

Response to the European Commission on its Green Paper: “On on-line gambling in the Internal Market”

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Purpose and Scope of this Submission

This written submission has been drafted in response to the European Commission's request for information from interested stakeholders for its Green paper "*On on-line gambling in the Internal Market*" published March 24 2011.² The purpose of the Green paper is to "*launch an extensive public consultation on all relevant public policy challenges and possible Internal Market issues resulting from the rapid development of both licit and unauthorized on-line gambling offers directed at citizens located in the EU*" (p. 3, European Commission, 2011).

What follows is a response to selected questions relating to problem gambling and the Internet, and issues relating to mitigating any associated risk and harm (specifically this includes responses to questions 15, 18, and 22). It is important to note that the focus on particular questions and the level of detail provided have been influenced by the extent to which some important issues seem to have been neglected in both public and academic debate. Responses have also been restricted by the limited time and resources available, and for this reason, I would be very happy to provide more details on request, in the case that this might prove useful to the Commission.

Whilst some information presented herein may prove unpalatable or inconvenient to some stakeholders (and this may apply equally to proponents and opponents of Internet gambling; and to state monopolies and private companies), it has been my intention throughout to provide evidence and/or commentary in an objective way. Personally, I think Internet gambling is an enjoyable and legitimate form of recreation. However, it is important that the right information is available regarding the public health status of Internet gambling, and that the current weaknesses in provision are highlighted and important recommendations for improved provision be made. While input from some sources (e.g., Bet Buddy, Featurespace) may have vested commercial interests, this information has nonetheless been fully explained and has received critical consideration.

A considerable portion of the material presented in this submission has come from a forthcoming edited book examining a range of social, political and commercial issues in the area of Internet gambling: *Williams, R.J., Wood, R.T., and Parke, J. (Eds.). (in press). Routledge International Handbook of Internet Gambling. Abingdon: Routledge.* Consequently, I would like to extend my thanks to the co-editors, and the publishers Routledge for giving permission to include some of our material in this submission. While the European Commission may publish this written submission as part of the consultation process only, we retain the copyright.

² Full details of the consultation can be obtained at:
http://ec.europa.eu/internal_market/services/gambling_en.htm

Questions and Responses

Question 15.

Do you have evidence that the factors listed above (*event frequency, payout interval, accessibility and social environment; chasing losses or being close to winning; perceived skills or “involvement” and commercial communications*) are linked to and/or central for the development of problem gambling or excessive use of online gambling services? (If possible, please rank them).

Response

I have spent the last 11 years studying gambling, and the roles of structural and situational characteristics have perhaps occupied the greatest proportion of time, and have always sparked my interest more than any other topic in gambling studies. These have been the focus of my PhD thesis, and I have published various academic outputs on this topic (e.g., Griffiths and Parke, 2002; Parke and Griffiths, 2004; 2006; 2007) and have been involved in developing and implementing one of the first responsible Game Design Protocols (although, I have since ceased my involvement in this project).

As you will probably be aware, there are various overviews, and/or attempts to gather consensus on this topic that currently exist in the public domain (Abbott, 2007; Cornish, 1978; Gambling Commission, 2009; Livingstone and Wolley 2008; Parke and Griffiths, 2007; Peller, LaPlante and Shaffer, 2008; Responsible Gambling Council, 2006; Williams Simpson and West, 2007).

My contribution to this section will be brief as I have limited original information to share beyond what is already out in the public domain. What follows are some brief comments that hopefully make some original contribution to the debate and I am more than willing to elaborate on these or other related points on request.

15.1. Causal evidence on risk and harm in relation to mode and characteristics of gambling games is limited

In addition to the above, key points to make in relation to game parameters are:

1. Some basic aspects of game design reflect common sense, but the exact nature of their relationship may be extremely complex and may be determined by other variables. In other words, there may be a non-linear relationship between structural features and problem gambling (e.g., increasing stake size may increase risk/harm up to a certain point, but if it gets too high then a problem gambler may not get what they need to meet their ‘needs’ as they would not be able to afford to play it for very long) and there may be interaction effects with other variables (e.g., size of stakes may be more important depending on whether the consumer is winning or losing).

2. There is a need to consider more features than those mentioned above, and these include:
 - a. Size of stake;
 - b. Size of prize;
 - c. Bonuses and their terms and conditions;
 - d. Game volatility and distribution of wins (contributing to rate of loss along with stake size and payback percentage).

3. It is critically important that research is ecologically valid, while at the same time offering sufficient experimental control. I am not aware of any research to date which really achieves this. To understand cause and effect, one must hold all other variables constant, while manipulating the variable of interest. Gambling experiments which allow such control rarely resemble real-life gambling conditions in terms of winning or losing money, length of time playing, authenticity of the game/environment and playing with low stake and prize levels. Both must be achieved to draw valid conclusions.

4. In the absence of robust empirical evidence, there are some structural characteristics that have a clearer relationship with gambling-related harm than others. For example:
 - a. a potential link with 'game speed' and problem gambling could be explained by the combination, or the variation, of the following:
 - i. The faster the game, the faster the rate of loss;
 - ii. The faster the game, the less time available for cognitive evaluation and emotional regulation;
 - iii. Fast games are arguably better suited to consumers motivated by discerning the outcome (because they find out the result quicker) rather than experiencing or enjoying the actual game, the former perhaps indicating a movement away from gambling as a leisure activity.
 - b. The link between payback percentage and problem gambling may be a lot less clear as legitimate arguments could be made for both lower payback percentages (e.g., higher rate of loss) and higher payback percentages (e.g., higher level of reinforcement) contributing to increased risk/harm.

Conclusions

Modification of game parameters will most certainly impact gambling behaviour, however, we do not currently know enough about exactly how or why. Restricting competition based on game parameters in the absence of scientific evidence, or concrete and well-justified explanations may invite criticism that such decisions are being driven by political and commercial agendas rather than consumer protection, and may actually do more harm than good in some circumstances.

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15.2. Should games be modified or prohibited to mitigate risk or harm?

As suggested in some codes of conduct, games can be examined, scored and potentially modified in an attempt to monitor and even mitigate against potential risk and harm. While this proactive approach is laudable, this may be premature given the lack of convincing empirical evidence regarding the specific impact on gambling behaviour especially across different gambling modes and media. Indeed, some changes and/or allocation of risk labels may have unintended consequences and do more harm than good. However, the potential efficacy of managing game design should not be dismissed outright without further empirical research, especially considering that existing evidence lacks methodological rigour and ecological validity.

However, quite apart from whether the management, restriction and modification of game design features COULD be used to mitigate risk and harm, it is also important to consider SHOULD these be used to mitigate risk and harm. Again, in the absence of empirical evidence one can only speculate, but it is highly likely that many of these changes made to limit risk and

harm, will also potentially limit commercial appeal. In other words, if games are made slower, less exciting or less accessible they may cease to fulfil their function as a fun or engaging leisure activity. Consequently, one must consider whether this 'supply-side' approach to player protection be prioritised over other potentially useful 'supply-side' approaches and 'demand-side' approaches (discussed later in this submission in response to Question 22). A good way to exemplify this point is to consider the nature of the 'near miss' (a technique used in some gambling games to increase excitement by artificially producing losing outcomes that players can interpret as 'nearly winning'). There is some suggestion that such a characteristic can encourage problem gambling or prolonged play (Griffiths 1994; Reid, 1986; Strickland and Grote, 1967), or that it may be misleading. However, it is also the case that such features are part of what makes games such as slot machines exciting. If you restrict near misses this also has the potential to reduce the fun and appeal of the game (this would apply to the vast majority of gamblers who do not play problematically). Further, the issue of misleading players is easily navigated by providing information on the odds of winning as part of the game information provided to the customer. This way, customers are educated, know the odds, can still get the excitement of nearly winning.

I have often heard the metaphor that gambling is similar to driving a fast car, in that it can provide pleasure but can prove to be risky and/or harmful for a small minority if not handled in the right way. Proponents arguing for this metaphor explain that managing game design acts like a seatbelt to protect consumers while driving this fast car. I personally would disagree with this metaphor, and instead, would suggest that this approach is more like putting in a top speed of 40mph and painting the car a yellowish brown colour. It may potentially reduce risky driving but there is no convincing evidence, and in addition it may restrict consumer appeal and limit functionality. In fact, such modifications may even have the unintended consequence of increasing risk.

Conclusion

Attempts to mitigate risk and harm through manipulating game design, while praiseworthy, have a certain element of risk attached, as evidence for precise impact on gambling behaviour is limited and lacks validity. This area merits future research, but priority should be given to other approaches which empower the player (e.g. player tracking, self-limiting and self-exclusion) and do not directly restrict the functionality and appeal of the product.

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Question 18.

Are there recognised studies or evidence demonstrating that on-line gambling is likely to be more or less harmful than other forms of gambling for individuals susceptible to develop a pathological gaming pattern?

Response to Question 18

18.1. Overview of the Evidence

Professors Robert Wood and Robert Williams and I have very recently completed a review of the evidence for a chapter addressing the same issue in our forthcoming edited book on Internet gambling:

Williams, R.J., Wood, R.T., and Parke, J. (Eds.). (in press). *Routledge International Handbook of Internet Gambling*. Abingdon: Routledge.

The chapter reference is:

Wood, R.T., Williams, R.J., and Parke, J. (in press). *The Relationship between Internet Gambling and Problem Gambling*. In Williams, R.,J, Wood, R.T., and Parke, J. (Eds.), *Routledge International Handbook of Internet Gambling*. Abingdon: Routledge.

With the kind permission of Routledge, a condensed version of this overview constitutes the entirety of section 18.1.

18.1.1. Association between Internet Gambling and Problem Gambling

Several studies examining the potential relationship between Internet gambling and problem gambling have largely relied upon non-random, cross-sectional samples of Internet gamblers. These studies have consistently found that those gambling using the Internet as a medium were more likely to be identified as problem gamblers compared to gamblers not using the Internet (Griffiths and Barnes, 2008; Griffiths, Wood, and Parke, 2006; Ladd and Petry, 2002; Wood and Williams; 2007a). Unfortunately, these studies yield limited insight into the temporal direction of the relationship, and the self-selected samples make it difficult to determine the strength of the relationship or to generalize to the broader population of gamblers.

The proportion of Internet users who opt to participate in online surveys is very low. Consequently, it is quite possible that surveys concerning online gambling may disproportionately attract heavy and/or problem gamblers. Random sampling of members of 'online panels' helps to correct this bias to some extent (Görizt, 2007; Görizt et al., 2002; cf. Williams & Volberg, 2011a). Using this methodology, a 2005 study of 12,717 Dutch Internet users found that 14% of the sample gamblers were potential problem gamblers (Motivaction International, 2005). Similarly, a Swedish online panel study of 3,000 online poker players in 2007 found that 23% of players were either moderate or severe problem gamblers as measured by the Canadian Problem Gambling Index (Jonsson, 2012).

The Casino City study (Wood and Williams, in press) used random digit dialing to survey a representative sample of 8,498 Canadians. The characteristics of the 179 Internet gamblers within this sample was used to weight a much larger survey of international Internet gamblers recruited from an online gambling portal ($n = 7921$, including 1954 Internet gamblers). Because both samples included Internet as well as land-based gamblers, a direct comparison could be made between the two populations. This particular study found that Internet gamblers were about 3 times more likely than their land-based counterparts to be classified as problem gamblers.

The most unambiguous evidence showing that Internet gambling is associated with a higher rate of problem gambling comes from jurisdiction-wide population surveys using either a telephone or face-to-face administration format. Internet gambling was shown to have a higher rate of problem gambling in Belgium in 2006 (Druine et al, 2006); Canada in 2006/2007 (Wood & Williams, 2009); Germany in 2006 (Bühringer et al., 2007); Great Britain in 2006/2007 (Wardle et al., 2007) and 2010 (Wardle et al., 2011); Iceland in 2007 (Olason & Gretarsson, 2009); Northern Ireland in 2010 (Department for Social Development, 2010); Norway in 2008 (Bakken & Weggeberg, 2008); and Sweden in 2007 (Tryggvesson, 2007) and 2008/2009 (Swedish National Institute of Public Health, 2011). Several state/provincial surveys have also found Internet gambling to bear a stronger relationship to problem gambling than other forms: e.g., Australian Capital Territory in 2009 (Davidson & Rodgers, 2010); Alberta in 2008 (Williams, Belanger, & Arthur, 2011); British Columbia in 2002 (Ipsos-Reid & Gemini Research, 2003); New Brunswick in 2009 (MarketQuest Research, 2010); Newfoundland in 2009 (MarketQuest Research, 2010); Quebec in 2009 (Kairouz et al., 2011); California in 2005/2006 (Volberg et al., 2006); and Maryland in 2010 (Shinogle et al., 2011).

It is important to note that the above merely describes association and NOT causation.

18.1.2. Is Internet Gambling a Cause of Problem Gambling or Just *Reflective* of Problem Gambling?

Although there is an unambiguous association between Internet and problem gambling, there are confounds that preclude causal inferences. The most important one is that very few Internet gamblers only gamble on the Internet. Rather, Internet gamblers tend to be frequent gamblers who participate in many different forms. For example, Wood & Williams (2011, in press) found that among 1,954 international online gamblers, only 4.6% *only* gambled on the Internet and that the best statistical predictor of being an Internet gambler among 22 predictor variables was gambling on a large number of gambling formats (Wood & Williams, 2011, in press). Similarly, one of the characteristic features of most problem gamblers is that they engage in many different types of gambling (e.g., Bakken & Weggeberg, 2008; Buth & Stöver, 2008; National Research Council, 1999; Sproston, Erens, & Orford, 2000; Swedish National Institute of Public Health, 2011; Wardle et al., 2007; 2011; Welte et al., 2004; Wood & Williams, 2012).

Thus, it is possible that involvement in Internet gambling is *reflective* of excessive gambling involvement, rather than being a cause. As evidence of this, the association between Internet gambling and problem gambling in the 2007 British Gambling Prevalence Survey becomes nonsignificant when controlling for number of gambling games engaged in (LaPlante et al.,

2009b; Vaughan-Williams, et al., 2008). A similar result was obtained by Halme (2011) in an analysis of the 2007 Finnish population prevalence study and by Welte et al. (2009) in a sample of U.S. youth aged 14 – 21.

These studies serve to remind us that multivariate approaches are far superior to univariate approaches in helping to determine a variable's unique contribution to problem gambling. They are also useful in helping correct the undue emphasis that has been placed on gambling format as a risk factor for problem gambling. Although electronic gambling machines and Internet gambling are commonly cited as 'causes' of problem gambling, Wood & Williams (2011, 2012) found that 41.7% of Canadian Internet problem gamblers and 46.4% of international Internet problem gamblers reported there was no particular form of gambling that contributed to their problems more than others.³ Finally, these above studies are very important because they confirm that a major part of the reason for the association between problem gambling and Internet gambling has to do with the fact that they are both characterized by heavy gambling involvement.

On the other hand, it is also important to recognize that a few studies *have* found evidence that certain forms of Internet gambling pose an additive risk even after controlling for level of gambling involvement (e.g., Internet roulette in Vaughan-Williams, et al., 2008). Also, if participation in a wide variety of gambling types is an important risk factor for problem gambling, then theoretically it would make sense that involvement in a wide variety of gambling *locations or administration formats* (i.e., online + land-based) should also be a risk factor.

The self-report of problem gamblers is also relevant. For the roughly 50%+ of Internet problem gamblers who do report that certain forms of gambling have been particularly contributory, Internet gambling is one of the forms most often identified (after electronic gambling machines; Wood & Williams, 2011, 2012). One can also not ignore the increased rate with which online gambling is identified as a problematic form among people seeking treatment. For example, Internet poker was identified by only 5% of people calling the Swedish helpline in 2004, but became the most commonly reported problem (by 29.9% of callers) in 2007 one year after its legal introduction (Jonsson, 2012). However, it is also worth bearing in mind that increases in helpline calls and treatment seeking may be a result of other factors (e.g. better promotion of helpline; or a recent social marketing initiative).

However, the most important caveat to the above type of cross-sectional analysis is that it does not take into account the temporal course of events that may differentiate gambling formats in their etiological relationship to problem gambling. Internet gambling may promote greater versatility because it provides gambling via an additional new medium and because of the wide array of gambling types available at most online sites (and the accompanying free play sections where people can learn to play the different types of gambling). Furthermore, although gamblers will add many different forms of gambling on their path to problem gambling, the addition of certain forms (e.g., Internet gambling) may be more likely to immediately precipitate disordered gambling compared to other forms. Finally, it is quite plausible that the online gambling may exacerbate existing problem gambling and/or hinder recovery to a greater extent

³ Similarly, in the 2008 and 2009 Alberta prevalence studies 44% of all problem gamblers (regardless of whether they gambled on the Internet) reported there was no particular form of gambling more responsible for their problems compared to other forms (Williams, Belanger, & Arthur, 2011).

than other forms of gambling because of its much greater accessibility. Longitudinal research is the only way of addressing these issues.

18.1.3. Longitudinal Examination of this Issue

18.1.3.1. Bwin Division on Addictions Research Collaborative

Researchers from the Division of Addictions at the Cambridge Health Alliance have lamented the fact that the bulk of existing Internet gambling research relies heavily on cross-sectional and retrospective self-reported data in the absence of any examination of actual Internet gambling behaviour as it evolves over time (Shaffer et al, 2010; LaPlante et al., 2012). These investigators have endeavoured to address this deficit in research collaboration with the European online gambling company *bwin.com*.⁴ In a series of studies (partly funded by *bwin.com*) of the actual longitudinal gambling behaviour of 40,000+ *bwin* patrons these researchers have found evidence that contradicts and challenges “*common assumptions that Internet gambling will stimulate excessive patterns of gambling*” (LaPlante et al., 2008: 2412). This position is rooted in their consistent observation that the betting and gambling behaviour among most *bwin* customers is both moderate and adaptive (i.e., level of betting subsided over time), with the exception of the top 1-5% of most heavily involved bettors (LaBrie et al., 2007; LaBrie et al., 2008; LaPlante et al., 2009; see Chapter 9 in this volume). As stated by LaPlante et al. (2008) “*daily analyses of gambling activity indicated rapid adaptation to the new service , as illustrated by a short term increase in activity, peaking by the eighth day of activity and declining thereafter*” (p. 2410). Moreover, the collective results of the *bwin* studies suggest that the net losses of the vast majority of *bwin* gamblers are relatively modest, with observed net losses being no larger than a median of €4 per week across each mode of gambling (LaBrie et al., 2007; LaBrie et al., 2008; LaPlante et al., 2009). However, for the most involved sub-groups, average weekly net expenditure could reach on average in excess of €130 (median = €88) per week per mode of gambling.

There is no doubt that this research provides support for the previously well established finding that only a small minority of online gamblers experience problems gambling online. On the other hand, there are some important limitations in extrapolating the particularly low level of ‘problematic behaviour’ in the *bwin* studies to online gambling more generally.

First, this data is from just one of the 665 companies that currently provide online gambling. Furthermore, *bwin.com* may not be representative of most providers. They are arguably more socially responsible than most as illustrated by their interest in academic research collaboration as well as the fact they are one of the small number of online companies that have sought and received certification from [eCOGRA](#) (eCommerce and Online Gaming Regulation and Assurance) as a fair and responsible gambling provider. In addition, the majority of *bwin* sports betting patrons have historically been German (LaBrie et al., 2007), as well as a significant minority of their casino players (30% from Germany and Austria; LaBrie et al., 2008). German nationals were observed to be more moderate bettors compared to people from other countries in the LaBrie et al. (2007) study, and indeed, Germany has one of the world’s lowest known past year

⁴ Known as *betandwin* from 1997 – 2006, *bwin* from 2006-2011, and *bwin.party* digital entertainment from March 2011 to present due to its recent merger with *PartyGaming*. Their initial product was sports betting, but they subsequently provided online casinos and then online poker

prevalence rates of problem gambling (~0.5%) (Bühringer et al., 2007; Federal Center for Health Education, 2008; Williams & Volberg, 2011b).

An additional problem with extrapolation from the bwin results is that most online gamblers patronize more than one site (Jonsson, in press; Parke et al., in press; Wood & Williams, 2011, in press). For example, in a sample of over 10,000 Internet casino and poker players Parke et al. (in press) found that the typical Internet casino player reported visiting more than six Internet casinos in the preceding three months. Jonsson (in press) found that the typical Swedish Internet poker player patronizes two poker sites. Thus, moderate gambling behaviour at the bwin site provides no assurance that aggregated online behaviour is also moderate.

Also, as acknowledged by the bwin researchers, the moderation of gambling activity over time observed among bwin patrons could easily be explained in other ways. Operators often provide a monetary bonus to new customers conditional on that player depositing some of their own money and wagering this total amount several times over before making a withdrawal. This would naturally encourage a pattern of play characterized by considerable activity followed by a decline or even cessation as players move to other sites to take advantage of their bonuses. Secondly, driven by the perception of better value or better odds, bettors may try out different websites, and consequently play at one website for only a limited period of time.

The final problem with the bwin data is that problem gambling is not actually assessed. Although the bwin researchers decry the reliance on self-report over objective behaviour in gambling research, self-report of problems deriving from gambling is the only way to establish that problem gambling is present as well as the actual prevalence of problem gambling among online players. Patterns of frequent gambling involvement or account closure, as used in the bwin studies, are not adequate substitutes.

18.1.3.2. Quinte Longitudinal Study

The recently completed Quinte Longitudinal Study (QLS) (Williams et al., 2006; Williams, 2010) began in 2006, with the recruitment and assessment of 4,121 individuals, aged 17 to 89, from the Quinte region of southeastern Ontario, Canada. Individuals were recruited via random digit dialing, and were asked if they wished to participate (in exchange for a \$220 honorarium) in a 5-year research study about the impacts of a proposed new racino, which was to be built in the area. Two samples were recruited: a 'General Population' sample ($n = 3,065$), and an 'At Risk' sample ($n = 1,056$) selected so as to oversample people at greater risk for developing gambling problems.

Among the participants, 381 people reported gambling on the Internet at least once during the five-year period of assessment. Twenty four of these individuals became Internet gamblers in the final assessment period, and were not problem gamblers during any of the previous assessment periods, thus precluding any determination of the subsequent effect of Internet gambling on developing gambling problems. (However, for these 24 individuals, it is at least possible to confirm that problem gambling did not precede their transition to Internet gambling.) Excluding these 24 individuals from the analysis, 282 (79.0%) out of the 357 remaining Internet gamblers did not transition to problem gambling status at any point during the study, while the remaining 75 individuals (21.0%) did become past-year problem gamblers at some point during the study. Of these 75 individuals, 21 were both problem gamblers and

Internet gamblers in the first assessment period, not permitting a determination of which came first. Excluding these 21 individuals from the analysis: 24 (44.4%) out of 54 were Internet gamblers who became problem gamblers in a subsequent assessment period; 16 (29.6%) out of 54 were problem gamblers who began gambling on the Internet in a subsequent assessment period; and 14 (25.9%) out of 54 were people who developed problem gambling and Internet gambling, apparently simultaneously, during the same assessment period (excluding assessment period 1).

These longitudinal findings yield several important conclusions. Importantly, 21% of people who gambled on the Internet were also problem gamblers, at some point during the study. This stands in contrast to the 5.6% of non-Internet gamblers in the sample, who became problem gamblers at some point during the 5-year study, thus confirming that Internet gamblers as a population are characterized by much higher levels of problem gambling. It should be noted, however, that the results of the QLS study also indicate that the majority of Internet gamblers (79%) are able to gamble on the Internet without experiencing problems. In any event, the more crucial question, with a previously undetermined answer, concerns the temporal direction of the relationship between Internet and problem gambling. After excluding people where the temporal direction of the relationship cannot be established, three general pathways are evident: 1) 44% of participants initiated Internet gambling prior to experiencing gambling problems; 2) 30% of participants were problem gamblers who subsequently engaged in Internet gambling; and 3) 26% of participants developed gambling problems relatively simultaneously with their transition into Internet gambling. Thus, in answer to the oft discussed “chicken and egg” question about the temporal sequencing of Internet gambling versus problem gambling, the answer is that both sequences are clearly evident among the Internet gambling population. This being the case, it is also apparent that Internet gambling leading to problem gambling is a more common pathway than problem gambling leading to Internet gambling.

As far as we are aware, this is the first longitudinal study to shed light on the temporal direction of the relationship between Internet gambling and problem gambling. However, this will certainly not be the final word on this topic, as there are other longitudinal studies currently underway in Alberta (Canada), Sweden, Australia, and New Zealand that will also be able to speak to this relationship.

It is also important to realize that the QLS, while making a significant contribution to our understanding of the link between Internet gambling and problem gambling, is limited by a number of factors. For one, the causal relationship between Internet gambling and subsequent problem gambling is not unambiguously established. It is quite possible that the 44% of Internet gamblers who subsequently became problem gamblers may have done so even without engaging in Internet gambling (i.e., choosing to engage in Internet gambling may simply be an early sign that someone’s gambling is getting out of control). A stronger case for Internet gambling being instrument in the development of problem gambling would require a demonstration that a subsequent propensity for problem gambling was much higher when people engaged in Internet gambling for the first time, compared to other forms of gambling for the first time (an analysis that has not yet been done with this data set). A second consideration is that even though the sample is representative, it is relatively small (only 75 participants evidenced both Internet and problem gambling in a way where the general relationship could be determined). It is also limited by its inability to provide a fine-grained chronological sequencing of events in the relationship between Internet gambling and problem gambling, which could be

important in identifying other variables which might be mediating this relationship. Finally, the results of the QLS study are specific to a particular jurisdiction, a particular time-period, and a particular 'gambling landscape' (i.e., southern Ontario where 'legal' Internet gambling is unavailable, but with most other forms of gambling being available). This specificity of location and time, in turn, may impact which kinds of people choose to engage in Internet gambling (e.g. risk takers, who are not deterred by the legal ambiguity associated with online gambling in Canada).

18.1.4. Conclusions

In summary, the research discussed establishes that:

- 1) Most Internet gamblers do not experience gambling-related problems.**
- 2) However, people who gamble on the Internet do have significantly higher rates of problem gambling compared to people who do not gamble on the Internet.**
- 3) A major reason for the strong association between Internet and problem gambling has to do with the fact that problem gamblers tend to engage in a wide variety of gambling formats that will sometimes include Internet gambling.**
- 4) However, although controlling for number of gambling formats engaged in significantly reduces the relationship between Internet and problem gambling, Internet gambling is still observed to be an additive risk factor. Furthermore, it is identified as a problematic form of gambling in population surveys and in treatment settings at a rate disproportionately higher than would be expected compared to population participation rates.**
- 5) Furthermore, although many problem gamblers gravitate to Internet gambling, tentative longitudinal data suggests that a more common pathway is for Internet gambling to precede the development of problem gambling or for it to develop simultaneously with problem gambling. Results from additional longitudinal research are needed to confirm these findings.**

Thus, the conclusion of the authors is that engagement in Internet gambling most likely does somewhat elevate a person's risk of developing problem gambling (although this risk level is less than many people have presumed).

18.1.5. References

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18.2. Player perceptions of the advantages and disadvantages of Internet as a gambling medium

Material for response 18.2. is taken with permission from the following source:

Parke, J., Parke, A.J., Rigbye, J.L., and Vaughan Williams, L., (in press). The eCOGRA Global Online Gambler Report. In Williams, R.,J, Wood, R.T., and Parke, J. (Eds.), *Routledge International Handbook of Internet Gambling*. Abingdon: Routledge.

The following data represent responses from a large internet survey (with over 10,000 Internet casino and poker players from nearly 100 different countries). This study was commissioned by eCOGRA in 2006/2007. What follows are ranked categories of player responses regarding the 'best' and 'worst things' about Internet gambling.

18.2.1 Top Ten 'Best Things' About Internet Gambling

This section was created based on answers from the open-ended question "what is the best thing about gambling online" to which there were 6654 respondents. Answers were thematically categorized and ranked according to frequency as detailed in Table 9. The majority

of respondents (N = 3925) reported that convenience and accessibility were the best things about Internet gambling. These respondents felt that having continual access, with no need to travel to Internet casinos or poker rooms and being able to commence or terminate play in whatever way the players deem appropriate (with exceptions e.g. poker tournaments) was the best thing about gambling online. Other aspects related to convenience and accessibility not making the top ten included “doing other things simultaneously” (N = 112), including smoking; consuming alcohol; playing in bed; playing while doing housework; playing while listening to your own preferred choice of music etc. It was also reported that internet provides access to players who have or live with someone who has a disability or illness (N = 52).

Top Ten "Best things" About Internet Gambling (N = 6654)

Rank	Reason	Responses
1	Convenience and Accessibility	3925
2	Fun and Excitement	1075
3	Winning and Financial Reward	893
4	Anonymity and Privacy	427
5	Relaxation	329
6	Better Value and Lower Stakes	186
7	Relieves Boredom	157
8	Speed	153
9	No Need for Staff	148
10	Variety (<i>games; blinds; players</i>)	144

Other popular draws of Internet gambling that were reported included ‘fun and excitement’ (N = 1075) and followed by ‘winning and financial reward’ (N = 893). It is interesting to note that ‘winning’, comes in third behind ‘convenience and accessibility’ but more notably behind ‘fun and entertainment’, (other motivational factors). Anonymity and privacy (N = 427) applied to: newer players concerned about learning how to play; avoiding crowds; not being judged or evaluated; and freedom to express themselves as they wish (e.g. swap gender; pray; laugh). This factor is also related to other reported benefits not making the top ten including ‘personal safety’ (N = 68); ‘lack of intimidation’ (N = 12) and the fact that some ‘tells and body language may hidden’ when playing poker (N = 9). Females were particularly attracted to the privacy and anonymity that the Internet affords.

Overall ‘better value and availability of lower stakes’ (N = 186) included the availability of lower stakes or free play, the absence of travel costs or tipping the dealer and overall smaller margins (i.e. a higher return to player). There were also other positive aspects reported by players which did not make it into the top ten. Bonuses (N = 111) were considered to be an important benefit of Internet gambling, particularly as they were considered to be more generous online and with greater availability. Internet gambling was also favoured because it does not have a ‘smoky environment’, (N = 102); offers more ‘social interaction’ (N = 76) and allows players (new players in particular) greater opportunity to improve their game (N = 39) either through play-for-free; low stakes or the general volume of practise one can get (particularly at skill games such as poker).

18.2.2. Top Ten 'Worst Things' About Internet Gambling

This section was created based on answers from the open-ended question '*what is the worst thing about gambling online*' to which there were 6346 respondents (see Table 10). The most popular response (N=1668) was 'losing and negative financial implications'. This factor is also related to other perceived losses of playing online not making the top ten, such as 'not winning enough' (N=268), 'electronic cash' (i.e. the value of money spent is devalued in a virtual environment, N=92), and 'bad beats' (i.e. losing in statistically unlikely situations, N=76).

Top Ten "Worst Things" About Internet Gambling (N = 6346)

Rank	Reason	Responses
1	Losing and Negative Financial Implications	1668
2	Payment Issues (problems with withdrawing or depositing money)	1075
3	Concern Regarding Addiction and Vulnerable Populations	781
4	Cheating and Low Levels of Trust	646
5	Convenience and Accessibility	530
6	Barriers to Playing (e.g. legal restrictions and ambiguities)	350
7	Technological Problems (disconnection; spam; pop-ups; complex software)	345
8	Nothing (Love it)	295
9	Other Irritating People (ignorance; racism; use of bad language; slow players)	159
10	Poor Customer Service	132

The most common complaint related to 'payment issues' was the length of time taken to receive winning payouts and the ability to make a 'reverse withdrawal' (i.e. gambling with funds after making a request to withdraw it from the account). 'Cheating and low levels of trust' in the site or other players (N=646) included issues surrounding whether the games were truly random, and whether pokerbots were being used. Despite topping the 'best things' list, 'convenience and accessibility' (N = 530) were reported to present problems namely by facilitating players to spend more time and/or money than they can afford. 'Barriers to playing' (N = 350) was also identified as a drawback including legal issues such as prohibition or regulatory ambiguity.

There were other negative aspects recorded by players which did not make it into the top ten. Losing time whilst playing or staying up late (N=102) was a common response, as was Internet gambling lacking atmosphere or not being as engaging as gambling at a land-based casino (N=86). Other aspects raised were lack of or misleading bonuses (N=78), concern over security of personal information (N=73), or the lack of regulation of Internet gambling (N=64).

18.2.3. Conclusions

A range of advantages and disadvantages of Internet gambling were identified by over 9000 participants in the survey. Many of the advantages reported here have been identified in other research: for example, convenience and accessibility, avoiding the negative characteristics of offline venues, privacy and anonymity, better value, fun and excitement, variety, speed, optimal conditions for learning how to play; providing for players who are disabled or geographically

immobile and permitting players to multitask when playing (Corney and Davis, 2010; Cotte and Latour, 2009; Griffiths and Barnes, 2007; Griffiths, Parke, Wood and Rigbye, 2009; Wood and Williams, 2011, 2012; and Wood, Williams and Lawton, 2007). Many of these had also been reiterated during the focus group study. These findings provide further confirmation that there are numerous advantages to using the Internet as a medium through which to gamble, and offer tangible justification for its growth and popularity. Less well documented are the potential disadvantages of using the Internet as a medium. Some of the reported downsides were arguably predictable (e.g. losing money, losing time, cheating etc.). Financial loss, the most common concern, clearly applies to offline gambling as well. Based on the current research, it is unclear to what extent participants think this varies according to gambling medium. However, concerns about withdrawing and depositing money, technical problems such as disconnections and software malfunctions, and a potentially disinhibiting environment that may foster 'bad behaviour' clearly are medium-specific issues. These, and various other concerns and gripes, represent a new set of problems for gamblers that had never existed before Internet gambling. While many of these issues may simply be teething pains that one would find with the introduction of other new forms of consumption or ecommerce, these findings lend weight to the call by Shaffer, Peller, LaPlante, Nelson, and LaBrie (2011) to treat Internet gambling as distinct from land-based gambling, particularly when making clinical, commercial or policy decisions until more research is done.

17.2.4. References

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Question 22.

What is the required level of due diligence in national regulation in this field? (e.g. recording on-line players' behaviour to determine a probable pathological gambler?).

The response to this question has multiple components, involving an evaluation of the current state of player protection in Internet gambling in Europe; a brief discussion of priority areas for future (i.e., cross-operator self-exclusion and behavioural analytics); and the case for considering a wider range of issues in regulatory decisions (i.e., individual economic and psychosocial benefits of Internet gambling).

Response to Question 22:

22.1. There has been considerable improvement in the provision of player protection and responsible gambling in the last decade, although there is still substantial progress to be made.

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Williams, R.J., Wood, R.T., and Parke, J. (in press). History, Current Worldwide Situation, and Concerns with Internet Gambling. In Williams, R.,J, Wood, R.T., and Parke, J. (Eds.), *Routledge International Handbook of Internet Gambling*. Abingdon: Routledge.

While there will always be some online sites with unethical or unfair business practices, there is currently no need to access these sites when online gambling is now provided from many well regulated domestically delivered government sites and/or private companies with well established reputations who are certified by one of the many industry standard associations.

There has been significant improvement in age verification systems, particularly in places such as the U.K. which now requires a robust age verification system as a condition of license (i.e., licensees are required to check the requisite sign-up information required to open an account against various databases (usually involving a third party) to confirm that the customer is indeed aged 18 years or older). In a recent report on e-consumer protection, the U.K. based Children's Charities' Coalition on Internet Safety (CHIS, 2010) identified the Internet gambling industry as an example of best practice in child protection for other e-commerce industries to emulate based on their strict enforcement and checks and relative success in minimizing access to 'under 18s'. A recent U.K. Gambling Commission mystery shopper exercise demonstrated that whereas 98% of land-based gambling venues had age verification weaknesses, this only occurred in a third of Internet gambling operations (Griffiths et al., 2012).

With regards to helping mitigate problem gambling, it has also been recognized that one of the important advantages of online gambling is that all activity is electronically recorded and linked to an identifiable individual. Thus, unlike most forms land-based gambling, online gambling sites can provide the player with the opportunity to set time or spending limits (which many currently

do). Most of these same sites also provide the opportunity for the person to bar himself/herself completely for a period of time, similar to the self-exclusion offered at land-based casinos. In addition, there has been considerable interest shown in using this player data to develop behavioural markers of risky play for the purposes of proactively alerting the player and/or implementing some type of automated restriction/intervention (Braverman & Shaffer, 2010; Broda et al., 2008; Shaffer et al., 2007).

Finally, there exists considerable momentum to create industry-wide standards. One prominent organization is the “E-Commerce and Online Gaming Regulation and Assurance” (eCOGRA). This is a U.K. based 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. Other similar organizations include the Remote Gaming Association (RGA), the European Gaming and Betting Association (EGBA), and the Interactive Gambling Council (IGC). In 2008, eCOGRA, RGA, EGBA, and IGC collectively developed an International Code of Conduct that set standards for Internet operators regarding measures to prevent underage gambling, the need to provide player protection tools, and mechanisms to promote fair play and resolve disputes. These principles have now been more formally adopted in the 2011 European Committee for Standardization Workshop Agreement (known as ‘CWA 16259: 2011’).

However, despite this progress the following action points should be prioritized in order to further develop the provision of player protection in Internet gambling in Europe:

1. *Specific expectations laid out in codes of conduct must be more explicit in their requirements.* For example, in providing a player activity statement, there should be a clear and detailed explanation regarding what is acceptable and what is not (e.g., clear communication of net expenditure over various time frames, according to the various gambling products on offer; easy to use interface etc.). At present, the majority of such codes are too vague and give insufficient detail, which allows for ‘paid lip service’ by companies who can tick boxes and gain accreditation with a minimal offering of player protection. The requirement for greater clarity and precision applies to most items covered in these codes of conduct (e.g. transparency in marketing, bonuses, game odds; ‘responsible gambling pages’; rules governing the use and provision of self-exclusion and self-limitation tools).
2. *Investment must be prioritised for exploring opportunities for cross-operator databases to enforce self-exclusion and self-limitation at the industry level rather than the operator level.* The ease with which players can ‘jump’ from site to site indicates that these tools will be significantly more effective if they apply across sites rather than within one site. This will be, without doubt, a very difficult goal but one that is worthy of exploration, and should be identified as a longer-term goal. See point 22.2. below.
3. *Behavioral tracking and player analytics should eventually be made a condition of license for Internet gambling operators.* Behavioural analytics may be the most important component of player protection and the promotion of self-regulation. Behavioural analytics are already being used in fraud detection, anti-money laundering operations and marketing strategy. Compared to some forms of player protection (e.g., restrictions on game design and type), this is arguably lower risk, both for the player (i.e., it is always best to be informed, and have feedback on behaviour regardless of the behavioural consequences) and, for the operator (technology often already exists for analytics). See point 22.3 below.

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22.2. Cross-operator self-exclusion should receive investment and should be supported by regulators and industry.

As Dragecevic (2011) argues, capturing and sharing data is now easier than it ever has been particularly for Internet gambling operations. As a consequence, the Internet gambling industry is well placed to transform how operators can help players self-regulate their behavior. At the most restrictive end is the option for the player to 'self-exclude' (i.e., voluntarily request that betting activity is frozen or terminated). Dragecevic points out that technological developments can drive self-exclusion to evolve in two very important ways: 1. 'Cross-operator self-exclusion' – through the creation and maintenance of an anonymous and secure 'register' of self-excluders, participating operations can help ensure that if consumers exclude on one site, that they will also be excluded on other 'participating' sites; and 2. 'Exclusion by vertical' (i.e., exclusion from certain games only).

The University of Salford, GamCare and BetBuddy⁵ are currently collaborating on a publically funded project (known as a "Knowledge Transfer Partnership" or KTP which receives funding from the Technology Strategy Board and Economic and Social Research Council along with additional funding from a consortium of Internet gambling operations) which aims to scope the feasibility and challenges inherent in such a project, and implement and evaluate a beta version of the software that could manage the process. This process will be documented along the way and publically disseminated.

⁵ In collaboration GamCare and the University of Salford, Betbuddy are preparing to pilot a beta version of 'Veriplay' which is a secure online gambling self-exclusion service with the capability to facilitate cross-operator self-exclusion and exclusion by vertical (for more information see www.veriplay.org).

Below are potential challenges that have been identified by the industry, and responses/resolutions to these challenges (S. Dragecevic⁶, personal communication, September 18, 2011).

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⁶ Simo Dragicevic is CEO of BetBuddy – for more information see <http://www.bet-buddy.com/>

Industry Concerns	Response
Technical integration	<ul style="list-style-type: none"> • A small number of data fields are required to share amongst operators which are available from every operator making operator integration very simple • In addition operators can manually upload CSV files to the system, which means that operators can start sharing relevant data without any technology integration
System development and maintenance cost	<ul style="list-style-type: none"> • Because VeriPlay uses established cloud technologies it is quickly and easily scaled to on-board additional operators. The cost of storage, central processing units and network bandwidth has exponentially decreased since the 1980s e.g. the cost per terabyte of storage from Apple in 1980 was \$14 million, today it's \$70 (Barracuda). Therefore this is not an issue • Additional industry and regulatory requirements can also be quickly and cost effectively added to the system to ensure it can evolve at the pace that industry innovation changes to meet operator requirements e.g. supporting self-exclusion across different gaming verticals • Arguably more expensive self-exclusion systems (e.g. facial recognition technology) have already been adopted in some global jurisdictions e.g. Canada.
Data privacy	<ul style="list-style-type: none"> • Secure encryption algorithms ensures data always remains anonymous except for the operators sending and receiving the data i.e. ensuring that a player's anonymity by separating a player's identity from the player's account data. This can be achieved through a number of proven the statistical and mathematical methods, including data reduction, data perturbation and data hashing methods • Therefore data stored in this encrypted format is meaningless to the operator of the self-exclusion service (VeriPlay) and is arguably more secure than when stored in the gambling operator's own data centre • There is a precedent for sharing data as operators today share anonymised player data for non-commercial reasons e.g. European Sports Security Association (ESSA) to ensure integrity in online sports betting, bwin and Harvard Medical School's collaboration into problem gambling research
Conflicting national laws	<ul style="list-style-type: none"> • Not a valid reason, as it makes sense to adopt schemes at a national level as it's likely one would need to be a citizen of a regulated jurisdiction to gamble, which is what many jurisdictions are now actively implementing e.g. The Danish regulator is making a step towards such a scheme with ROFUS (problem gambling register)
Service abuse	<ul style="list-style-type: none"> • Independent audits could enforce the integrity of a scheme. However it's highly unlikely that established and regulated operators would risk their reputations by abusing such a scheme. If required, penalties could also be defined by the industry and/or regulators to ensure service abuse doesn't exist
Driving Customers to Unregulated Operators	<ul style="list-style-type: none"> • Ensuring customers gamble with responsible, regulated operators is a broader regulatory issue that the EU and the industry need to work together to tackle and is not an excuse for not implementing such a service which could go a long way in protecting vulnerable gamblers.
Independent service management	<ul style="list-style-type: none"> • VeriPlay has been developed by independent software company (Bet Buddy) and the service could be governed collaboratively with relevant industry organizations or could be technically managed on behalf of a regulator or problem gambling treatment provider • The service could also easily be hosted on a regulator or other server if required.

22.3. Behavioural analytics may be the most important component of player protection and the promotion of self-regulation.

Although this tool can inform and drive the 'supply-side' components of player protection (e.g., responsible gambling tools such as self-limits and exclusion), its principle function is to inform players and provide them with feedback, and therefore, can be described as a 'demand-side' approach. Research has identified that reliable feedback is a critical component of successful self-regulation in consumer behaviour (Baumeister, Heatherton and Tice, 1994).

22.3.1. Why Behavioural Analytics?

The ability to predict (those who may develop a problem) and identify gambling related harm among consumers is arguably the most crucial requirement in player protection platform. It can be used to educate and alert players but can also be used to focus and evaluate other forms of player protection.

Harm prediction and identification using behavioural analytics should be considered the essential basis of any player protection platform because it can be used to:

1. Predict those who may develop a problem (although not currently experiencing any significant harm);
2. Detect consumers who may currently have a problem;
3. Focus player protection efforts while minimising any negative impact on the gambling experience among non-problem gamblers;
4. Evaluate success in harm mitigation either in preventing new harm and/or reducing/restricting existing harm (*for example, by using experiment methods and examining before and after levels of gambling risk and harm as measured by the analytics*);
5. Communicate to players to promote and develop self-regulation (there is potential for any of the following):
 - a. Factual info about their risky or harmful behaviour;
 - b. Providing feedback to inform consumer self-regulation;
 - c. Frequent and tailored e-mails suggesting use of player protection tools;
 - d. Voluntary and/or mandatory requests to relevant consumers to use limits and other self-regulation tools;
6. Improve our understanding of problem gambling (academic, regulatory and commercial implications) and improve organisational profile (giving back to community by significantly advancing stakeholder understanding of problem gambling).

22.3.2. How should this be done?

1. First, it is advisable to validate and develop 'suspected behavioural profiles' associated with gambling-related harm. This could be done by using behavioural data in conjunction with the most up-to-date gambling screens and potentially even clinical interviews (and NOT using conventional wisdom or self-exclusion as a criterion variable).
2. Use behavioural analytics to identify clusters of behaviours most likely to predict or indicate gambling-related harm for each main mode of gambling (e.g. lottery, poker,

etc.,). It is important that each mode of gambling be examined separately. Although some academic research in this area is already under way (Braverman and Shaffer, 2010; LaBrie and Shaffer, 2011; Xuan and Shaffer, 2009) it has limited applied value in that it examines variables/profiles in relation account closures and not problem gambling.

3. Initially the predictive and indicative value of variables commonly associated with risky or harmful play for some robust measurement of problem gambling behaviour needs to be examined. For example, for illustrative purposes only, the following variables may prove a useful starting place:
 - i. Deviations from usual behaviour or strategy such as
 1. 'chasing': faster games, higher stakes, more focussed betting
[avoid very basic errors like Harvard group concluding that chasing was of limited relevance just because number of bets reduced and shorter odds were targeted]
 2. 'tilt': faster decisions; less logical decisions;
 - ii. Frequency of play;
 - iii. Duration of play;
 - iv. Net expenditure
 - v. Variety of Games being played;
 - vi. Number of 'reloads' (potentially indicating playing beyond planned levels of expenditure);
 - vii. Payment method rejections;
 - viii. Payment method changes;
 - ix. Use of player protection tools;
 - x. Removal of player protection tools
 - xi. Customer services interactions:
 1. Complaints about fixed games;
 2. Irrational or aggressive behaviour;
 3. Requests for limits to be removed;
 4. Other (e.g. suggestions about problem gambling advice)
 - xii. Staking behaviour and variability
 - xiii. Prize preferences and variability
 - b. Explore relevance of other potentially less obvious, or hitherto overlooked variables to explore their predictive value and opportunity to improve overall accuracy of algorithm.
4. Continue to refine algorithm accuracy – accuracy is critically important to avoid a) failing to predict or detect when it exists (false negatives) and b) predicting or identifying risk when it does not exist (false positives).
5. Examine ways to evolve our understanding of 'Problem Gambling' beyond the problem gambling screen:
 - a. Explore different levels (i.e., of severity in terms of harmful consequences) rather than dichotomous or discrete categories;
 - b. Explore different types of problem player exhibiting qualitative differences in their play (e.g., binge, chronic etc.,);
 - c. Adapt prediction, detection and response accordingly.

22.3.3. What are the potential challenges?

There may be potential conflicts with Marketing/CRM solutions, for example:

- High value or 'VIP' customers may also be problem gamblers;
- Prevention efforts may be difficult when simultaneously marketing new and existing products. This will need careful consideration and management;

There may be a variety of concerns from industry:

- Overregulation in the absence of evidence that such investment (cost of product/service – initial investment and ongoing) will have a positive impact on player protection.
- There would be potential for an increased liability burden for operators since they would have more information regarding who exactly are exhibiting signs of risky or problem behaviour. Consequently, experts recommend that legislation needs to be put in place to help protect the operator as long as they are using the information responsibly (e.g., not using predatory tactics on vulnerable consumers)(D. Excel⁷, personal communication, 15 September 2005);
- There is some evidence that revenue from problem gamblers is disproportionately higher than from non-problem gamblers (Wood and Williams, 2009). If this is the case, then there will be concern that such harm mitigation approaches, if successful, may have a significant negative impact, at least in the short term, on revenue.

There will need to be consideration given to data protection issues, however experts argue that analytics can use data which is generated from the players normal interaction with the operator's website and does not require data capture from the consumers computer or from third parties (D. Excel, personal communication, 15 September 2005). It will also be of critical importance to establish 'best practice' on how information from behavioural analytics should be used (e.g., problem vs potential problem vs non-problem etc.).

There are currently various products/companies that specialise in behavioural analytics in player protection: Playscan (for more info see <http://www.playscan.com/>), Betbuddy (for more information see <http://www.bet-buddy.com/>) and Featurespace (for more information see <http://www.featurespace.co.uk/>).

22.3.4. References

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22.4. The status of Internet gambling as a leisure activity must also be considered

It is logical to commence raising this issue by suggesting that there is substantial gap in the research literature on gambling which in the interests of scientific accuracy and comprehensiveness needs to be filled. Thus, a great deal of research has been undertaken about the potential harms that gambling may cause to individual gamblers, those close to them and to society as a whole. This research concentrates overwhelmingly on problem gambling rather on the harm that may accrue to those who gamble in moderation. There is another substantial body of work which discusses the potential economic benefits to society in terms of taxation, new investment, new employment and increased visitor spend which may occur in a jurisdiction, as a result of the introduction of new forms of commercial gambling businesses. This work is highly controversial, with the controversy centring on, first, whether these supposed economically beneficial consequences actually occur and, secondly, on whether, even if they do occur they are not outweighed by the costs for taxpayers, other businesses and citizens generally which constitute the negative consequences of introducing new forms of commercial gambling into a particular community.

What is missing from this research is a consideration of the potential psychosocial and economic outcomes at an *individual* level for those gamblers who exercise normal consumer choice in choosing to spend their time and money gambling rather than on other activities, on saving or on other goods and services.

This large lacuna in the scientific literature is paralleled by and possibly results from an equally distorting and important omission from political debates about commercial gambling, in particular about whether it should be legalised and, if so, how it should be regulated. Governments, nowadays, regularly claim to be committed to evidence-based policy making. Most commonly, this means that they are committed to conducting cost-benefit analyses in order to determine which of the various policy options available to them will generate the largest margin of benefits over costs or the smallest margin of costs over benefits. However, at least when it comes to gambling, the benefits which are argued about and which governments attempt to measure are the extraneous and public economic benefits identified above. There is very little consideration of the personal benefits derived by the individual consumer. In technical economic terms, there is very little discussion of “consumer surplus” understood as the extra value derived by consumers when new goods and services come onto the market. This extra value results from the fact that the new goods or services enable consumers either to satisfy

more of their preferences at the same price or to satisfy the same preferences at a lower price. When governments fail to take account of consumer surplus in determining the relative costs and benefits of different policy options they are exhibiting a form of economic illiteracy, since an increase in consumer surplus constitutes an increase in the overall wealth (spending power) of a society. In relation to gambling and to leisure activities generally the consumer surplus consists in the forms of enjoyment and other psychosocial benefits which consumers derive from participation. Any honest public debate about gambling, therefore, needs to be informed about whether individual benefits actually exist and if so, what is the precise nature of such personal benefits.

22.4.1. Individual economic benefits: Internet gambling increases competition lowers prices and increases 'consumer surplus' (value for money)

22.4.1.1. Forrest (in press) argues that the Internet, as a gambling medium, creates much more intense competition in commerce generally, and in the gambling industry specifically. As a result, most Europeans now have a large choice of providers, and this new competition has driven down the cost of gambling as measured by expected loss. He argues that this is unambiguously a gain to any consumer who is neither a problem gambler or not likely to be in danger of becoming problem gamblers. He argues that as a result of Internet gambling and increased competition in Europe, that these gamblers will now be able to engage in this activity to a greater extent at the same price, or at least, to the same extent for a cheaper price. This, he argues, is the value that the Internet creates for society and commerce, and that gambling, like most other industries, has moved to take advantage of this.

22.4.1.2. Conclusions

While risk and harm among some members of the gambling population should be a top priority for public policy, it is important to consider the individual economic benefits (greater choice and cheaper prices) to the broad range consumers who choose to gamble on the Internet as recreational activity.

22.4.1.3. References

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22.4.2. The need to explore if positive psychosocial outcomes of Internet gambling exist

As far back as 1992, Cook highlighted the large shift in public acceptance and interest in gambling as a viable leisure activity. Participation in gambling has expanded exponentially recently driven by technological advances enabling increased accessibility. McIntosh, Goeldner and Ritchie (1995) proposed that legalised gambling is becoming an important source of revenue in the tourism industry. Christiansen (1998) highlighted that approximately one in every ten dollars in the United States (US) leisure industry was being spent on gambling activities. Moreover, in the same report, Christiansen revealed that in the US more money was being spent on gambling than recorded music, video games, film and sporting events combined.

In spite of this shift, recreational gambling still is an under-researched social and behavioural process, and moreover existing research into gambling has predominantly focused on the negative impact of gambling (Cotte, 1997). The vast majority of research into gambling behaviour is in the field of adult disordered, problem gambling; effectively conceptualising gambling as irrational and ego-dystonic (Abt, McGurrin & Smith, 1984; Dixey, 1987). To date, there has been little attempt to examine gambling behaviour as a leisure pursuit, and gambling motivation from a recreational perspective (Platz & Miller, 2001). Research emphasis has been placed on developing theoretical frameworks that explain how gambling can become addictive, rather than investigating the rationalisation and motivation to use gambling as a leisure activity (Cotte, 1997; Jang, Lee, Park & Stokowski, 2000; Walker, 1992).

Because of the lack of research regarding non-problematic gambling it is probable that our understanding of gambling as a behaviour is limited, and furthermore, with an incomplete picture it is difficult to address the issue of social policy and regulation from a balanced perspective. If gambling can be conceptualised and understood as leisure and as a source of recreation rather than an irrational and problematic behaviour, there is scope to propose that gambling for some populations, may have positive rewards and benefits. Research investigating the possibility of gambling being instrumental in satisfying specific psychological needs, and being positively correlated with indicators of social adjustment, is required to provide a more comprehensive and accurate understanding of gambling motivation.

22.4.2.1 Internet gambling as recreation and leisure

For the minority of gamblers who are 'problem' gamblers, the activity is salient across their lives rather than an occasional recreation selection, and with the behaviour being selected more through habituation rather than cognitive rationalisation (Blaszczynski & Nower, 2002). This is in contrast to the majority of the gambling population who are recreational or social gamblers. It is clear that when evaluating the concepts of leisure and recreational gambling there is scope for overlap. The hallmark of gambling is that the activity is engaged in as a free choice i.e. without obligation, within the boundaries of discretionary time and that the activity through arousal and social factors provides an enjoyable experience.

The potential to conceptualise gambling as a leisure activity proposes new avenues of investigation for gambling research. There is a substantial research literature identifying the importance and the impact of leisure as a social behaviour, on psychosocial adjustment and well-being (Coleman & Iso-Ahola, 1993). Implicit in such claims is the contention that leisure provides positive rewards or *benefits* either directly or indirectly through a process of 'improved condition'. Because of this, there is scope to hypothesise that gambling can provide individuals with benefits, and therefore be considered to be a functional, adaptive behaviour.

22.4.2.2 Future areas of research into the psychosocial benefits of Internet gambling

Cornish (1978) in his book "*Gambling: A review of the literature and its implications for policy and research*" was one of the first to systematically identify that gambling may function to satisfy certain 'expressive needs' that are not satisfied in other areas in everyday life. However, there has been little empirical examination of these motivation theories to date.

Based on an examination of the broader research literature on the benefits of leisure in general, the following are areas that may prove fruitful to explore in the context of Internet gambling:

1. Mood enhancement, positive feelings and experiences in everyday life are often a result of participation in leisure (Hammitt, 1980; Hull, 1991; Mannell, Zuzanek & Larson, 1988);
2. Leisure can aid in reducing stress experiences through promoting self-determination, autonomy, social support, mastery and achievement (Coleman and Iso-Ahola, 1993; Hutchinson, Bland & Kleiber, 2008; Iwasaki, 2003; Iwasaki and Mannell, 2000);
3. Leisure can restructure our environment in order to meet psychological needs that are not currently available (Haggard and Williams, 1991; Knopf, 1987; Schlenker; 1984).

To the best of my knowledge the above have not been appropriately researched in the context of gambling and internet gambling, but, they should be given their importance to the public policy debate.

22.4.3. Important caveats and limitations to researching the psychosocial benefits of Internet gambling

The psychosocial benefits derived by problem gamblers from gambling may or may not be the same as those secured by people for whom gambling is simply a harmless recreation. It also seems overwhelmingly likely that for problem gamblers, whatever benefits they secure are substantially outweighed by the negative effects they have on their own well-being and on that of others.

It is also important to recognise that there may be harms caused by gambling which affect non-problem gamblers and which also outweigh or mitigate the benefits they derive from gambling. For example, gambling may make people more reckless in their everyday lives. It may make them less generous or more inappropriately preoccupied with money. Gambling may also have a generally stultifying effect on their intellectual capacities. One cannot rule out the possibility, therefore, that gambling may be an activity which people would do better to avoid even if they engage in it moderately and without any of the kind of psychological and other harms associated with problem gambling. However, these are obviously questions which should also be addressed by empirical research.

22.4.4. Conclusions

The current research paradigm dominating the area of gambling studies relates to understanding problem gambling and its mitigation; and or the economic costs and benefits at an aggregate level. As a consequence, there is limited input into public policy regarding the potential consumer benefits to non-problem gamblers who use Internet gambling as a leisure activity, and who may lose out if this service is restricted or prohibited altogether. This section is intended to make the following points:

- 1. That there are logical theoretical propositions that psychosocial benefits from Internet gambling may exist;**
- 2. That these should be empirically examined through objective research and that adequate funding should be made available (I would also suggest that such research should be funded wherever possible from non-industry sources to avoid accusations of a conflict of interest);**
- 3. That any evidence emerging in relation to psychosocial benefits at an individual level should be used to inform public policy decision making.**

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