- Abstracts: Online gambling offers valuable insights into the relationship between real and virtual places. Gambling in most countries is highly regulated, with its geography reflecting the licensing of gambling to specific activities and locations. The ability to use the Internet challenges the legal foundation for gambling by offering access in an efficient and private way from distant locations. The heaviest concentration of gambling websites is found in North America and the Caribbean, with the leading locations for gambling-domain-name registrations being the United States, Canada, Antigua and Barbuda, Costa Rica, the United Kingdom, and St Kitts and Nevis. In this paper I explore the location and operation of Internet-gambling websites, with emphasis on the legal and economic geography of this activity.

Wilson, P. (2006). Remote gambling and the 2005 act - Is a UK License worth the trouble?. Presentation at the *Global Remote and E-Gambling Research Institute Conference*. August 31 – September 1, 2006. Amsterdam, Netherlands. Retrieved July 12, 2007, from: http://www.gregri.org/files/conference/Peter_Wilson.pdf

Wijnholds, H. and Little, M.W. (2007). Online gambling: murky legal status and vulnerable socio-economic environment pose public policy challenges. *Journal of Internet Commerce*, 6 (1), 119-138.

- Abstract: The marketing of online gambling has been successful, measured by the revenues being generated and by its tremendous growth in popularity. After examining a growing body of relevant literature, this study analyzes the legal environment of the United States and European markets and its impact on the affected stakeholders. It was found that the legal status of Internet gambling in the United States is in a flux while enforcement is largely ineffective. An exploration of several future scenarios for the legal environment identifies the dire need for clarification of the legal status of the market as the federal government's most important policy challenge. Some suggestions made regarding future research include studies on promotion and consumer welfare.

Winters, K. (2006). Adolescence and e-gambling: Intersections on the developmental highway. Presentation at the *Global Remote and E-Gambling Research Institute Conference*. August 31 – September 1, 2006. Amsterdam, Netherlands. Retrieved July 12, 2007, from: http://www.gregri.org/files/conference/Ken_Winters.pdf

Wood, R.T., and Williams, R.J. (2005, April). Problem gambling on the Internet: Characteristics, prevalence, and policy implications. Presented at the *Discovery 2005* conference, Niagara Falls, ON. Retrieved July 12, 2007, from: http://www.responsiblegambling.org/articles/robert_wood_discovery_2005.pdf

Wood, R.T. and Williams, R.J. (2007a). Problem gambling on the Internet: Implications for Internet gambling policy in North America. *New Media & Society*, 9(3), 169-191.

- Abstract: The proportion of North American gamblers who choose to gamble on the Internet is increasing at a dramatic rate. Unfortunately, however, relatively little is known about the characteristics of these individuals or their propensity for problem gambling. Past studies predict that Internet gamblers are especially at risk for developing gambling problems and that a substantial proportion of them already can be properly classified as problem gamblers. This article investigates this issue using data collected from an Internet-based survey administered to 1920 American, Canadian, and international gamblers. Confirming predictions of a relationship between Internet gambling and problem gambling, it finds that 42.7 percent of the Internet gamblers in the sample can be classified as problem gamblers. In light of the findings, and bearing in mind the recommendations made by other gambling researchers, it concludes with a discussion of issues and cautions for governments to heed when crafting Internet gambling policies.

Wood, R.T. and Williams, R.J. (2007b). *Internet gambling: Prevalence, demographics, and behavior*. [Study in progress, funded by the Ontario Problem Gambling Research Centre.]

Wood, R.T. and Williams, R.J. (2007c). Internet gambling: Past, present and future. In G. Smith, D.C. Hodgins, and R.J. Williams (Eds.), *Research and Measurement Issues in Gambling Studies* (pp. 491-514). Burlington, MA: Elsevier.

- This book chapter provides an overview of trends in Internet gambling, in a comparative and international context. The chapter includes discussions on the prevalence of Internet gambling, the demographic characteristics of Internet gamblers, social problems arising from Internet gambling, and potential future trends in Internet gambling.

Wood, R.T., Williams, R.J., and Lawton, P.K. (2007). Why do Internet gamblers prefer online versus land-based venues? Some preliminary observations. *Journal of Gambling Issues* [Online journal] (20). Retrieved July 12, 2007, from:

<http://www.camh.net/egambling/issue20/07wood.htm>

- Abstract: At a time when land-based gambling opportunities are widely available, why might some people choose or prefer to gamble on the Internet? We investigate this question using qualitative and quantitative data collected from an Internet-based survey of 1,920 Internet gamblers. The primary reasons people gave for preferring Internet gambling were (a) the relative convenience, comfort, and ease of Internet gambling; (b) an aversion to the atmosphere and clientele of land-based venues; (c) a preference for the pace and nature of online game-play; and (d) the potential for higher wins and lower overall expenditures when gambling online. Findings suggest that online venues may offer their clientele a range of experiences and benefits that are perceived to be unavailable at land-based venues. The authors recommend research into whether a competitive edge exists between different aspects of the gambling market, including Internet venues versus land-based gambling establishments.

Wood, R.T.A., and Griffiths, M.D. (2006). The GamAid Pilot Evaluation Study. Presentation at the *Global Remote and E-Gambling Research Institute Conference*. August 31 – September 1, 2006. Amsterdam, Netherlands. Retrieved July 12, 2007, from:

http://www.gregri.org/files/conference/Richard_Wood.pdf

Wood, R.T.A. and Griffiths, M.D. (2007). Online data collection from gamblers: Methodological issues. *International Journal of Mental Health and Addiction*, 5(2), 151- 163.

- Abstract: The paper outlines the advantages and disadvantages of using the Internet to collect data from gamblers, predominantly online gamblers. Drawing from experience of a number of studies carried out online by the authors and by reviewing the available literature, the authors discuss the main issues concerning data collected using computers and the Internet. The paper examines a number of areas including; recruiting and utilising participants, validity, suitable methods of data collection (i.e., questionnaire studies, online tests, participant observation, online interviews) and ethical issues. It is concluded that online research methods can be a useful way of examining the psychosocial aspects of online gambling and in some cases even traditional gambling activities.

Woodruff, C., and Gregory, S. (2005). Profile of Internet gamblers: Betting on the future. *UNLV Gaming Research & Review Journal*, 9(1), 1-14.

- Abstract: The commercial casino industry in 2002 provided more jobs, higher wages, and more tax revenues to states and local communities than ever before. At the same time Internet gambling sites operated by offshore companies have seen explosive growth since the introduction of the World Wide Web in 1995 (Rose, 2003). This research developed profiles of current land based casino patrons who have gambled on the Internet, those who have not but are willing to try, and those who have not and would not in the future consider Internet gambling. Two hundred surveys were collected at two Detroit, Michigan casinos, asking questions varying from demographic information to gambling experience, and the willingness to try new things. The conceptual framework for this project was based on Roger's Diffusion of Innovation Theory, and Forsythe and Bailey's Perceived Time Poverty Model. Income, education, marital status, prior Internet purchasing and online banking experiences have a significant impact on past behaviors and future intentions regarding Internet gambling. Hours of Internet usage had more of an impact on behaviors than the issue of accessibility.

Woolley, R. (2003). Mapping Internet gambling: Emerging modes of online participation in wagering and sports betting. *International Gambling Studies*, 3(1), 3 - 21.

- Abstract: Participation in gambling online has to date been largely regarded under homogenizing terms such as 'interactive gambling' or 'e-gambling'. This article explores different modes of participation gambling in the online environment, seeking to begin a process of better understanding some of the factors that construct distinguishable populations of online gamblers and distinct experiences of gambling online. The article commences with a brief overview of the internet, commenting on the apparent suitability of commercial gambling products for the development of successful online business models. Social and institutional factors constraining various modes of online participation in gambling are briefly outlined in relation to online wagering and gaming in Australia. Data drawn from three online surveys are then used to provide an overview of participation in the areas of online wagering and sports betting. These results form the basis of an initial analytical distinction between modes of participation in online betting on racing and sports in Australia.

Wootton, R., and d'Hondt, R. (2005, June). G4 Responsible e-Gaming - a case study in delivering successful e-gaming standards. Presented at the *6th European Conference on Gambling Studies and Policy Issues*, Malmö, Sweden. Retrieved July 12, 2007, from: http://www.easg.org/files/malmo2005/presentations/Zaterdag/11.30-13.00/Symposium/rob_wootton_rob_d%27hondt.pdf

Wu, D.A. (2000). Dischargeability of credit card debt incurred for Gambling: How to determine if a debtor committed actionable fraud under §523(a)(2)(A) in light of *Field v. Mans* and other recent court pronouncements. *Gaming Law Review*, 4, 13.

Wunsch-Vincent, S. (2006). The Internet, cross-border trade in services, and the GATS: Lessons from US-gambling. *World Trade Review*, 5(3), 319-355.

- Abstract: The rapid development of the Internet has led to a growing electronic cross-border delivery of services. While the WTO negotiations have not caught up to the reality of such service trade, the first GATS case dealing with the Internet, namely '*United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services*', has advanced matters. This paper distils the substantive conclusions of the case and remaining questions in relation to Internet-supplied services and certain core concepts of the GATS. Moreover, it sheds light on the case's implications for the services negotiations under the ongoing Doha Development Agenda. It concludes that the second ever GATS case has provided an encouraging set of answers to the unresolved questions of the WTO's Work Programme on E-Commerce, mainly confirming the applicability of GATS commitments to electronically supplied services and shaping the concept of technological neutrality. While more work or dispute settlement cases are necessary to clarify the remaining questions, the rulings have paved the way for the GATS to be a more effective discipline for cross-border (electronic) trade. The paper also explains that a 'chilling effect' of the rulings on the Doha services negotiations is not warranted.