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Controlled gambling as a therapeutic option

Some 30 years ago, a number of authors started to consider controlled gambling as an intervention goal (Dickerson & Weeks, 1979; Rankin, 1982; Rosecrance, 1988, 1989). However, advocates of controlled gambling have been few until relatively recently, although it seems that the possibility of establishing controlled gambling as an attainable therapeutic goal for some gamblers is being gradually accepted.

Choosing abstinence or control as a therapeutic goal is not a minor decision. Establishing an inadequate or unattainable goal can entail a great number of risks when dealing with a problem that, as is the case in gambling addiction, can severely damage all areas in the life of an individual. Throughout the years, solid arguments in favor of each option have been raised. It is therefore important to look into the implications of controlled gambling as a therapeutic goal.

Arguments against using controlled gambling as a therapeutic option have been both theoretical and empirical in nature. The first argument is theoretical. The conceptual and theoretical assumptions regarding pathological gambling, be they implicit or explicit, have a continuous impact on therapeutic work and, more specifically, on the objectives considered as part of the psychological intervention. For the clinicians who believe in the existence of an illness — who consider that the illness is latent even before the individual experiences his or her first gambling episode and that it remains active even if the subject never gambles again in the future — the possibility of using controlled gambling techniques as a treatment goal is beyond consideration. These clinicians contend that even one sole gambling episode reactivates the whole disorder. For them, the cases in which gamblers have tried to gamble in a controlled manner and have failed in their effort to do so — and even the cases in which gamblers have relapsed after a long period of time without gambling — are interpreted as empirical evidence that supports this approach to gambling, thus proving that the only possible way for the gambler to control his or her problem is by quitting gambling altogether.

However, there are empirical data that support the idea that controlled gambling is indeed possible (Dickerson & Weeks, 1979; Rankin, 1982) and that relapse does not necessarily lead to a return to pathological gambling practices (see, for example, the excellent — and classical — studies of Blasczcynski, McConaghy & Frankova, 1991, or Russo, Taber, McCormick & Ramírez, 1984, who showed that some gamblers had relapse experiences without recovering pathological gambling patterns of behavior).

Some gamblers experience periods of gambling in a context marked by abstinence. Furthermore, a positive response to treatment is frequently observed even in gamblers that experience short periods of relapse. If the gambler suffers a disorder that makes it impossible for him or her to gamble without losing control of the situation, how is it possible for some “pathological” gamblers to gamble in a controlled way? These cases threaten the hypothesis put forward by the medical model.

Perhaps the cases in which gamblers experience relapse or fail in their effort to gamble in a controlled way are instead examples of therapeutic interventions that have not been aimed at the control of gambling, but at the avoidance thereof.

Moreover, by choosing success criteria that are based only on abstinence one can ignore significant improvement indices, such as the decrease in the frequency and intensity of gambling, as well as the urge to gamble, the achievement of self-control once the gambling episode begins, or the potential economic, social, and family improvements.

The second argument against controlled gambling is of a practical nature. It is easier to quit gambling altogether than to gamble in a controlled way. The fact that the gambler frequently exposes him or herself to discriminatory stimuli that enhance gambling practices instead of avoiding them or escaping from them increases the probability of triggering a gambling episode or makes it more difficult for the gambler to control the situation. Furthermore, availability and accessibility of gambling is high, which renders the task even harder. In addition, stopping a gambling episode once it has started entails the deployment of self-control skills that the gambler probably has not developed unless he or she has undergone a previous learning process.

However true this is, the following consideration can be offered: The goal of controlled gambling can be more enriching for the client than a treatment that is aimed exclusively at abstinence. When considering controlled gambling, it is assumed that the individual can learn how to control his or her behavior, a behavior that has been previously learned. In other words, the treatment not only focuses on showing individuals how to inhibit a specific behavior, but also on teaching them the behavioral mechanisms that enable them to control such behavior voluntarily — that is, showing them how to control what used to be uncontrollable, just as non-problematic gamblers do. It is easy to assume that the acquisition of these skills can benefit individuals in other areas of their lives apart from gambling. The acquisition of these skills would not be possible if the individual had quit gambling instead of learning how to deal with it.

A third argument is also important: No comprehensive body of knowledge regarding the causes of the lack of control and the skills required to regain control exists as of today. Indeed, this gap leads many clinicians to "play it safe" and thus to avoid the risks entailed in a treatment approach that has to be designed to meet the specific characteristics of each gambler.

However, the search for controlled gambling would necessarily boost research on the factors that influence gambling behavior and that enhance or protect a harmful gambling pattern. For example, if failures are not considered to be evidence of the existence of a disorder, then we must focus our efforts on studying the reasons that led to treatment failures in gamblers who drop out of treatment or who do not benefit from it. It is important that we look into the skills that the pathological gambler is lacking, the personal components that enhance gambling addiction, and the specific differences that exist between the gamblers who are able to control their gambling activities and those who are unable to do so. Furthermore, we must perform a comprehensive study of adequate explanatory models that can be verified empirically: Only if we know why the gambler cannot control him or herself will it be possible to prevent this lack of control. Although significant progress has been made in this regard during the past years by leaving aside the approach that considers problematic gamblers to be a homogenous group and promoting the study of the different functions that gambling can play in different subgroups of gamblers, we are still unfortunately far from having a large and empirically consolidated body of knowledge.

A fourth argument is methodological in nature: There is no consolidated treatment with enough empirical evidence to support its efficacy in the achievement of controlled gambling. This is still unfortunately true, although progress is being made. However, it is not possible to gather data if the starting point or initial approach is not accepted. Nevertheless, we are not working from scratch; there are indeed therapeutic interventions that have proved their efficacy in the control of other excessive behaviors that can help us (see, for example, the special issue on controlled drinking, Coldwell & Heather, 2006).

Having mentioned the arguments against this therapeutic goal, it is important to describe arguments that support the use of controlled gambling as a therapeutic option. In the first place, we must not forget the high dropout rate that exists in treatment for pathological gambling. It seems reasonable to think that the high dropout rate in gambling therapies can be linked to the assumption that the solution to the problem is the interruption of all forms of gambling. In this regard, programs aimed at a controlled use of gambling offer certain advantages, given that the goal of the treatment is the reduction, and not the total suppression, of a socially accepted behavior.

It must also be considered that the percentage of problem gamblers who seek treatment is still low. It is likely that gamblers who feel unable to control their gambling and want help, but reject the idea of being sick or of quitting gambling, will forever oppose treatment. Furthermore, our experience is that nowadays there are more people requesting treatment with less severe levels of gambling than in the past. Fortunately, an increasing number of individuals seek help because they are starting to worry about their gambling behavior but have not yet reached their maximum level of decline. The motivation that leads these people to seek treatment differs greatly from that of individuals whose lives have been destroyed by gambling, and thus, the goals of treatment must be adapted to meet the characteristics of each gambler.

An increasingly common response to these issues is to propose the restrictions of a controlled gambling option for those gamblers that are "at risk" and that have not yet reached the disordered level. Even the recent and interesting perspective of harm reduction shares this preventive characteristic: It practically proposes a secondary prevention, accepting the existence of a minimum and persistent level of damage. It has, therefore, a different goal than the one sought by the controlled-gambling-objective: a harm-free level of controlled gambling.

I want to finish with the following questions: "Is controlled gambling possible only with gamblers who do not meet the clinical criteria for disorder?" "Can controlled gambling be considered a goal of therapeutic intervention, and not only a preventive one?" In other words, “Is controlled and non-harmful gambling possible for those who have been previously addicted to gambling?”

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Editorial

The Editorial Board of the *Journal of Gambling Issues (JGI)* would like to express its gratitude to Phil Lange, founding editor of JGI, for his important and remarkable contributions to the emergence of JGI as a vital forum for knowledge exchange and research dissemination about gambling and gambling problems. We have been impressed by his unequivocal commitment to retiring and taking up other enthusiasms that a full-time job inevitably gets in the way of. Our self-interested efforts to encourage him to defer or protract his leaving have not been able to sway Phil from his resolve for new adventures and a return to territories explored long ago—he is, after all, an anthropologist by training!

He was described in his farewell celebration as being something of a modern renaissance man, with many competencies and interests. We in problem gambling world have been the beneficiary of these for just about eight years now. The job of editing a journal is a demanding one. It is a true sign of the person that Phil is that so many who have been involved with the JGI as authors, reviewers, and in other ways, have remarked on the civility and thoughtfulness that Phil brought to his work with them. Indeed, a number of individuals sent their best wishes, which were read out at his farewell. To illustrate, here are a few quotes from colleagues around the world:

> “Phil—thank you for your always-kind and reinforcing comments about our papers, and thank you for being a warm and friendly presence in this electronic world".
>
> “As an editor you had to chase reviewers and contend with discontented authors who always found critical reviews unjustified (rightfully so). Throughout this process you always tried to bring reason and fairness while helping advance this young field. You did an exemplary job".
>
> “While we are far away on the other side of the world, the Internet brings us close and your energies have fostered a very precious resource. In the process, you leave behind an important legacy for the gambling field”.

To this tribute, the Editorial Board adds its congratulations to Phil on his outstanding editorship. He has provided the foundation upon which the Journal of Gambling Issues is built, and he leaves a legacy for future editors to carry. His professional acumen, personal warmth and interpersonal skills made him a caring and wise guide in his role as editor, leading us effectively through the never-easy terrain of quality scholarly publication in a complex and contentious environment.

Sincerely,

Members of the Editorial Board, JGI

Editorial

My retirement as editor of the *Journal of Gambling Issues* (*JGI*) at the end of February 2008 offers me two reasons for joy. One comes from contemplating the freedoms popularly associated with retirement. The other comes from my pleasure in seeing Daryl Boshart as the *JGI*'s new Managing editor. Daryl brings excellent qualities; he has a solid background in gambling research and advanced knowledge of peer-reviewed publishing practices and ethics. I know that you will enjoy working with Daryl (— he has none of my irritating faults).

With some sadness I will miss the warm collegiality of our colleagues. The quality and utility of any science journal rests on the labours of authors and reviewers. I want to especially thank each reviewer for their timeliness and the expertise that they bring to each review. By reading the list of reviewers in "About us" you can see who these valuable researchers and clinicians are. They deserve our gratitude.

And last, I offer a warm Canadian "thank you" to everyone who supported the *JGI*.

Phil Lange
(Former editor, *Journal of Gambling Issues*)

Welcome to the 21st issue of Journal of Gambling Issues (*JGI*).

For several reasons, this issue marks a watershed moment for the journal. Most notably, Issue 21 carries with it happy retirement wishes for an architect and the founding editor of *JGI*, Phil Lange. As incoming Managing editor, I am privileged to inherit and challenged to preserve the high standard of ethical scientific publishing that has been forwarded by Phil.

This issue also marks the movement to online peer review software for the processing of submissions to the *JGI*. Authors and reviewers can now visit http://mc.manuscriptcentral.com/camh-jgi to submit, modify, review, and check the status of submitted manuscripts. Further, readers can soon observe the fruition of several other efforts, including a new web layout and a move toward immediate online publishing of accepted content.

In addition to overseeing the growth of *JGI*, it is also my goal to uphold its status as a trusted resource for current gambling-related scholarly publication, and as a useful archive of knowledge accessible to a diverse readership.

I hope this issue stimulates, enriches, and challenges your understanding of gambling-related matters.

Daryl Boshart

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How working in a gaming venue can lead to problem gambling: The experiences of six gaming venue staff

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Abstract

Arising from a larger study into workplace influences on gambling amongst employees who work in hotels, clubs, and casinos in Queensland, Australia, this paper presents six case studies of staff with gambling problems. All six developed their gambling problems while working in gaming venues. Semi-structured interviews were conducted and analysed thematically to reveal several ways in which the work environment in gaming venues influences the gambling behaviour of these staff. For these employees, the attraction of gambling is reportedly enhanced by close interaction with gamblers, frequent exposure to gambling, the influence of fellow employees, the influence of management, workplace stress, hours of work, and frequent exposure to gambling marketing and promotions. Responsible gambling training and other venue-based responsible gambling measures did not protect these staff from gambling problems. An understanding of these workplace influences on problem gambling can inform identification of appropriate interventions.

Keywords: problem gambling, gaming venue staff, case studies, work environment, risk factors

Introduction

Although public health models of gambling recognise contextual influences on gambling, there has been minimal examination of how these influences vary for different sub-populations, particularly occupational groups. One occupational group with a distinctive work environment that could reasonably be expected to influence gambling behaviour is gaming venue employees. However, only three peer-reviewed studies have examined gambling by gaming venue staff (Collachi & Taber, 1987; Shaffer & Hall, 2002; Shaffer, Vander Bilt & Hall, 1999). Findings from these studies suggest that gaming venue employees may be an at-risk group for gambling problems. However, none of these studies conducted qualitative research to identify reasons behind this finding, nor did they examine particular aspects of working in gaming venues that might explain higher levels of problem gambling amongst staff.

This paper presents six case studies of gaming venue staff with gambling problems. Although subject to the usual limitations of case study research, these cases illuminate particular factors in the workplace that appear to have fuelled these gambling problems. As such, the cases highlight a number of issues not elsewhere reported and add to the general understanding of factors that can contribute to the development and maintenance of gambling problems. The paper first presents a brief contextual overview of gambling in the Australian state of Queensland where this research was conducted. The methodology is then explained, followed by narrations of each case. Thematic analysis of the cases is then presented. Gaming venue strategies to better discourage gambling problems amongst gaming venue employees, as recommended by the six interviewees, are then summarized and the limitations of the study outlined.

Background

In Queensland, 581 licensed clubs operated 21,102 gaming machines and 771 hotels operated 18,382 gaming machines at the end of June 2005 (Queensland Government, 2005). The state's four casinos operated 284 table games and 3,593 gaming machines (Australian Gaming Council, 2005). The casinos, along with many hotels and clubs, also operate keno and TAB outlets.[i] At June 30, 2004, there were estimated 31,000 staff positions in casinos, hotels, and clubs with gaming machines (Queensland Government, 2005). Along with gaming machines, casino games, keno and TABs, lotteries, on-course wagering, and sports betting are also widely available in Queensland.

Methodology

The six case studies were collected as part of a larger study into workplace influences on gambling amongst staff working in hotels, clubs, and casinos in Queensland, Australia. All six people had developed their gambling problems while working in gaming venues, and all were still working there at the time of the study.

Two were in counselling for their gambling problems and, as they had clearly self-assessed as problem gamblers and as their counsellors had confirmed this assessment, no instrument was used to re-test this diagnosis. These interviewees were recruited via notices placed in gambling counselling agencies.

The other four people were interviewed as part of the staff sample for the larger study. Recruiting this larger sample involved judgement sampling to select a reasonably representative sample of venues, which were then approached to request interviews with some staff. In total, 92 employees were interviewed, four of whom scored in the "problem gambler" category of the Canadian Problem Gambling Index (CPGI; Canadian Centre on Substance Abuse, 2001), administered at the conclusion of employee interviews. Data from the 9-point scale constituting the CPGI were analysed to categorise respondents into the Classification of Gambler Sub-Types, as recommended by its developers (Canadian Centre on Substance Abuse, 2001). Cut-off scores were applied as recommended, where non-problem gamblers score 0, low risk gamblers score between 1 and 2.5, moderate risk gamblers score between 3 and 7.5, and problem gamblers score between 8 and 27 on a nine-item, 4-point Likert scale (Canadian Centre on Substance Abuse, 2001, p. 43). The Canadian Centre on Substance Abuse (2001) describes the problem gambler category as those who have experienced adverse consequences from their gambling and may have lost control of their gambling.

Of the two employees in counselling, Case 1 was interviewed in person in the presence of her counsellor, whereas Case 2 was interviewed by telephone. Cases 3 to 6 were interviewed on-site in their workplaces. All interviews were conducted by two members of the research team, lasted between 25 and 90 minutes, were taped with permission, and were later transcribed.

After asking each interviewee about his or her work experience in gaming venues, the interviewers sought their opinions and experiences about whether and how various aspects of working in gaming venues might influence employee gambling behaviour. The interviewees were encouraged to raise additional aspects that they felt were relevant, provide examples, and share their personal experiences. These aspects were close interaction with gamblers, frequent exposure to gambling, influence of fellow employees, influence of management, workplace stress, hours of work, frequent exposure to gambling marketing and promotions, responsible gambling training of staff, responsible gambling measures in the venue, and other aspects that interviewees considered as influential. This paper presents below a summary of each case before analysing the results according to prominent themes and sub-themes. Both authors analysed the data individually as a cross-check on the veracity of conclusions drawn.

Case One

This client, a female in her late 20s, had worked in four hotels and one club, had been playing gaming machines for 4 years, and had been in counselling for 6 months. She had worked as a bar attendant, in the TAB facility, as a workplace trainer, and as a maitre d' in a club restaurant. All her workplaces allowed staff to gamble there outside of working hours and while not in work uniform.

Before working in gaming venues, she "was never a gambler, not even a scratchie."[ii] She started while working in a club "because you see people win, and some people won't tell you how much they've lost ... that was what encouraged me. I know when I started at the RSL (club), I put $2 in a pokie one day, and I won $600 ... and it was ... wow! ... Yeah, that's exactly how it started." She started gambling more when promoted to a higher position to deal with the added stress of "dealing with staff and management, copping it from both sides. They expected 100% and I had no support; I had been given a 3-day training program … I was expected to do everything … it was pretty intense."

She often gambled with other employees, where "in all of the venues, if you finish work with someone at the same time, you'd grab a beer and put $10 in the pokies ... it was a wind down, before you went home." Alternatively, she "would go to another venue ... just be by myself for a while. Not speak to those people … you just want to go where there's no one that you really know. And my wind down was sitting at the pokies." She started gambling on days off, usually at her workplace, because friends were unavailable then. Her friends who work in hospitality are "the same, as me; they have their days off on Tuesday and Wednesday … the pub is … down the road, and it's just so handy … there's nothing else really to do on a Tuesday and Wednesday."

Constant exposure to gambling – being "constantly in your face" and "the whole illusion of the music and the free spins" – was a strong reinforcer of her gambling habit. Conversely, when working in the club restaurant, she "liked being away from the pokies. I wasn't tempted." Working around gamblers created an organisational culture where gambling was accepted. Playing gaming machines in her workplace was a comforting setting where her gambling problems were "normal," as "most of the patrons had a gambling problem, too … I felt like I wasn't a massive problem gambler, but I knew they were." Being familiar with some adverse consequences did not deter her. She related how one patron committed suicide and another was stabbed nine times by her husband in front of her young daughter because of gambling, with the husband then driving his car into the front of her workplace. She said, "I can't believe that I still gambled after I'd seen what families go through, what he went through." Her responsible gambling training did not change her gambling, as "it just makes you more aware of how to maybe approach people when they've lost money."

She related how staff in her current workplace watch jackpot levels, recalling how "we had a 5c machine, and the jackpot was up to $30,000 so all the staff when they finished work would ... have a go and see if they could jag it," even some who "had never played the pokies … and I'd be thinking, this might be the start of something." She also noted, "a lot of other staff would go in for the promotions" at their workplace.

Of the staff she works with at the club, "80% play the pokies or bet on the TAB ... and keno is really big ... the other 20% who don't (gamble) absolutely hate it." She estimated one-half of that 80% would have gambling problems, mainly with poker machines, but "one ... watches the keno all day and ... others would watch the TAB … When it's in your face all the time, and you have the punters telling you … it's going to be an issue." Staff working in gaming areas are "definitely" more likely to be gamblers and problem gamblers than staff working in non-gaming areas, she said. Many managers she has worked for are also heavy gamblers, as are friends who work in hospitality – "they will get their pay, will put all their money through the pokies and then get a $100 sub [advance on pay]." Finally, she contended that problem gambling amongst gaming venue staff is "one of the biggest issues in the state that needs to be dealt with, that hardly anyone knows about."

Case Two

This client, a female in her mid-40s, was married with adult children and grandchildren. She had worked as a chef for 7 years in a small regional club with seven gaming machines, typically working three shifts a week. She began receiving counselling 18 months earlier when "I got out of control. And I was actually going to clubs on my own, which I'd never done … I felt ashamed, I'd let my husband down." She had been playing gaming machines for about 3 years, and "used to be able to go out and put $5 or $10 in and take the losses and the wins." But "I've had quite a bit of drama in my life in the last few years ... when things got too heavy, it was, well, go and play the pokies … I am still gambling now, but trying to keep it in control a bit … But I have my moments." She explained, "it was mainly through big wins at another club that got me hooked."

She noted, "I see the same faces at the poker machines" at work and "they are pumping $20 after $20. I used to think, well, they have a major problem," but this did not deter her. Exposure to gambling poses a real temptation – "a bit like an alcoholic wanting a drink when you are sitting there, and I know these people by name, and I think, they're winning again, they're winning again." Although the counsellor "helped me come up with a few strategies, such as planning my day, or putting my mind somewhere else" to avoid going to other gaming venues, "it is only when I get to work … I walk in the door and they're there. I have 15 minutes (before starting work), and you can go through a lot in 15 minutes." If she does a split shift (lunch and dinner) "because I live 20 km from home, I will stay at the club and play the pokies … I might have about 2 hours in between." She noted that workplace stress is also an influence, where "if I've had a bad night, or are under a lot of pressure, then I will finish work and go and play the pokies, to unwind, lose myself I suppose." Having automated teller machines (ATMs) in her workplace means "on pay day I can just pull it all out and play the pokies."

The client had "never heard of" responsible gambling training, although she reads the problem gambling signs "every time I play them. And I know in myself that I had a problem." It "would probably help a lot," she said, if she was not allowed to gamble in her workplace. She has advised her boss of her gambling problem and "asked her to tell me to get off the machines if she sees me playing them … but then as my friend she doesn't feel it is her business." She has considered self-exclusion from the gaming area, "but I don't know whether it would be enforced," as "the friendship kind of gets in the way." She has sought alternative employment, but "in this town, the only place that doesn't have pokies is the restaurants, and I've tried getting work there and been told I am too old."

She considers that venue staff are an at-risk group for gambling problems, "that if they've only played them on a casual basis, and something has happened and they want to lose themselves, and they've only had one good win, I just feel that staff think, well I've had that good win, maybe next week I'll put a few more bucks through. And if staff have any worries … I tend to go to work to lose myself and get away from the day-to-day stuff anyway."

Case Three

This employee worked in a large hotel in north Queensland. She was in her mid-20s and employed on a full-time salary, working from 9.30 a.m. to 7 p.m. 5 days a week as TAB and bar supervisor, having been in the industry for about 4 years. She "was putting bets on Melbourne Cup for mum from age 12, and my brother was watching Sky racing from 14. And my grandfather was a big gambler." Her boyfriend also worked night shifts at the hotel. He "used to not play the pokies but when he started working here he did start" and then "was spending way too much money, starting to enjoy them." The interviewee and her boyfriend had just made a decision to stop gambling, or at least "not to gamble at work when I've finished work," and she reported abstaining now for 2 weeks.

Until this recent decision, "not a day goes past without me having a few bets" and she would "gamble all day – 3 or 4 hours on days off." She gambled at the TAB on a daily basis, played gaming machines about fortnightly, and keno, casino table games, and sports betting about monthly. Every few months, she would bet at the racetrack, engage in private gambling with friends, and enter a lottery-type game. Her typical reported session lengths were 5 hours at the racetrack, 4 hours for TAB betting, 2 hours at casino table games, 1 hour on gaming machines, 10 minutes on keno, and 5 minutes on sports betting. She reported her typical monthly expenditure to be $600 on the TAB, $100 on gaming machines, $50 on casino table games, $20 on keno, $10 on lottery-type games, and $5 on sports betting. Her score on the CPGI was 13.

Although staff were recently barred from gambling at the hotel, "I used to play after work every day," so being allowed to gamble in the workplace "definitely influenced me." She recalled how “most staff would, in their time out, put $10 to $12 through.” She now goes "to the casino and pub with other staff. We go and play the pokies, maybe for an hour. I also go out with my partner" to gamble. She noted, "all our managers like to gamble as well. So there is 100% influence there."

As TAB supervisor, she has very close interaction with gamblers and "when you see people winning, it affects you. It's amazing that the losing doesn't." Many patrons say "I've got a hot tip," which is "100% tempting." But "it is my job to know what is going on. My gambling helps me in my job." She explained, "my staff are so much better if they know how to punt. I suggest to my staff that they sit down and learn – spend a day (learning). You need to know your product."

She described her gambling as "my way of dealing with stress" and enjoyed the "adrenaline rush putting a bet on." She commented, "when you work shift work there is not too much to do, no entertainment when you finish and need to unwind." Her boyfriend's night shifts in the venue also encouraged her to stay after she finished work at 7 p.m. She sees linked jackpots as "a draw card – we'd stay a bit longer. Yesterday I put $10 in the pokies and sat on the machines with the links. It does encourage you to have a go." She had done responsible gambling training and although "the training made me aware, made me self-identify as a problem gambler … it didn't make me change, although I am now."

When asked if hospitality staff are an at-risk group for gambling problems, she answered, "definitely, definitely … I agree that many staff have problems," and elaborated that "I don't think people realise that we have opportunity and exposure." She concluded, "I thought the only way for me to give up gambling was to leave the industry. I am so proud of myself, and know I am okay if I stick to my limits."

Case Four

This employee was a female in her late 20s, a bar attendant and TAB supervisor in a large north Queensland hotel. She had also held a gaming licence in the Northern Territory and had been working in gaming venues, all hotels, for around 3 years. She gambled on gaming machines, keno, casino table games, and lottery-type games between two and six times each per week, and a typical session for her was 4 to 5 hours on gaming machines and 3 to 4 hours at the casino tables. She reported her typical monthly expenditure to be about $200 on lottery-type games, $200 on keno, $600 on gaming machines, and $200 on casino table games. She scored 10 on the CPGI.

She felt that "a few years ago I may have had a little bit of a problem … when I was going to the casino … But I was up $400 every time I went there, so that was why I kept going … I started betting $1 instead of 40c bets. That was where it all sort of started for me. I had inside knowledge." When at work now, however, "I don't have that urge to gamble, so I don't think I have a problem." She tries to limit her machine gambling to $20 a session, although "sometimes I find myself putting an extra $10 in."

She explained, "I like the TAB, because I know the TAB, and because you are with your customers and they are putting bets on, and they are always giving you tips … You can see what is going on and you follow it." She was not allowed to gamble while working, "but I watch them, I watch them get up and say, 'Ooh! I picked that one!'" On "my days off, I find myself at the TAB. I think, my old mate told me about that horse to watch, I'd better put a bet on it." She commented, "I think that is why I'm a gung ho TAB operator, because I do take an interest in it." She also noted, "you never hear about the losses" from patrons, so this is a "temptation" to gamble. Frequent exposure to gambling was also tempting, as "you find yourself betting because everyone else around you is doing it." In fact, "I did a gaming shift a few weeks ago, and after my shift I found myself at the casino, so that should answer your question!" She said, "you are hearing the machine, you are doing the payouts, and you know they pay out." Although "you also know there is a lot more money that goes in than what goes out ... I guess that when you are paying out and paying out, at the end of it you want to sit down and have a go."

She disagreed that workplace stress encourages her gambling – instead, "when you walk out of there, it is like, give me a drink." But "alcohol and gambling don't go together," as "you seem to up the ante after you've been drinking." However, "for the majority of us, it is with the hours … all our friends are working when we have days off, so you find yourself at a pub or a club. And everywhere you go is gaming." When staff were allowed to gamble in the workplace, "you find yourself off duty, and you go down and have a bet. Because you know the regulars, and you don't get a chance to have a decent chat, to finish a conversation." When she was "working until 2 in the morning, and going home and everyone was asleep, I found myself at the casino to wind down, because you're still wired, and not in the mood for conversation and it is the only place open."

She related how staff go out together, that "last night me and one of the girls found ourselves at (another hotel). We went there for a drink, but we did find ourselves in the pokie room, probably because they've got new machines, and we were checking them out." Her colleague had "ended up finding herself at the casino. And I've done that, gone on my own. Because the pokie machines are unsociable, full stop. So if you want time out by yourself, it's better sitting at a poker machine rather than at the bar."

The interviewee felt management policies on staff gambling had a strong influence – "in one hotel I worked, we were allowed to gamble, and I gambled. And here we are not allowed … and I don't find myself gambling as much." At her previous workplace in the Northern Territory "there were a lot of girls that sat on a machine after their shift … getting a sub and gambling, so they were gambling on credit." She had left to work in a Queensland hotel with no gaming, "just to get away from the gaming side of it ... I've been known to have a gamble, so it was nice to not have it in my face." She also felt management can nurture a gambling culture in the workplace "if the publican is into it." She recalled how a former employer had "involved us (in gambling), which shouldn't have been allowed, because sometimes we were working at the time … but he still encouraged it." She noted, "we had our own punters' club at this hotel, and so every Saturday, if you had a Saturday off, you'd go down the pub."

Unlike other interviewees, this employee felt her responsible gambling training "actually helped me. I learnt a lot about my own issues. I found after doing that, it helped me to control it a little, like saying that $20 is my limit." However, she felt that the responsible gambling signs are ineffective, as "you don't look at it; it is part of the furniture." Finally, she noted hospitality staff are an at-risk group for gambling problems, "because they are around it a lot more … we're watching it for 7 hours" during each shift.

Case Five

This interviewee was a 29-year-old female and assistant manager of a large Brisbane hotel. She had been working there for 5 months and for a total of 10 years in gaming-related positions in hotels. Her score was 11 on the CPGI. When she started in the industry, the interviewee hardly gambled – "I probably only put $5 in every year" – and when she started in management "counting all the money, I'd think to myself, you're idiots. And I'd say to my mum, don't gamble, don't gamble." However, when interviewed, her gambling involved playing gaming machines and keno between two and six times each per week, private gambling amongst friends about weekly, betting on the TAB about monthly, and going to the racetrack and casino every few months. A typical gambling session would be 8 hours playing keno, 8 hours playing gaming machines, and 2 hours each on TAB betting, gambling at the racetrack, and casino table games. On a monthly basis, she would typically spend $1,000 on gaming machines, $400 on keno, $100 on casino table games, $20 at the TAB, and $10 on private gambling.

She commented that close interaction with gamblers "absolutely can influence staff." Although "some staff don't gamble at all, because they hear a lot of negative feedback from customers saying I've lost this amount or that amount, or can't feed my kids this week," there are "also the times they're giving people large payouts, and think to themselves, I can do that as well." She explained, "I think it is very tempting when people do get large payouts … It is such a big deal, such a big job to write out a cheque, the time concentrating on that amount, writing it out, concentrating. And it is there in black and white, and they think, 'lucky bastard.'"

Frequent exposure to gambling also "definitely influences, because you actually watch the game. So you quickly learn what pays … you are continuously watching, if someone gets a free game, all the staff look, see how much they win." This exposure leads to "insider knowledge"; "they know that higher turnover machines have a higher rate of pay. You have better odds, a better chance of winning something." She continued, "if you were to … watch someone pump a machine for 2 hours with $5, you'd be mad not to get on it and have a go. So they'll watch, watch, watch, and then jump on something that has been played."

The interviewee noted, "there are the two groups here, those girls that go to gamble and drink and the others that go to dance and drink." The interviewee has "taken staff out before … often they'll sit in gaming rooms, and gamble and talk at the same time. Often we don't even have to look at the machine, we know what it is doing by the sounds. So we just sit there and our money drips away." She noted that "staff from the pub across the road come here, and we go there. So we all know each other, and the managers will buy each other drinks." Staff go to each other's venues to get good service; they feel comfortable there on their own because "we understand each other to the extent that I'll talk to them and chat to them when I'm at the bar, and then when I'm sitting at a pokie, they don't talk to you, and they sort of do the same." Sometimes, staff give advice on which machines to play and which to avoid.

Workplace stress "influences me. If I've had a hard day, I'll … play the pokies … it is an elation feeling, a good feeling … to forget about work for however long the money lasts for and to escape … it is just zoning out." She also gambles in the hope of winning, thinking "I can put this 100 bucks in and make it a bit more, and life might be a bit easier." Boredom at work can encourage gambling – "staff giving their money to a customer to put bets on for them ... If they know ... it is going to be quiet, they'll go and put 100 (keno) games on and then watch it all day."

She also thought shift work is influential, because "if staff want to … go out after work, a lot of the time the gaming venues are the only ones open." She continued, "most hospitality workers do have Monday-Tuesday off, and there isn't much happening; there's no football matches, shows, nightclubs, nothing. You can't do anything … Your body clock is all messed up."

The interviewee noted, "I don't know anyone that works for me, or me, or any of my friends, who all work in hospitality … who bets under 25c, and they're all big bettors." Linked jackpots "suck you in. You do watch it, because ours is really loud up here; it is the car, that goes vroom, vroom. If you are a big bettor, you have a better opportunity to win the big jackpot. People are more inclined to spend a bit more money to play them, staff included." Watching jackpots in her workplace was a temptation for her to play linked machines at other venues.

She also discussed the role of alcohol, where "hospitality staff ... drink a lot and smoke a lot and gamble a lot. And they do all three together, and when they're doing too much drinking, that's when too much gambling comes in ... they start borrowing money off each other, and it goes full circle. I guarantee you three of them will owe each other money at the hotel … I hear it all the time, I went out and got pissed and now I've got no money." Access to cash at work also "is tempting. A lot of the time they've gambled all their money and are trying to get their rent. Keno and TAB are what I call the quiet achievers for that reason. A lot of staff do credit bet on them; I've caught staff doing it. It's easy."

Her responsible gambling training had some influence "in the beginning; when you get your job … I probably thought: what idiots." However, she said, "it is 5 years since I've done that course, and I don't think about that now," explaining "I don't think any gambler thinks that they have a problem." Even though she had "excluded a lady a few days ago ... it hasn't changed my behaviour" and she felt that "signage is just like a picture on the wall … it is just something we have to do." She also felt that managers do not influence staff gambling, apart from a no gambling policy, explaining "one girl who works for me right now … does have a gambling problem. But … it isn't really my business until it becomes a work problem."

She "definitely" thought hospitality staff are an at-risk group for gambling problems, commenting, "I think it is older staff that gamble. Most back-of-house people don't gamble, because they deal with the issues, the complaints, the money, the profit. I think that that deters people. But front of house … are continually talking to people who win … I find that staff that work in gaming rooms, if they are the gambling sort … will spend a lot of money gambling at the gaming machines." She contended that "most of my friends in hospitality gamble, half of the staff here gamble … mainly pokies and keno," and "I know girls up there who have paid their rent, and then gamble the rest." She admitted, "I'm a good subject, too" for having gambling problems.

Case Six

This employee was a 24-year-old male, a duty supervisor in a coastal club, although for most of his 4 years there he had been a gaming attendant, working 35 hours a week over five shifts. He had not worked in other venues. He reported playing gaming machines about weekly, and gambling on the TAB about fortnightly. He also gambled monthly on lottery-type games, keno, and sports betting, and gambled privately with friends once every few months. His CPGI score was 10.

He noted, "if you see someone else winning the big one, you always think your time might come." He continued, "it probably influences me in some way, either positive or negative. If you have an experience with someone that you know has probably spent too much, you don't want to go down that track, so you change your behaviour accordingly." However, frequent exposure to gambling "is bound to increase your willingness to try it," because "you are exposed to those environments for so long." He explained, "I have the occasional poke … you see machines, and chuck a few bucks through." He implied this exposure raises staff knowledge about particular machines, so if an employee "sees a machine that they like and they can't play them here, they'll go and play it somewhere else."

Although he said that fellow employees tended to discourage other staff from gambling, that they "remind you of how bad the effects can be, of what the odds are," he thought "some people might encourage other employees to chuck a couple of bucks through. People that are allowed to play, they might point them in the direction of a particular machine." He noted the influence of shift work – "I'll chuck a couple of bucks in on a night when I've got the night off, and some of my friends don't have the night off. It is something you can do by yourself." He also noted the influence of gambling promotions – "keno promotions are a real good one, because they do extensive in-house advertising. A good one is Keno Four out of Four, so people knock off and put a bet on that game, because they think it is good odds." He considered "in a way it affects me, but not so much as what I've seen in other people."

His responsible gambling training "influenced my gambling for a short period after." But, "hearing the odds would be a short-term discouragement, for a few weeks. Then you'd start chucking a few bucks through." However, responsible gambling signage "wouldn't do much, because you see them every day. They'd become part of the furniture. They haven't changed my own gambling behaviour."

He thought hospitality staff are an at-risk group for gambling problems, commenting, "if you see people winning, you think your chance is equal to theirs, especially when you don't see how much they put in, and it is a relative [low] wage as well."

Analysis and Discussion

These six case studies highlight numerous ways in which the work environment in gaming venues has influenced the gambling behaviour of these employees, and so confirm the role of contextual factors in the development and maintenance of gambling problems. Although these cases cannot be generalised, they highlight a number of influences on gambling involvement not reported previously. These influences are discussed below according to each aspect of working in a gaming venue raised in the interviews.

Close interaction with gamblers

For the five of the six problem gamblers who work in front-of-house positions, close interaction with gamblers while at work means that they often hear about and see gambling wins more than losses, give payouts to customers, constantly hear about gambling from patrons, are given gambling tips from punters, get caught up in the excitement of gambling, and build friendships with regular gamblers. These influences increase the allure of gambling, and for some people, feed erroneous beliefs and fuel hopes of winning and a desire for a piece of the action that they see gamblers enjoying. Such faulty cognitions about gambling are widely recognised as a correlate of problem gambling (Canadian Centre on Substance Abuse, 2001).

Frequent exposure and access to gambling

Also observed amongst the six cases is that frequent exposure to gambling normalises gambling and heavy gambling, making it easier for employees to downplay the extent of their own gambling. This exposure can also trigger gambling sessions, either at the workplace or another venue after work. Exposure also increases familiarity with gambling, which can lead to a belief in heightened insider knowledge to enhance chances of winning and a desire to try new machines. Working in a TAB outlet seems to particularly nurture an interest in punting, where this familiarity is deemed necessary for or is legitimised by effective job performance. As Perese, Bellringer, and Abbott (2005) note, attitudes to gambling are important, because they directly influence a person's behaviour. These employees' acceptance of, familiarity with, and knowledge about gambling seems to nurture their gambling habits. Additionally, some employees have ready access to gambling in their workplace, before and after work, and between split shifts. For others, the social accessibility of gambling is heightened because their work experience means they now find gaming venues familiar, comforting environments. As the Productivity Commission (1999) pointed out, there is "sufficient evidence from many different sources to suggest a significant connection to greater accessibility to gambling ... and the greater prevalence of gambling problems" (p. 8.31).

Influence of fellow employees

Five problem gamblers experienced some peer endorsement of gambling, where it is the "norm" to gamble with colleagues after work and on days off, to gamble while waiting for others to finish work, or to gamble at other venues where they know the staff. Because of other limitations on the social life of venue staff, strong social bonds can develop amongst them. Although there is a paucity of research into how social interaction influences gambling (Abbott & Volberg, 1999), significant others can be a key influence through increasing exposure to gambling and social learning (Perese et al., 2005). One study (Abbott, 2001) noted that problem gamblers commonly report that their spouse or partner and work colleagues have gambling problems.

Influence of management

This endorsement of gambling can also extend to management, where some of the problem gamblers reported that their past or present managers are also keen gamblers and so set a poor example for staff, nurture a gambling culture in the organisation, and allow staff to gamble in the workplace. The situation of one employee was exacerbated when her manager did not take her gambling problems seriously enough to encourage self-exclusion, while other interviewees in supervisory roles themselves take a passive, non-interventionist approach around gambling problems amongst their staff. Management can influence employee gambling in numerous ways – by reducing access, by setting a good example, by promoting a culture of responsible gambling, and by assisting individual staff with gambling problems.

Workplace stress

Although the development of gambling problems amongst these six staff may have been catalysed by outside factors (for example, personal problems, a big win), workplace stress plays a role in the maintenance of their gambling problems. Most staff reported a desire to unwind after work, to escape from workplace worries, and to "zone out." For some employees, their gambling increases in tandem with workplace stress; one gambled more when promoted to a more stressful position, and others reported gambling after very stressful shifts. Gaming machines seem a particularly attractive option to take time out from work and from interacting with others. Gaming venue employees elsewhere have reported high levels of stress, irritability, moodiness, and exhaustion after work, along with sleep and appetite problems (Keith et al., 2001). Further, numerous studies have found that gambling to relieve negative emotional states, such as depression, anxiety, boredom, and loneliness, may be a significant risk factor for problem gambling (Perese et al., 2005).

Hours of work

Shift work is also an influence on gambling by these staff. Having time off when family and friends are unavailable means that they can experience social isolation and need to find solitary leisure activities. For some staff, gaming machines are an attractive option, providing opportunities to go out and be around other people without having to interact. These machines are also a "comfortable" activity for single females. Amongst the six employees, one has 2 hours to fill in between split shifts, whereas others are drawn back to the workplace in their time off, as they know the staff and regular patrons. For those who finish work in the evenings, there are few other entertainment options away from gambling venues. Because of limits on their social life, some staff tend to socialise with work colleagues or other hospitality staff who are also active gamblers. Shift work can interfere with a worker's family, social and community life, leisure activities, and other obligations (Keith et al., 2001). Further, Perese et al. (2005) note it is probable that lack of social interaction influences the development and maintenance of gambling problems.

Frequent exposure to gambling marketing and promotions

Staff are frequently exposed to the venue's marketing and promotions. Some of the six problem gamblers noted their gambling is triggered by seeing linked jackpots at high levels; by certain keno promotions; by the lights, music, and atmosphere; and by just seeing and hearing the machines. It is widely recognised that the gambling environment, including lighting, colour, sound effects, and size of jackpots, may influence gambling behaviour (Griffiths & Parke, 2003), although the nature of any link between situational factors and problem gambling remains unclear (Perese et al., 2005).

Responsible gambling training and responsible gambling measures

It could be speculated that responsible gambling training of staff and measures such as signage and self-exclusion in venues would raise staff awareness of problem gambling, its indicators, its effects, and where to get help. Clearly, however, for these six people, these initiatives had had no lasting effect. Although the one back-of-house employee had received no training, the other employees reported that it did not prompt them to change their own behaviour, even though it might have initiated some passing self-reflection. Measures such as signage are also ineffective for these people. Although there is a paucity of research on the effectiveness of responsible gambling measures (Jackson, Thomas, & Ho, 2000), one survey of self-reported changes in gambling behaviour amongst patrons of clubs in Sydney, Australia, concluded that the measures cannot be considered as very effective for most problem or at-risk gamblers (Hing, 2003).

Other aspects of the workplace

Other aspects of the workplace were also identified amongst the six cases as influencing their gambling problems. These aspects comprised the opportunity to earn, access to gambling, and spending wages on gambling without leaving the workplace; lack of alternative employment opportunities away from gaming venues; the difficulties and embarrassment of self-excluding from gaming areas in the workplace; and drinking alcohol as a typical "wind-down" after work in venues where gambling is available. The link between alcohol consumption and gambling problems is well documented and is associated with increased risk taking during play (Perese et al., 2005).

Venue strategies to discourage problem gambling amongst staff

The interviewees were asked, "In your opinion, what are the most effective ways that gambling venues can help encourage responsible gambling and discourage problem gambling for their staff?"

All six employees endorsed a no gambling in the workplace policy. They felt this policy should apply to all staff and would reduce easy access to gambling and reduce temptations to gamble. Five employees commented about the need for more education and training for staff in responsible gambling. They felt that all staff should be trained and made more aware of the risks of developing gambling problems. The interviewees also advocated refresher courses and training to emphasise the effects of problem gambling and focus more on staff gambling. Two employees favoured measures to limit access to cash by staff by removing ATMs positioned near to gaming machines and not giving advances on pay. One suggestion was to further promote a culture of responsible gambling in the workplace, with managers to set a good example by not gambling in the workplace themselves. One person suggested promoting staff wellbeing by providing alternative social or leisure activities for staff, such as "area industry nights…that didn't involve gambling."

Limitations

A major limitation of this paper is that it relies on retrospective self-report by the participants. As Griffiths (2003) notes for this type of case study research, not only does the researcher have to accept participants' accounts as true, but self-reporting is also subject to the fallibility of human memory. Further, case studies such as these cannot be generalised. Nevertheless, it is hoped that these six accounts illuminate some experiences and risks that can be faced by gaming venue staff that influence their own gambling. In turn, an understanding of these experiences may allow further identification of appropriate interventions.

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Endnotes

[i] TAB is the acronym for Totalisator Agency Board. The Australian Gaming Council (2007) explains that totalisator wagering is where a player makes a unit wager (a unit being any multiple of 50 cents or $1, depending on the jurisdiction). Totalisator wagering is sometimes called parimutuel betting. The operator deducts a percentage of the total units wagered, and the rest is returned as dividends (winnings) to players in multiples of the unit wagered. This form of wagering is Australia wide and takes place at TAB outlets (other than those at race tracks). In Queensland, most TAB outlets are located in hotels, clubs, and casinos. Bets are most commonly taken on horse and greyhound races. Keno is a game where players wager that their chosen numbers match any of the 20 numbers randomly drawn from a group of 80 numbers via a computer system or a ball draw device. In Queensland, keno is linked to hotels, clubs, and casinos, enabling the operator to offer large jackpot prizes (Australian Gaming Council, 2005). A new keno game is run every few minutes by the centralised operator. Players can bet on each game and collect any winnings at the keno terminal in the linked venues, where there are specialised screens so that players can view the outcomes of each game. Players can bet on numerous games in advance and then wait for the results to be televised on these screens.

[ii] "Scratchie" refers to instant lottery, where a player scratches a coating off a ticket to identify if the ticket is a winner, often requiring three matching symbols. Prizes generally range from $2 to $100,000.

Student gambling, erroneous cognitions, and awareness of treatment in Scotland

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Abstract

Rates of probable pathological gambling in colleges and universities across Scotland were investigated with a nationally distributed sample consisting of students (*n* = 1,483) and members of staff (*n* = 492). Gambling-related erroneous cognitions (Gambling Beliefs Questionnaire [GBQ]) and gambling severity (South Oaks Gambling Screen [SOGS]) were measured, with additional questions enquiring about awareness of treatments available for gambling problems. Rates of past-year problem and probable pathological gambling for students were 4.0% and 3.9%, respectively. An exploratory factor analysis of the GBQ resulted in a 24-item five-factor model, with gambling severity (as indicated by SOGS scores), indices of increasing gambling involvement (gambling frequency and number of gambling activities), and male gender being positively correlated with higher levels of erroneous cognitions, suggesting erroneous cognitions may not be prominent for females with gambling problems. Less than a fifth of students were aware of where to go to receive help for gambling-related problems.

Keywords: student gambling, erroneous cognitions, treatment

Introduction

Shaffer, Hall, and Vander Bilt's (1999) meta-analysis revealed 16 North American and Canadian studies examining student gambling. The main problem encountered by Shaffer et al. (1999) involved the taxonomy used to classify gambling groups across studies, where participants with some degree of gambling problems were classified using terminology ranging from problem, at-risk, and in-transition to potential pathological gamblers, and those with some degree of pathology were referred to as probable pathological, pathological, or compulsive gamblers. The different criteria employed to assess gambling problems and the nomenclature used to classify gambling groups complicated the synthesis of existing estimates. In an attempt to resolve this issue, Shaffer et al. (1999) reclassified non-problem gamblers and non-gamblers as Level 1 gamblers, those considered to have a problem with gambling as Level 2 gamblers, and those considered to have some level of pathology as Level 3 gamblers. Following reclassification, the mean lifetime rate of Level 3 (or probable pathological) gambling for gamblers in the 14 student gambling studies that used the South Oaks Gambling Screen (SOGS) was found to be 5.0%, with an additional 7.0% being Level 2 (or problem) gamblers. A refinement of these estimates, employing three additional student gambling studies, has shown Level 3 gambling to have increased to 5.5% (Shaffer & Hall, 2001).

Although the extant literature concerning student gambling in America and Canada continues to grow (e.g., Adams, Sullivan, Horton, Menna, & Guilmette, 2007; Huang, Jacobs, Derevensky, Gupta, & Paskus, 2007), the rates of probable pathological gambling remain unclear. Shaffer et al. (1999) concede that reclassification of past student gambling studies involved subjective interpretation, which may bring into question the accuracy of the figures obtained, with Poulin (2002) considering Shaffer et al.'s multi-levelled classification scheme inappropriate for everyday and professional usage. The main problems that exist, however, with American and Canadian student gambling research are not related to Shaffer et al.'s (1999) attempt to integrate existing studies, but the limitations inherent in the studies themselves. Shaffer et al. (1999) describe how some of the earlier studies did not employ suitable gambling screens nor indicate the time frame of gambling problems (i.e., lifetime or past-year). More recent studies assessing student gambling are not without their problems, either; for example, by only incorporating males or students who gamble, the levels of problem and probable pathological gambling found are often disproportionately high and not generalisable to student populations (Clarke, 2003; Langewisch & Frisch, 1998; Neighbors, Lostutter, Cronce, & Larimer, 2002). The problem of small sample sizes is evident in many of the student gambling studies used in Shaffer et al.'s (1999) meta-analysis (e.g., Browne & Brown, 1993; Devlin & Peppard, 1996; Frank, 1990) and is highlighted by the relatively small combined sample size for the 16 studies (n = 8,918).

Unfortunately, the recruiting of insufficient numbers (Clarke, 2006), the reliance on assessing students from either single colleges or universities (Williams, Connolly, Wood, & Nowatzki, 2006) or employing only specific sub-groups of students such as student athletes (Huang et al., 2007; Rockey, Beason, & Gilbert, 2002), and the failure to employ gambling screens are issues that have not been remedied in subsequent student gambling studies (Clarke, 2003; Hira & Monson, 2000; LaBrie, Shaffer, LaPlante, & Wechsler, 2003; Skitch & Hodgins, 2005).

The previous concerns regarding the methodological limitations of student gambling studies from around the globe are trivial, however, when it is considered that such a population has never been examined in Britain and specifically in Scotland. When it is considered that almost 10% of the adult population of Scotland are students (full time or part time), then the absence of research into student gambling is mystifying. Given that student life is likely to be associated with an increase in risk-taking behaviour, whether it is alcohol, illicit drugs, risky sexual behaviour, or gambling (Winters, Bengston, Dorr, & Stinchfield, 1998), students would be expected to be a high-risk, high-priority group. Furthermore, Moore and Ohtsuka (1999) claim that because students struggle with issues of independence whilst being constrained by the fact that financial independence is unlikely, this in itself may constitute a risk factor for problem gambling.

A number of factors related to student gambling have been investigated, such as impulsivity (Holt, Green, & Myerson, 2003), depression (Clarke, 2006), suicide (Ladouceur, Dubé, & Bujold, 1994), alcohol and drug use (Lesieur et al., 1991; Winters et al., 1998), sensation seeking (Langewisch & Frisch, 1998), criminal activity (Ladouceur et al., 1994), and gambling motivation (Neighbors et al., 2002). Despite erroneous gambling-related cognitions receiving far more attention in recent times, they are rarely investigated with educational populations and as such merit investigation. There are a number of methods available to measure erroneous gambling-related cognitions, such as the "think-aloud" method (Gaboury & Ladouceur, 1989; Griffiths, 1994), interviews (Toneatto, Blitz-Miller, Calderwood, Dragonetti, & Tsanos, 1997), and screens for assessing erroneous cognitions.

Instruments available to investigate erroneous gambling-related cognitions include the Gambling Attitudes and Beliefs Scale (Breen & Zuckerman, 1999), the Gamblers' Beliefs Questionnaire (Steenbergh, Meyers, May, & Whelan, 2002), the Informational Biases Scale (Jefferson & Nicki, 2003), the Gambling Related Cognitions Scale (Raylu & Oei, 2004), the Drake Beliefs about Chance Inventory (Wood & Clapham, 2005), and the Gambling Beliefs Questionnaire (GBQ; Joukhador, MacCallum, & Blaszczynski, 2003). Unfortunately, these instruments are largely untested, have been developed using small samples, or have questions relating to only a limited range of erroneous beliefs or cognitions (see Moodie, 2007). The GBQ, however, appears to show promise, as it comprises questions relating to a wider range of cognitive distortions than the instruments previously mentioned. The GBQ has been employed with problem and social gamblers (Joukhador et al., 2003), although as the problem gambling group were all in treatment, this study may not be representative of pathological gamblers in the community (Winters & Kushner, 2003). However, in a study employing multiple assessments to examine the gambling-related cognitions of a small number of non-treatment-seeking fruit machine gamblers, Moodie (2007) found that both social and pathological gamblers considered the GBQ a more effective measure of assessing gambling-related thoughts than either the think-aloud method or an interview. As such, the GBQ would appear to be a useful instrument for assessing erroneous gambling-related cognitions in an educational setting.

The Gambling Act (2005) in Britain was fully implemented in September 2007, with the government claiming to bring gambling in Britain into the 21st century. The Gambling Act has been contested by those within the gambling field (Orford, 2005a) and has also encountered "a stormy reaction from an unusually broad political spectrum" (Room, 2005, p. 1226). This is hardly surprising considering that one of the intentions of the Act is to (supposedly) protect children from the dangers of gambling, while simultaneously making Britain the only country in the world to permit juveniles to continue gambling legally on category D fruit machines (electronic gaming machines [EGMs] with low stakes and low prizes). Juvenile gambling aside, the easing of restrictions on most forms of gambling is a cause for public concern, as there has never been a period in history when gambling has been more widely available and socially and culturally accepted. Despite the relaxation of the gambling laws, there appears to be a lack of treatment available for those with gambling problems (Orford, 2005b). The present study, conducted prior to the full implementation of the Gambling Act, provided the opportunity to assess the awareness of treatments available for gambling problems before the Act's official application.

The study was exploratory in nature, but had a number of aims and hypotheses:

1. The first aim was to establish a baseline rate for problem and probable pathological gambling for students in Scotland, and to rectify the problems inherent in many of the student gambling studies identified by Shaffer et al. (1999) by employing a large sample from colleges and universities across the whole of Scotland. The sample consisted of both university and college students and staff, with the rates of probable pathological gambling calculated separately for students and staff.

2. It was hypothesised that probable pathological gamblers would have significantly higher levels of gambling-related erroneous cognitions than would problem and non-problem gamblers, as measured by the GBQ (which is not suitable for non-gamblers).

3. The final aim was to investigate awareness of treatments available for gambling problems.

Methodology

Design and participants

A questionnaire-based design was employed across colleges and universities extending the length and breadth of Scotland. Of the 66 colleges and universities in Scotland, 45 were targeted for data collection on the basis of geographical distribution. The intention was to obtain a nationally distributed sample, with the 21 colleges or universities not contacted all being from major cities that were well represented. A total of 37 of the 45 colleges or universities approached agreed to participate in the research, giving a response rate of 82.2% with all colleges and universities returning questionnaires.

Over 2,000 participants were obtained (n = 2,056) from the colleges and universities approached, with the final sample being reduced to 1,975 after 81 questionnaires were eliminated, as they had been returned but not completed. Three-quarters of the final sample were college or university students (n = 1,483), with college or university staff (n = 492) making up the other quarter of the sample.

Members of staff were included in the sample to investigate differences between students and staff in terms of probable pathological gambling and awareness of treatments available for those with gambling problems. An additional reason for including members of staff was to provide as large a sample as possible, which was beneficial for factor analysing the GBQ, as large samples produce more accurate solutions (Costello & Osborne, 2005).

The participant response rate was based on the number of questionnaires distributed and the number returned by each college and university (40%), although this response rate is extremely conservative given that all colleges and universities were given an excess of questionnaires. The mean age of the sample was 23.7 years for students and 44.4 years for staff. There was a higher proportion of females (61%) than males (39%) in the sample. There are a greater number of females (52%) than males in Scotland, and an even greater number in higher education (54%; SCROL, 2004), although slightly fewer than obtained in this sample.

Materials

Gambling habits

Frequency of gambling in the past year was measured for 12 gambling activities, each activity being measured on a 4-point scale extending from never, less than monthly, monthly, to weekly. Respondents were also asked to identify their main form of gambling.

South Oaks Gambling Screen (SOGS). The SOGS (Lesieur & Blume, 1987), past-year as opposed to lifetime, was employed to assess current gambling problems. The SOGS is a widely used instrument that has been found to have satisfactory reliability and validity (Stinchfield, 2002), although it has been criticised for producing a number of false positives (Abbott & Volberg, 1996). Despite this, it is clear that there is currently no gold standard for measuring gambling problems (Collins & Barr, 2003; Gambino, 2005), and as the SOGS has been employed in the vast majority of previous student gambling studies (Shaffer et al., 1999), it was used for comparability.

Gambling Beliefs Questionnaire (GBQ). The second questionnaire employed was the revised 48-item (as opposed to the 65-item) version of the GBQ (Joukhador et al., 2003), kindly provided by Professor Blaszczynski, University of Sydney. The original 65-item GBQ assesses a number of cognitive distortions, irrational beliefs, and erroneous perceptions that fall into the following categories: personal skill and judgement (illusion of control), ability to influence outcomes (superstitious rituals and beliefs), selective recall and biased evaluation of outcomes, and erroneous perceptions regarding randomness and the independence of events. The 48-item GBQ remains largely untested, although it has been found to be a useful measure of assessing erroneous cognitions for non-treatment-seeking gamblers (Moodie, 2007). The 48 items on the GBQ are scored on a 5-point Likert scale, ranging from 0 (*not at all*) to 4 (*very much*). The overall score on the GBQ is calculated by summating the scores from the 48 items, with possible scores ranging from 0 to 192. The 48-item GBQ was used to investigate its potential value with a sample in higher education.

Treatment items

The author formulated seven questions concerning treatment: (1) Have you ever believed that you needed treatment for your gambling? (2) Would you know where to go for treatment for a gambling problem? (3) If you answered yes to question 2, where would you go? (4) Have you ever received treatment (outside of family and friends) for a gambling problem? (5) If you answered yes to question 4, where did you receive treatment for your problem? (6) Are you aware of any professional treatment in Scotland (e.g., psychologists, gambling counsellors) available for people with gambling problems? (7) Have you seen any advertisements, posters, awareness campaigns, and so forth, targeted specifically for people with gambling problems? All questions relating to treatment had yes or no responses except for the two open-ended questions (3 and 5) asking about where an individual would go, or has gone, to receive help for gambling-related problems.

Procedure

Ethical approval was obtained from the Psychology Department of Glasgow Caledonian University. The principals of colleges and universities were contacted by letter and subsequently by telephone, and asked if they would like to assist in a study relating to gambling in higher education. Those that agreed to participate were informed that the study required the distribution and collection of gambling questionnaires from a sample of their college or university, either students or staff. The exact method used for distribution of questionnaires varied across colleges and universities, depending on their preferred method of administration. Colleges and universities were given options as to how to distribute the questionnaires, such as by administering them in particular classes, seminars, workshops, tutorials, or lectures, or by positioning them at various appropriate places around the campus and providing a suitable place for return. Ultimately, it was left to each college and university to decide. Given that the questionnaire instructed individuals not to indicate their name for the sake of anonymity, and as each questionnaire had an accompanying envelope in which it was to be placed, either method ensured the privacy of the participant.

Results

Excluding the allocation to the gambling group and the items concerning treatment in which the results for both the student and staff sample are shown, all analyses are based exclusively on the student sample. The exception is the factor analysis of the GBQ in which the student and staff sample are combined to increase the sample size.

Allocation to the gambling group. The student sample was divided into one of the four gambling groups in accordance with past-year SOGS scores; 3.9% (n = 57) were probable pathological gamblers (5 or above), 4.0% (n = 59) were problem gamblers (3 or 4), 76.0% (n = 1,114) were non-problem gamblers (0-2), and 16.0% (n = 235) indicated that they were non-gamblers (0). The staff sample was also divided into four gambling groups, with 1.0% (n = 5) probable pathological gamblers (5 or above), 2.5% (n = 12) problem gamblers (3 or 4), 76.9% (n = 372) non-problem gamblers (0-2), and 19.6% (n = 95) who indicated that they were non-gamblers (0). Students were significantly more likely than staff to be problem or probable pathological gamblers, $\chi^2(3, N = 1{,}949) = 14.5$, $p < .005$.

Age, gender, and source of sample. Table 1 shows the number (and percentage) of students within each of the gambling groups by gender and age. It should be noted, as with all tables, that sample sizes may vary because of missing data, for example, regarding age or gender. Males had significantly higher levels of problem and probable pathological gambling than did females, $\chi^2(3, N = 1{,}420) = 95.8$, $p < .001$, with the ratio of problem and probable pathological gambling between males and females being 3.6:1 and 10.9:1, respectively. The student sample was divided into two groups, those aged less than 26 years (young students), and those aged 26 years and over (mature students). Young students had a tendency to be problem and probable pathological gamblers compared with mature students, although not significantly so, $\chi^2(3, N = 1{,}424) = 5.2$, $p = .2$.

Table 1
Gambling groups across gender and age

	Non-gambler (n = 235)	Non-problem gambler (n = 1,114)	Problem gambler (n = 59)	Probable pathological gambler (n = 57)
GENDER				
Males (n = 566)	57 (10.1%)	421 (74.4%)	39 (6.9%)	49 (8.7%)
Females (n = 854)	169 (19.8%)	662 (77.5%)	16 (1.9%)	7 (0.8%)
AGE GROUP				
16-25 (young students) (n = 1,063)	182 (17.1%)	795 (74.8%)	44 (4.1%)	42 (4.0%)
26 + over (mature students) (n = 361)	46 (12.7%)	290 (80.3%)	11 (3.0%)	14 (3.9%)

Frequency and number of gambling activities. Two-fifths (38.6%) of students gambled on a weekly basis, 13.5% monthly, 32.2% less than monthly, and 15.7% never, with probable pathological and problem gamblers significantly more likely than non-problem gamblers to gamble on a weekly basis, $\chi^2(2, N = 1{,}240) = 71.2$, $p < .001$. The mean number of activities gambled on was 3.2 ($SD = 2.6$), with almost half gambling on two or fewer activities (46.1%), a quarter on three or four activities (25.4%), and just over a quarter on five or above (27.5%). Probable pathological and problem gamblers gambled on an average of 6.7 and 6.2 gambling activities, respectively, which was significantly higher than non-problem gamblers who gambled on 3.5 gambling activities, as measured by ANOVA, $F(2, 1228) = 89.5$, $p < .001$, and confirmed by Tukey post hoc analysis ($p < .001$).

Gambling activities. The most popular gambling activities among students were the lottery (69.9%), fruit machines (49.7%), scratchcards (44.7%), games of skill (29.4%), racing – horses or dogs (28.1%), sports (25.6%), cards (24.2%), bingo (18.2%), casino (13.3%), dice games (8.0%), and stocks or shares (7.1%). Students were asked to identify their main form of gambling, with the lottery (30.9%) found to be the most popular, followed by fruit machines (9.2%), sports (6.9%), racing – horses or dogs (3.5%), and cards (3.5%). Almost a third (31.9%) indicated they had no main form of gambling, and a small number identified various other forms of gambling as their main form. Ten participants identified newer forms of gambling such as Internet gambling (n = 2) and fixed odds betting terminals (n = 8) as their main forms of gambling. Of these 10 individuals, 5 were probable pathological gamblers, 2 were problem gamblers, and 3 were non-problem gamblers. Technologically advanced forms of gambling aside, fruit machines were considered the main form of gambling for both problem and probable pathological gamblers, whereas the lottery was the main form of gambling for non-problem gamblers (see Table 2).

Table 2
Main forms of gambling across the three gambling groups

Main form of gambling (Rank)	Non-problem gamblers	Problem gamblers	Probable pathological gamblers
1.	Lottery (39.3%)	Fruit machines (22.0%)	Fruit machines (24.6%)
2.	Fruit machines (9.7%)	Lottery (16.9%)	Racing (15.8%)
3.	Sports betting (7.5%)	Sports betting (16.8%)	Sports betting (12.3%)

Factor analysis of GBQ. An exploratory factor analysis was conducted to eliminate any items that were not contributing to the scale. Kaiser's Meyer Olkin measure of sampling adequacy (0.94) was very high, and Bartlett's Test of Sphericity (χ^2 = 11026.2, *df* = 276, $p < .001$) was highly significant, indicating both that factor analysis would produce distinct and reliable factors (Field, 2000) and that a relationship exists between the variables. A principal component factor analysis using orthogonal (varimax) rotation explained over 60% (63.3%) of the variance of the GBQ, and yielded five interpretable factors with loadings (0.55 or above) that can be considered to be good (Comrey, 1973). Varimax rotation was used, as it maximises the dispersion of the loadings within factors so that loading a smaller number of variables highly onto each factor results in more interpretable clusters of factors (Field, 2000). Varimax is also the most common form of rotation used to factor analyse data from screens measuring gambling-related cognitions (Breen & Zuckerman, 1999; Jefferson & Nicki, 2003; Raylu & Oei, 2004; Wood & Clapham, 2005). Although past research suggests the use of varimax rotation was appropriate, a second factor analysis using oblique (direct oblimin) rotation was conducted to reveal any differences between the two methods. Oblique and varimax solutions often produce virtually identical results because the correlation between the factors is so small that it is negligible (Kline, 1994), and this was found to be the case, with direct oblimin rotation revealing an identical five-factored model.

Only factors with eigenvalues over 1.0 were included in the analysis and although rotation suggested that five factors were appropriate, a scree plot was consulted to confirm that this was the case. In addition, a parallel analysis, based on 48 variables (number of items on the GBQ) and 950 cases (number of participants completing the GBQ), was conducted to confirm the suitability of the existing factor structure (Steenbergh et al., 2002). A parallel analysis performs the same statistical analysis on a random uncorrelated sample of data, ensuring no non-essential factors are accepted (O'Connor, 2000). A parallel analysis informs how large an eigenvalue should be before the factor is accepted, revealing that only factors with eigenvalues exceeding 1.37 should be employed. There were five factors with eigenvalues over 1.37 and therefore the parallel analysis, like the scree plot, revealed that five factors should be retained.

The 48 items of the GBQ were reduced to 24 after items were eliminated for the following reasons: items with communalities below 0.5 (n = 18); hyperplane items, that is, those that did not load on any of the salient factors (n = 5); and a single item that had loaded upon the first two factors. The reasoning behind the exclusion of items with communalities below 0.5 was to produce factors that were strongly related. The internal consistency of a scale is the most widely accepted test of reliability, and the 24-item five-factored GBQ was found to have a high degree of internal reliability (0.89). The items comprising each factor were systematically removed and replaced to see how the exclusion of a particular factor, that is, the items that made up that factor, would affect the internal reliability of the scale. The internal reliability of the scale was lower than 0.89 if any of the first four factors were removed (0.86, 0.83. 0.83, 0.87), but higher if the fifth factor was excluded from the analysis (0.93); that is, when the three items that made up factor 5 were removed from the scale, the internal reliability increased. This suggests that a four-factor model may actually be more appropriate than a five-factor model, although this requires further investigation.

The five factors obtained from factor analysis were named in relation to the erroneous cognitions that they appeared to be assessing, these being coping, personal illusory control, general illusory control, winning expectancy, and rational beliefs. The five factors are shown in Table 3, along with the percentage of variance explained by each factor, the number of items in each factor, the Cronbach's alpha of each factor, the actual items comprising each factor, and their corresponding factor loadings and communalities. The first four factors all had a Cronbach's alpha above 0.75 and as such the internal reliability can be considered good (Coolican, 2004). The fifth factor, however, had a less satisfactory Cronbach's alpha (0.65).

Table 3
Description of factors obtained from GBQ

Factor	% of variance explained	Number of items in factor	α	Items included in factor	Loadings	Communalities
1-Coping	37.8	6	0.87	* Gambling is the only way I can cope with the problems in my life	0.75	0.64
				* Gambling is the only way I can enjoy myself	0.75	0.64
				* The only way I can pay my debts is by gambling	0.87	0.81
				* Gambling is the only way I can get enough money to buy the things I need	0.60	0.60
				* I've lost so much money I might as well keep going	0.70	0.67
				* I have the psychic ability to predict a winner	0.65	0.51
2-Personal illusory control	8.9	6	0.87	* I know I can win if I follow my strategies	0.70	0.70
				* I believe I can beat the system	0.68	0.64
				* The chances of winning improve after a near win	0.61	0.55
				* If I lose it's because something unforeseen has happened	0.69	0.64
				* I have more skills at gambling than the average person	0.67	0.62
				* I can win money back	0.63	0.61
3-General illusory control	7.3	6	0.86	* Skill is a big determinant of winning	0.65	0.57
				* The more often you gamble the more skilful you become	0.73	0.63
				* Winning at gambling is the result of good judgement	0.74	0.64
				* Identifying a pattern helps me predict a winner	0.64	0.56
				* When I've lost it's because I've made a hasty decision or didn't concentrate	0.61	0.55
				* I believe I can repeat previous big wins	0.63	0.65
4-Winning expectancy	4.8	3	0.76	* I feel that I'm due for a win	0.72	0.67
				* The big win is just around the corner	0.63	0.65
				* I don't want to miss out on a win	0.74	0.66
5-Rational beliefs	4.5	3	0.65	* I believe I can resist the opportunity to gamble	0.80	0.67
				* I do not expect to win	0.70	0.60
				* Winning is based on chance	0.80	0.71

GBQ = Gambling Beliefs Questionnaire

GBQ scores. A total of 1,043 students and members of staff attempted the GBQ, with 93 questionnaires eliminated because they were incomplete, that is, had one or more items missing. The decision to exclude questionnaires with any items missing was made for two reasons; first, even after excluding these 93 questionnaires, the remaining sample size was still large, and, second, the author could be sure that the results were not tainted by the inclusion of missing values. Of the 950 participants who completed the instrument, there were 836 non-problem gamblers, 60 problem gamblers, and 53 probable pathological gamblers, with one participant not completing the SOGS. Differences between the gambling groups on overall GBQ scores and each of the five factor scores were examined using ANOVA, and confirmed by Tukey post hoc tests ($p < .001$) unless otherwise stated. Probable pathological gamblers (38.7) had significantly higher scores on the 24-item GBQ than did problem (27.0) and non-problem gamblers (11.9), $F(2, 948) = 182.0$, $p < .001$ (see Table 4). The probable pathological gambling group had significantly higher scores on the first factor (coping), $F(2, 948) = 135.7$, $p < .001$; the second factor (personal illusory control), $F(2, 948) = 125.6$, $p < .001$; and the third factor (general illusory control), $F(2, 948) = 139.0$, $p < .001$, compared with the other gambling groups. The probable pathological gambling group had significantly higher scores on the fourth factor (winning expectancy), $F(2, 948) = 77.2$, $p < .001$, compared with the non-problem gambling group, but not compared with the problem gambling group. Similarly, the probable pathological gambling group had significantly higher scores on the fifth factor (rational beliefs), $F(2, 948) = 4.1$, $p < .01$, compared with the non-problem gambling group, but not compared with the problem gambling group, although this effect disappeared with post hoc analyses. This series of analyses highlights another problem with factor 5, which is that it is unable to discriminate between the gambling groups. Differences across gambling groups in terms of factor scores are shown in Table 4.

Table 4
*Mean scores (*SD *and range) on 24-item GBQ and five factors across gambling groups and gender*

	Non-problem gamblers (n = 836)	Problem gamblers (n = 60)	Probable pathological gamblers (n = 53)	Males (n = 453)	Females (n = 466)
GBQ score	11.9 (10.6, 0-60)	27.0 (12.6, 6-50)	38.7 (17.7, 6-88)	18.7 (14.5, 0-88)	9.7 (9.6, 0-76)
Factor 1	0.6 (2.2, 0-24)	2.4 (3.7, 0-13)	6.7 (6.2, 0-23)	1.6 (3.4, 0-23)	0.6 (2.4, 0-24)
Factor 2	2.7 (4.0, 0-24)	7.8 (5.3, 0-18)	10.9 (5.7, 0-24)	5.2 (5.2, 0-24)	1.8 (3.3, 0-20)
Factor 3	1.9 (3.6, 0-24)	6.5 (4.6, 0-17)	9.9 (5.9, 0-24)	4.0 (5.0, 0-24)	1.2 (2.8, 0-22)
Factor 4	1.5 (2.4, 0-12)	4.1 (3.2, 0-12)	5.0 (3.3, 0-12)	2.4 (2.9, 0-12)	1.2 (2.2, 0-12)
Factor 5	5.1 (3.9, 0-12)	6.2 (3.0, 0-12)	6.2 (2.6, 0-12)	5.5 (3.5, 0-12)	4.9 (4.0, 0-12)

GBQ = Gambling Beliefs Questionnaire

Gambling involvement and gender across the five factors. Although the 24-item GBQ appears to be both reliable and able to discriminate between gambling groups (with the exception of factor 5), bivariate correlations were conducted using indices of increased gambling involvement to confirm if this was the case (see Table 5). Significant positive correlations across all five factors were found in relation to SOGS scores, gambling frequency, and gambling participation, that is, the number of gambling activities participated in, with higher SOGS scores, more frequent gambling, and gambling on a greater number of activities being associated with higher scores for each factor. The only correlation that did not reach significance was the correlation between factor 5 and gambling frequency. Bivariate correlations for gender were run separately, with male gender significantly correlated with the 24-item GBQ score and all five factors. Therefore, despite slight concerns regarding factor 5, it appears that a five-factored model is a useful measure for discriminating between those with some degree of gambling problems and those without any problems, and also between gender.

Table 5
Correlations of 24-item GBQ and the five factors over SOGS score, gambling frequency, and number of gambling activities participated in

	SOGS score (n = 949)	Gambling frequency (n = 949)	Gambling participation (n = 949)	Gender (n = 919)
24-item GBQ	r = 0.58 (p < .001)	r = 0.25 (p < .001)	r = 0.44 (p < .001)	r = -0.34 (p < .001)
Factor 1	r = 0.51 (p < .001)	r = 0.16 (p < .001)	r = 0.24 (p < .001)	r = -0.16 (p < .001)
Factor 2	r = 0.52 (p < .001)	r = 0.22 (p < .001)	r = 0.42 (p < .001)	r = -0.36 (p < .001)
Factor 3	r = 0.52 (p < .001)	r = 0.25 (p < .001)	r = 0.41 (p < .001)	r = -0.33 (p < .001)
Factor 4	r = 0.42 (p < .001)	r = 0.26 (p < .001)	r = 0.33 (p < .001)	r = -0.23 (p < .001)
Factor 5	r = 0.07 (p < .05)	r = 0.01 (*ns*)	r = 0.11 (p < .001)	r = -0.08 (p < .05)

GBQ = Gambling Beliefs Questionnaire; SOGS = South Oaks Gambling Screen

Knowledge of treatments available for gambling problems. A total of 987 students and members of staff answered the final section of the questionnaire regarding treatment, with 2.4% (n = 24) indicating that they believed that they had needed treatment for their gambling problems, and 1.1% (n = 11) that they had received treatment (outside of family and friends) for their gambling problems. Only 22.7% (n = 224) of those completing the treatment items indicated that they knew where to go for treatment, with the majority (62.0%) stating Gamblers Anonymous, followed by a general practitioner (15.1%), a gambling helpline (4.4%), a counselling service (3.9%), a rehabilitation centre (3.4%), the Citizens Advice Bureau (2.9%), and obtaining information from the Internet (2.9%). Other places mentioned included the Samaritans, the Yellow Pages, and psychologists or social workers. Not a single participant indicated seeking help within the college or university. Less than a quarter of the sample, 23.6% (n = 233), were aware of professional treatment in Scotland being available for gambling problems, and only 26.2% (n = 259) indicated they had seen advertisements, posters, or awareness campaigns targeted specifically for those with gambling problems. Table 6 shows that staff were significantly more likely to know where to go for gambling problems and have a greater awareness of professional treatment for gambling problems than were students, with approximately one in three members of staff being aware of treatment available for gambling problems, compared with only one in five students.

Table 6
Treatment items across staff and students

	Staff (n = 238)	Students (n = 749)
Have you ever believed you needed treatment for a gambling problem?	3 (1.3%)	21 (2.8%)
Would you know where to go for treatment for a gambling problem? **	87 (36.6%)	137 (18.3%)
Have you ever received treatment (outside of family and friends) for a gambling problem?	2 (0.8%)	9 (1.2%)
Are you aware of any professional treatment available for people with gambling problems? *	72 (30.3%)	161 (21.5%)
Have you seen any advertisements, posters, awareness campaigns, etc., targeted specifically for people with gambling problems?	65 (27.3%)	194 (25.9%)

* Significantly higher for staff than for students as measured by Pearson chi-square ($p < .01$).
** Significantly higher for staff than for students as measured by Pearson chi-square ($p < .001$).

Discussion

The present study found the rates of student probable pathological and problem gambling to be 3.9% and 4.0%, respectively. Shaffer et al. (1999) reviewed 14 studies investigating student gambling, finding the mean lifetime rate of Level 3 (probable pathological) gambling to be 5.0% (range 3.6% to 6.6%), with an additional 7.0% being Level 2 (problem) gambling (range 4.5% to 9.5%). Inspection of these figures suggests that problematic student gambling in the present research is at the lower end of the scale. The figures, however, are based on past-year SOGS scores as opposed to lifetime SOGS scores, with lifetime SOGS scores thought to inflate the figures by two or three times (Volberg, 1996; Volberg, Abbott, Rönnberg, & Munck, 2001). The revised SOGS (including lifetime and past-year items) was not employed because although lifetime rates are useful for comparisons between past studies, no past British student gambling studies exist. Instead, the present study was intended to provide a baseline measure of current student gambling problems before the new Gambling Act was fully implemented.

Although the assessment of past-year gambling problems makes it difficult to make comparisons with Shaffer et al.'s (1999) findings, there are a number of studies in the United States and Canada that have also assessed past-year probable pathological gambling using the SOGS. For example, Ladouceur et al. (1994) recruited a sample (n = 1,471) of students from three colleges in Quebec, finding that 2.8% were past-year probable pathological gamblers. Similarly, Winters et al. (1998) found 2.9% of students, recruited from two Minnesota universities (n = 1,361), to be past-year probable pathological gamblers. Adams et al. (2007) found even lower rates (0.9%) in a student sample (n = 1,579) obtained from four universities in Ontario. Finally, Huang et al. (2007) found that only 0.8% of their large nationally distributed student athlete sample (n = 17,076) were classified as past-year pathological gamblers, although this low rate may be partly attributable to the use of a DSM-IV-based screen as opposed to the SOGS, with the DSM-IV criteria appearing to be more stringent. Therefore, whether comparing the findings of the second study to Shaffer et al.'s meta-analysis or the studies previously mentioned, it is clear that students in Scotland appear to be at high risk of developing gambling problems.

The availability hypothesis suggests that increased availability of gambling opportunities results in a simultaneous increase in gambling behaviour and gambling problems, receiving support in Australia, America, and Great Britain (Australian Productivity Commission, 1999; Grun & McKeigue, 2000; National Research Council, 1999; Shepherd, Ghodse, & London, 1998). It would therefore appear that with the relaxation of the gambling laws in Britain, an increase in problem and pathological gambling in Britain is inevitable, with Abbott (2005) envisaging a three- to four-fold increase in problem gambling in the short to medium term. This is likely given that one of the consequences of gambling liberalisation in Britain appears to be an increase in the availability of particular forms of gambling such as EGMs, which have been found to increase the likelihood of users developing gambling problems (Breen & Zimmerman, 2002). Problem and probable pathological gamblers in the present study were more likely to identify EGMs as their main form of gambling compared with any other form of gambling. Regardless of how accessible gambling becomes, Abbott anticipates a levelling out and eventual decline of problem gambling with the aid of public awareness, treatment facilities, and industry and public health measures. The measures mentioned by Abbott, however, are exactly what are lacking in Britain (Orford, 2005b), with treatment facilities for gambling problems in Scotland almost non-existent.

Not surprisingly, it was found that university or college staff had a greater awareness than students of where to go to receive help for gambling problems, and of professional treatments available for gambling problems. However, as only a small percentage of staff were identified as problem (2.5%) or probable pathological gamblers (1.0%), it is not this particular group that is in the greatest need of assistance. Worthy of noting is that not a single participant indicated that he or she would seek help within the various educational establishments that participated in the research, suggesting that no higher educational institution in Scotland provides such a service. Further highlighting the dearth of treatments available across Scotland, for both students and members of staff who were aware of where to go for gambling-related problems, treatment was by and large restricted to Gamblers Anonymous. As Gamblers Anonymous and outpatient therapy have been considered by pathological gamblers to be equally ineffective (Grant & Kim, 2002), having particularly high levels of drop-outs and low rates of abstinence and active involvement (Stewart & Brown, 1988), this therapy is unlikely to provide an optimal opportunity for resolving such problems. The second most commonly cited source of help was from general practitioners, although Schofield, Mummery, Wang, and Dickson (2004) believe general practitioners may not be the most appropriate health practitioners to treat individuals with gambling problems, as they may not realise that the medical model is not suitable for most cases of pathological gambling.

In relation to erroneous cognitions, the GBQ was developed using pathological gamblers in treatment (Joukhador et al., 2003) and as such it was beneficial to examine the GBQ with probable pathological gamblers in higher education. Joukhador et al. (2003) believed larger scale studies allowing for factor analysis of the GBQ were required, and in the present study, a factor analysis of the GBQ revealed there to be five factors: coping, personal illusory control, general illusory control, winning expectancy, and rational beliefs. The 24-item five-factored GBQ appeared to have reasonable psychometric properties, as it was able to discriminate effectively between the gambling groups and also between indices of increased gambling involvement such as gambling frequency and gambling participation, that is, the number of gambling activities participated in. As hypothesised, probable pathological gamblers had significantly higher GBQ scores than did problem and non-problem gamblers, and the probable pathological and problem gambling groups had significantly higher scores on each of these five factors, with the exception being factor 5. The main concern about the five-factored model concerns the fifth factor, which was named rational beliefs. Unlike the first four factors, the reliability of the fifth factor was quite low, although still acceptable (alpha = 0.65). In addition, the fifth factor failed to discriminate between the gambling groups and gambling frequency. On the basis of these findings, exclusion of the fifth factor would appear to be an option, although a parallel analysis and scree plot did indicate that five factors would be most appropriate, and future research is required to confirm if this is the case.

Although males and females have not been found to respond preferentially to any of the various treatments available for gambling problems, Grant and Kim (2002) believe that cognitive behavioural therapy may be useful for males. Given that males had significantly higher scores than did females on all five GBQ factors, as has been found with four of the five factors on the Gambling Related Cognitions Scale (Raylu & Oei, 2004), the study provides support for this assertion, even taking into account that males were more likely than females to have a gambling problem. The evidence from this study is supported by research with youth populations, where young males have been found to be significantly more likely than females to view gambling as profitable (Moodie & Finnigan, 2006). These findings are important in relation to cognitive theory (Ladouceur & Walker, 1996), as they suggest that erroneous cognitions may not be salient for females in the development and maintenance of gambling problems. These findings also have significant implications for the treatment of pathological gamblers, suggesting that treatment needs differ depending upon gender. This is especially so given that treatment interventions aimed at cognitive correction of randomness and chance are prominent in the gambling literature (Ladouceur, Sylvain, Letarte, Giroux, & Jacques, 1998; Ladouceur et al., 2001; Ladouceur et al., 2003).

Limitations

The sample size was satisfactory for a country with a relatively small population such as Scotland (5 million), although the number of students and staff obtained from three-quarters of Scotland's colleges and universities was disappointing. The low response rates for students and staff may have impacted upon the findings, and bring into question whether or not the sample was representative of students and members of staff in Scotland. Furthermore, a second interview phase involving students and staff from a random selection of colleges would have been beneficial. Nevertheless, the study does provide the first estimates of probable pathological gambling among a nationally distributed student sample in Scotland.

Conclusions

The main aim of the study was to provide a baseline measure of problem and probable pathological gambling across colleges and universities in Scotland, which was necessitated given the absence of such research in Britain. The fact that the study was conducted just before the very liberalising Gambling Act comes into force is beneficial, as it enables comparisons to be drawn with similar future British research, which may help in assessing the impact that the easing of restrictions on gambling has in Britain. Almost 1 in 12 students were identified as problem or probable pathological gamblers, and gambling is clearly a common activity for those in higher education. Erroneous cognitions (as measured by the GBQ) were also investigated and were positively correlated with measures of gambling severity (SOGS scores), indices of increasing gambling involvement (gambling frequency and number of gambling activities participated in), and male gender. The 24-item GBQ appears to be a useful instrument for measuring erroneous cognitions and beliefs, although future research using this instrument is required. The study highlights the need to enhance awareness about gambling-related problems within colleges and universities, and to investigate the policies and training programmes of colleges and universities (e.g., examining the existence of in-service training for faculty and staff would be an interesting area of future research). The findings also point to a need for an increase in treatment resources in the community, and for a heightened public awareness of these resources.

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Random-ratio schedules of reinforcement: The role of early wins and unreinforced trials

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Abstract

The distribution of rewards in both variable-ratio and random-ratio schedules is examined with specific reference to gambling behaviour. In particular, it is the number of early wins and unreinforced trials that is suggested to be of importance in these schedules, rather than the often-reported average frequency of wins. Gaming machine data are provided to demonstrate the importance of early wins and unreinforced trials. Additionally, the implication of these distributional properties for betting strategies and the gambler's fallacy is discussed. Finally, the role of early wins and unreinforced trials is considered for gambling research that utilises simulated gaming machines and research that compares concurrent schedules of reinforcement.
Key words: schedules of reinforcement, random ratio, gambling behaviour

Introduction

Turner and Horbay (2004) provided a comprehensive review of the underlying mechanisms governing electronic gaming machine (EGM) play. Their review addressed many of the misconceptions about the design of gaming machines, and although it was intended for counsellors, prevention workers in the field of problem gambling, and the general public, it is also of use to those studying gambling behaviours in experimental settings with simulated slot machines (e.g., Dixon, MacLin, & Daugherty, 2006; Weatherly & Brandt, 2004; Weatherly, Sauter, & King, 2004; Zlomke & Dixon, 2006).

The current paper extends some of the issues raised by Turner and Horbay (2004) with specific reference to random-ratio (RR) schedules and the role of early wins and unreinforced trials. First, the difference between variable-ratio (VR) and RR schedules of reinforcement is discussed in terms of the number of early wins and the number of unreinforced trials that each schedule provides. It is argued that these properties of gaming machine reinforcement have implications for the gambler's fallacy, schedule-induced behaviours, and research using simulated gaming machines.

Second, the notion of early wins and unreinforced trials in RR schedules receives greater scrutiny in this paper. Just as Turner and Horbay (2004) examined the misconceptions among gamblers regarding the law of averages and win/loss expectations, this paper examines the misconception among researchers regarding average reinforcement rate and experimental control. Gaming machine data are provided to illustrate the importance of the distribution of early wins and unreinforced trials.

Variable ratios, random ratios, and the gambler's fallacy

A number of early gambling researchers referred to gaming machines as operating under a variable ratio of reinforcement (Cornish, 1978), and, even today, the slot machine is typically provided as an example of a VR schedule to undergraduate psychology students (e.g., Weiten, 2007). It has since been documented that gaming machines operate under a more complex RR schedule of reinforcement (Crossman, 1983; Hurlburt, Knapp, & Knowles, 1980; Turner & Horbay, 2004), utilising pseudo-random number generators; Turner and Horbay (2004) debunked many of the myths associated with randomness in slot machine play. However, the difference between a VR and an RR schedule of reinforcement has not been illuminated previously with reference to gambling behaviour.

A variable ratio of 2.5 indicates that, on average, every 2.5 responses will be rewarded. When this type of VR schedule is designed, it is done with a determined number of reinforced responses, for example, 1, 2, 3, and 4, arranged in a variable order to form the VR sequence. The VR schedule comprises a number of different sized fixed-ratio schedules (Crossman, 1983). Behaviourally, this means that the maximum number of responses before reinforcement will be four, the minimum one. If the VR schedule is activated repeatedly and randomly, this will result in an indefinitely long sequence of digits (not digits of an indefinite size), which may serve as the run lengths on a VR schedule with an average run length of approximately 2.5. With enough trials, around one quarter of all runs should be of length 1, one quarter of length 2, one quarter of length 3, and one quarter of length 4.

With a random ratio of 2.5, the sequence will contain run lengths with a mean of 2.5, but the run lengths themselves can range from 1 to an indefinitely large number. Thus, whilst both types can be described by an average sequence of run lengths, the distribution of run lengths for these two will be greatly different. In gaming machine play, this difference has implications for both cognitive (the gambler's fallacy) and learning (schedules of reinforcement) explanations of persistent gaming behaviour.

Under the VR schedule outlined above, the probability of a reinforcer on the next response increases with every unrewarded response (Crossman, 1983). That is, the first response has a 0.25 chance of being rewarded, and if no reward is provided, then the next response has a 0.33 chance of being rewarded, the next has a 0.50 chance, and the last has a 1.00 chance. Thus, the maximum number of unreinforced responses is three, and if this sequence occurs then there is a 100% probability that the next response will be rewarded. This is because a VR schedule is designed with a predetermined number of reinforced response lengths: in this example, they are 1, 2, 3, and 4. With adequate exposure to these conditions the gaming machine player could rationally expect a win after a loss and develop a reasonable strategy of increasing the stake size to increase the impending reward. The development of this type of strategy is considered the basis for the principle of the gambler's fallacy (Ayton & Fischer, 2004; Ladouceur, 2004) when applied to RR schedules; however, the probabilities indicate that it is not a fallacy under a VR schedule.

Furthermore, after a response has been rewarded, the probability of the next response (recommencement of play) being rewarded is 0.25 Therefore, the probability of it not being rewarded is 0.75. Thus, if the experience of play has been that after a win another win occurs only 25% of the time, or that no win occurs 75% of the time, the behaviour of the player is likely to reflect this. The player may adjust the size of their bet based on the probability of a win or loss.

Under an RR schedule, each response-outcome is independent of the previous one because there is a constant probability of payoff for each trial (Crossman, 1983; Hurlburt et al., 1980). All EGMs operate under an RR schedule, and the size of this probability is determined in a more complex manner by a random number generator (see Turner & Horbay, 2004, for a more detailed explanation of the modern EGM configuration). EGMs are also very volatile, and the response-outcome relationship is influenced by secondary machine characteristics such as the multiplier potential, the pay structure, "free" games, near misses, and linked jackpots (Griffiths, 1993). These can all promote irrational beliefs about winning, and, under an RR schedule, the gambler's fallacy does exist, because the distribution of wins for an RR schedule differs from that of a VR schedule.

It is worth noting that some studies have assessed the rate of responding and postreinforcement pauses on EGMs in relation to wins and losses (Delfabbro & Winefield, 1999; Dickerson, Hinchy, Legg England, Fabre, & Cunningham, 1992; Schreiber & Dixon, 2001) and have generally found a pattern of play on slot machines that is very similar to that found on VR schedules.

The only published study comparing human gaming behaviour under both a VR and an RR schedule is Hurlburt et al. (1980). Their study involved 20 undergraduate students playing a computer-simulated game in a laboratory setting and gambling bogus money. Their dependent variables were schedule preference, measured by the number of bets made, and strategy employment, measured by the amount staked per gamble (with increasing stake size indicating the player believed a win was imminent). The aim of the Hurlburt et al. study was to determine if participants preferred a VR schedule to an RR schedule and whether participants employed a betting strategy on a VR schedule but not an RR schedule. The results suggested no behavioural differences between the schedules, although the support for the null hypothesis may be explained by poor ecological validity and statistical power problems. The study utilised an unrealistic teletype simulation for the slot machine (Dixon et al., 2006) with a small number of trials, and the power of the statistical test chosen was adequate to detect very large effect sizes only.

Hurlburt et al. (1980) noted other explanations for the support of the null hypothesis. They suggested that the manner in which the participants were introduced to the schedules might have played a critical role, as "[s]haping is apparently more likely than verbal instructions to lead to differential responding" (p. 638). Thus, the behavioural significance of the distributional difference between the variable ratio and the random ratio may become more apparent over a greater number of trials, as learning of the distributional properties of the VR schedule may take some time. Other work on schedules has also suggested that exposure levels may explain sensitivity to schedules (Weatherly & Brandt, 2006).

There is still uncertainty regarding the behavioural differences between a VR and an RR schedule. Empirically, this could have an impact on the use of computer-simulated gaming devices based on VR schedules or where the schedule is unknown. However, a computerised slot machine has been devised by MacLin, Dixon, & Hayes (1999) which operates under an RR schedule (Zlomke & Dixon, 2006) and allows researchers to manipulate a number of key variables. Several published studies have since utilised this freely available software (Dixon et al., 2006; Schreiber & Dixon, 2001; Weatherly et al., 2004; Weatherly & Brandt, 2004; Zlomke & Dixon, 2006) to test cognitive and learning explanations of gambling behaviour. However, researchers using actual slots or computer-simulated versions need to be aware of the distributional properties of RR schedules in order to ensure control across participants and machines. In particular, it is argued below that the important consideration is, again, the distribution of early wins and unreinforced trials.

Early wins and unreinforced trials

Another problem with the Hurlburt et al. (1980) study was that the difference in the distribution of reinforcement between the VR and RR schedules was not illustrated. Under a VR schedule, with sufficient trials, the distribution of reinforcement should be graphically represented as a straight line. This reflects the fact that the frequency of wins occurring after one response is the same as the frequency of wins occurring after two, three, or four responses. However, under an RR schedule, the distribution of reinforcement is very different. With a random ratio of 2.5 a win may occur after 100 responses (which is impossible under a variable ratio of 2.5), but this skews the average rate to a higher figure (the effect an outlier has on the mean). Therefore, under an RR schedule, the majority of reinforcers occur more frequently, which compensates for the effect of any outlier and provides the lower mean.

This is shown in the figures below. Figure 1 shows the distribution of wins under a VR schedule (variable ratio 2.5) and Figure 2 displays the results of 856 bets placed by the author on a real slot machine in a gaming venue, providing an RR schedule (random ratio 2.56).

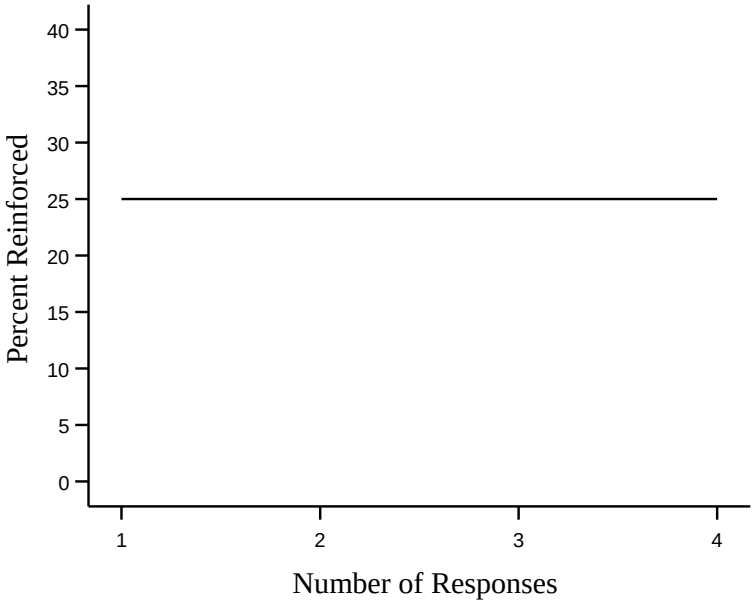

Figure 1. Distribution of reinforcers under a VR schedule (variable ratio 2.5).

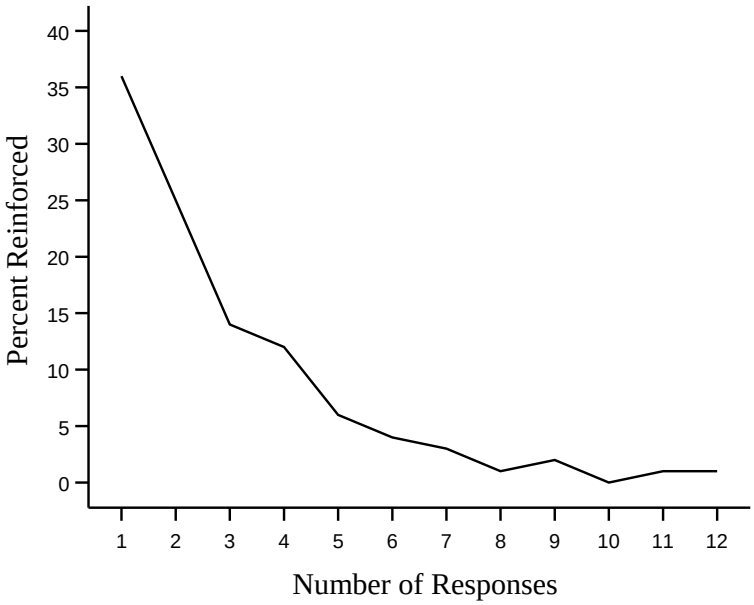

Figure 2. Distribution of reinforcers under an RR schedule (random ratio 2.56).

Figures 1 and 2 illustrate the difference in reinforcer rates between a VR schedule and an RR schedule. Both have a similar mean reinforcement ratio, but the distribution of reinforcers is considerably different. It is also evident that the RR schedule possesses a mode of reinforcement, which is more frequent than the mean reinforcement rate. Figure 2 shows that over 35% of first button presses are reinforced, compared to only 25% for the VR schedule. Also, the number of unreinforced trials is vastly different between the two distributions. Just how this difference is reflected in gambling behaviour is unclear, but it is possible that regular players become sensitive to the number of early wins and/or the number of unreinforced trials and operate according to these values. Certainly, both of these would appear easier to detect in gaming machine play than the average reinforcement rate.

If players are aware of these characteristics, then it is these characteristics that must be reported when testing the effect of schedules on playing behaviour. The study by Hurlburt et al. (1980) controlled for the average rate of reinforcement and reported that participants failed to discriminate. This may be because the numbers of early wins and unreinforced trials were similar in their examples. Similarly, other studies comparing schedules also only report the average (Dixon et al., 2006; Schreiber & Dixon, 2001) and assume control has been achieved if the two distributions have the same average. Just as Turner and Horbay (2004) illustrated how the average reinforcement figure can mislead gamblers about the nature of the reinforcement distribution, the average reinforcement figure can also mislead the researcher into believing that control has been achieved.

When testing concurrent schedules, it may be that the number of early wins and unreinforced trials needs to be similar to properly ensure control across the schedules. Zlomke and Dixon (2006) provided an excellent example of the experimental rigour needed when testing concurrent schedules. Using the simulated game from MacLin et al. (1999), they compared machines that differed only in colour by controlling for possible variations in reinforcement density. This resulted in an identical sequence of trial outcomes, thereby ensuring control.

With different machines having different RR distributions in gaming venues, these characteristics may affect machine selection and machine persistence. It is possible that players have a preference for schedules based on the number of early wins and the number of unreinforced trials. There is some support that small frequent wins are preferred by players (Dixon et al., 2006; Griffiths, 1999) and also support for the general concept that the placement of wins in a gambling cycle can influence gambling behaviour such as persistence (Weatherly et al., 2004).

Delfabbro and Winefield (2000) and Walker (1992) linked persistent gaming machine play to irrational thoughts generated by beliefs about gaming machine reinforcement schedules. Sharpe (2002) extended upon this point and cited Vitaro, Arsenault, and Tremblay's (1999) finding that impulsive individuals tend to prefer immediate reinforcement. She concluded that the placement of wins early in the gaming experience (i.e., a big win when first gambling) and the patterns of wins and losses within gaming sessions "may have etiological significance in the development of problematic levels of gambling in vulnerable individuals" (p. 8). She developed a comprehensive model of problem gambling that included win/loss patterns and cognitive biases.

Another effect of RR schedules on the way gaming machines are played is bet size. On North American and Australian slot machines, the number of lines played is determined by the player with each line being purchased, and this has the tradeoff of increasing the frequency of reinforcement. Figures 3 and 4 show the distribution of reinforcers when playing 10 lines and when playing 20 lines on the same slot machine. The same number of bets was placed on each (n = 428).

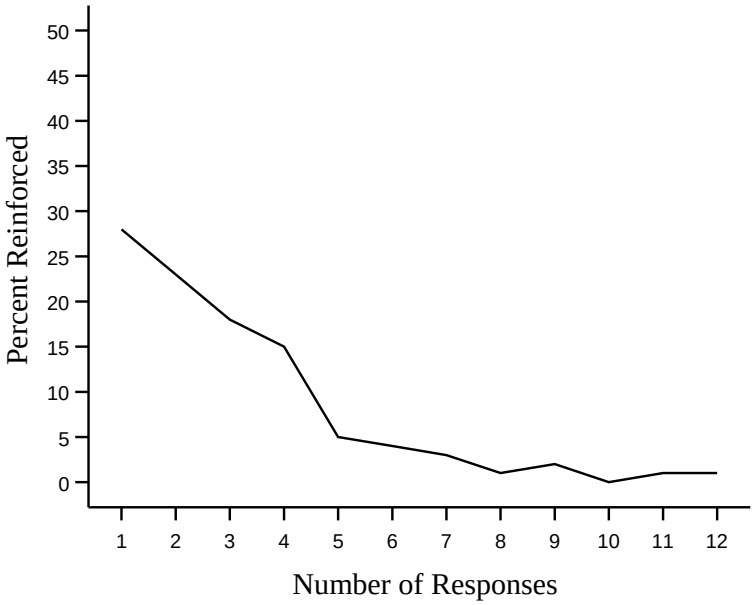

Figure 3. Distribution of reinforcers when playing 10 pay lines (random ratio 3.0).

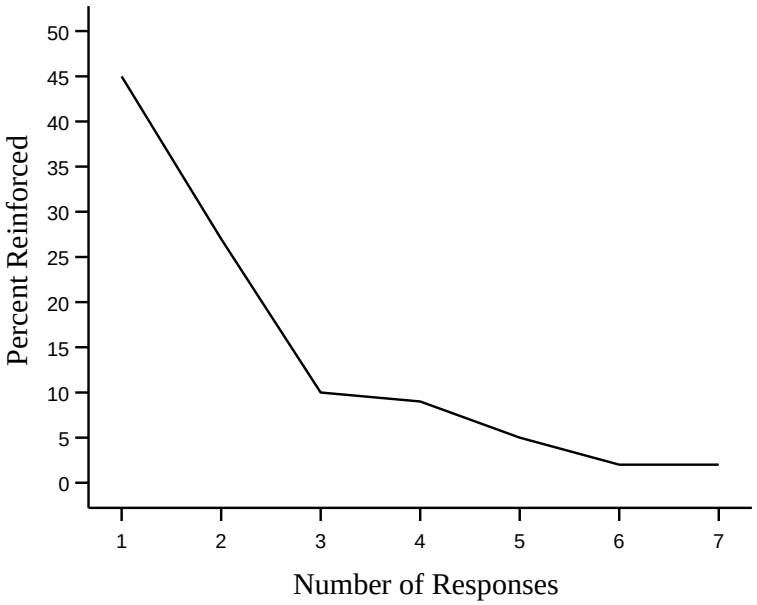

Figure 4. Distribution of reinforcers when playing 20 pay lines (random ratio 2.2).

Figures 3 and 4 clearly show that increasing the number of pay lines from 10 to 20 increases the mean reinforcer rate from 1 in 3.00 to 1 in 2.20. However, of greater interest is the fact that the run of unreinforced trials was longer when playing 10 lines (maximum = 12) compared to 20 lines (maximum = 7). The most frequently occurring number of reinforced trials was one under both conditions, but the percentage of trials rewarded after one response was higher when playing 20 lines (45%) compared to 10 lines (28%). Perhaps it is this increase in the number of early wins, and the decrease in the length of unreinforced trials, that influences player betting strategies and the decision to continue gambling. By purchasing more lines to play on a slot machine, a player can increase the frequency of reinforcement and reduce the number of unreinforced trials. This could promote the player's belief that they can control the betting outcomes (e.g., "If I buy more lines I get more wins and fewer losses"), which is true regarding the frequency of (small) wins, but actually leads to an increase in the rate of net loss. Empirical investigation of this is needed with regard to the illusion of control and possible chasing behaviour due to increased rates of losses. It is worth noting that increasing the number of lines played increases the amount staked and that a machine's maximum stake limit has been shown as a characteristic that influences time and money spent gambling, along with other behaviours such as cigarette and alcohol consumption (Sharpe, Walker, Coughlan, Enersen, & Blaszczynski, 2005). Hence, early wins and unreinforced trials are perhaps the components of the RR schedule that need to be manipulated and reported in studies of the effect of schedules of reinforcement on gaming machine behaviour.

Conclusion

The current paper provides an important extension to Turner and Horbay's (2004) review of EGM design. This extension is of most benefit to gaming machine researchers because there is a need for awareness of the differences between RR and VR schedules. This has methodological implications for research and is important for the appropriate evaluation of research in this field. In particular, gaming machine researchers should be aware of the difference in the distribution of reinforcement between the two types of schedules. This will have an impact on the use of simulated gaming devices in research and the generalisation of behaviour under a VR schedule to RR schedules. Moreover, there is a need for research to report the frequency of early wins and the length of unreinforced trials in the RR distribution, rather than assume that two distributions are identical based on the average reinforcement rate. To date, the theoretical and behavioural significance of early wins and unreinforced trials has not been examined within the gaming machine context; however, there does appear to be some relationship with the gambler's fallacy, the illusion of control, and the role that reinforcement has on persistent gaming behaviour.

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A cognitive-behavioral analysis of Gamblers Anonymous

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Abstract

Cognitive-behavioral therapy is often placed in opposition to twelve-step approaches in the treatment of addictions. While the former is accompanied by considerable empirical support and tend to be relatively brief and symptom-focused, twelve-step approaches are often more widely available, accessible without cost and can provide long-term, ongoing support. Very few studies have directly compared these approaches in the treatment of problem gambling. The purpose of this article is to briefly examine the twelve steps of Gamblers Anonymous (GA) and show their essential comparability to concepts and strategies commonly found in cognitive-behavioral therapy (CBT). The striking similarities in intention and process between these two approaches are shown for each of the 12 steps despite their differences in their conceptual and linguistic framework. The result of this analysis is to encourage integration of these complementary approaches based on the common ingredients of therapeutic change rather than on ideologically-based differences.

Key Words: problem gambling, Gamblers Anonymous, cognitive-behavioral therapy

The Complementary Nature of CBT and GA

Although rarely studied empirically (Petry, 2005), the twelve-step program (TSP) defining the recovery process within Gamblers Anonymous (GA) is frequently juxtaposed against more scientifically-evaluated approaches such as cognitive-behavior therapy (CBT). While the twelve-step approach may differ from CBT in many ways (i.e., the relevance of scientific research, acceptable treatment goals, the centrality of spirituality; see McCrady, 1994 for an excellent comparative analysis of Alcoholics Anonymous and behavior therapy) these differences may mask important core similarities between these two approaches to recovery from pathological gambling. Although the efficacy of GA remains generally unsubstantiated, this self-help modality frequently remains the only treatment option available in many communities, is free of cost, and continues to be a central component of most residential treatment programs and an important element of aftercare. Correlational data have shown that GA affiliation is associated with better gambling outcomes even if they are engaged in concurrent professional treatment (Hodgins, Peden, & Cassidy, 2002; Petry, Ammerman et al., 2006). The available evidence, in fact, suggests that these approaches may be of relatively equal effectiveness (Project MATCH research group, 1996; Wells, Peterson, Gainey, Hawkins, & Catalano, 1994; Ouimette, Finney & Moos, 1997) and likely share common treatment elements (McCrady, 1994).

An emphasis on the complementary nature of these two approaches may serve to integrate them more effectively in the treatment of problem gambling. The purpose of this article is to briefly highlight the essential comparability and compatibility of TSP and CBT in the treatment of problem gambling by demonstrating how each step of the GA program resembles conceptualizations and therapeutic interventions commonly advocated in CBT for problem gambling. Following each Step, a translation into terminology and concepts more familiar with CBT is presented.

Step 1 (GA)
We admitted we were powerless over gambling- that our lives had become unmanageable.

Step 1 (CBT)
We realized that our belief that we could control or predict gambling outcomes was illusory and that uncritical belief in this illusion had led to severe gambling-related problems in all of the important areas of our lives.

Step 1 describes the insight, awareness or realization that gambling-related negative consequences have outweighed the positive consequences to the point where gambling is no longer justifiable or tolerable. CBT, as a common treatment of addictions, often attempts to strengthen the commitment to change by explicitly exploring the positive and negative consequences of engaging in, and stopping, the addictive behavior (Sobell & Sobell, 1993). The awareness that gambling has become very harmful to one's core values (or conditioned reinforcements) and must be interrupted leads to a cognitive re-appraisal of gambling, which can be gradual ('I think I better do something about my gambling') or sudden ('That's it. I'm not gambling anymore'). Step 1 additionally indicates that the gambler has disconfirmed the core cognitive distortion common to problem gamblers, the illusion of control, eliminating the self-deceptions, attributional biases, rationalizations and other cognitive distortions that might otherwise sustain continued gambling (Langer, 1983; Gaboury & Ladouceur, 1989; Toneatto, Blitz-Miller, Calderwood, Dragonetti, & Tsanos, 1997). It is an act of radical self-honesty or veridical self-perception without which further therapeutic progress would be difficult.

Step 1 also acknowledges the ambivalence inherent in any addictive behavior and how the resolution of such ambivalence is the necessary and critical first step in the recovery process (Miller & Rollnick, 1991). Although influenced by multiple negative consequences (interpersonal problems, financial problems, health problems), a decision to stop gambling, for it to endure, must ultimately remain an individual one and not primarily a reaction to external influences (e.g., to satisfy a spouse). Finally, Step 1 acknowledges that willpower is insufficient to make real change. Individual efforts need to be accompanied by other sources of support (GA group, family, friends) and transcendental values (e.g., desire for happiness, spiritual transformation, highest self), a realization that directly leads to Step 2.

Step 2 (GA)
Came to believe that a Power greater than ourselves could restore us to a normal way of thinking and living.

Step 2 (CBT)
We realized that values and motivations of greatest meaning or reward value to me, more important than those governing our gambling behavior, would guide us to healthier thought and behavior.

Step 3 (GA)
Made a decision to turn our will and our lives over to the care of this Power of our own understanding.

Step 3 (CBT)
We decided to behave according to the higher-order values and motivations of greatest meaning to me.

Steps 2 and 3 acknowledge the importance of transcendence in recovery, in becoming responsive and available to influences that go beyond solely the immediate needs of the self. The concept of transcendence is often discussed within CBT in the context of values, motivations, or high-order reinforcers that govern behavior. An individual who has experienced the cognitive change associated with Step 1 is often motivated by the clear awareness that continued gambling poses a serious threat to a fundamental value, reinforcement or reward held by the individual. Unfortunately, it is often the case that a gambler's core values must be threatened before they develop the resolve to avoid further damage by addressing the gambling behaviour. Interventions often attempt to raise awareness of the impact of continued problem gambling on these higher-order values. While the transcendental value may certainly be the spiritual one often associated with the Twelve-Step Programs, many other values may form the basis of such transcendence. For example, family, self-esteem, health, honesty, financial health, belief in an actualized or higher self, the search for peace or tranquility are just a few of the important goals which may have become seriously threatened by continued gambling and which contribute to the cognitive re-appraisal signified in Step 1. By becoming aware of the transcendental aspect of recovery, that one is making this change in order to preserve or regain relationships, meanings, and values which are of high significance than the gambling behavior, the gambler remains committed to change and less susceptible or vulnerable to proximal gambling-related triggers and other stimuli which might otherwise interfere with the recovery process. Note that transcendent values of a lower order or in some way inauthentic (e.g., to appease others) may not be effective motivators in high-risk situations. For many gamblers, their first awareness of the transcendental aspect of recovery (their Higher Power) is their attachment to their recovery group.

Since the commitment exemplified in Step 1 often arises within the context of an intense psychological crisis induced by the accumulation of gambling-related (often financial) consequences, it can be short-lived once the crisis has faded unless the individual has a valid motivation to continue to address the gambling problem. Remaining aware of such transcendental values may also guard the newly recovered gambler against acting impulsively to satisfy desires for sensation, excitement, fun, or money. Individuals who lack any meaningful source of transcendence (e.g., lack of spiritual beliefs, no family, dysfunctional self-esteem) may have particular difficulty in remaining committed to recovery and stabilizing the cognitive appraisal described in Step 1, especially under the demands of treatment. For example, a gambler who has no meaningful interpersonal relationships may find it difficult to maintain their recovery if such relationships serve as their primary transcendental value.

Steps 2 and 3 advance the work described in Step 1 by making the individual aware of the positive and prosocial core cognitive schemas which inform the individuals' view of their self, other people and their environment (Beck, Wright, Newman, & Liese, 1993). Identifying these core schemas is critical to developing a firm motivational basis to tolerate the often-difficult personal work that the recovery process may entail. Since it is possible that the recovering gambler may not always be aware of which values and core schemas are actually healthy or may even focus on values that are dysfunctional in the long-term (e.g., to appease others) it is very helpful to engage the support of individuals who may provide the necessary feedback (e.g., GA group, therapist) to ensure that this process leads to the identification of suitable values and meanings.

An important aspect of these two steps is the willingness to accept new ways of thinking or believing. The individual acknowledges that their habitual way of thinking and perceiving may not be most helpful and that more adaptive approaches must be adopted. One aspect to this transformation is the willingness to accept help from source outside oneself, a key element in the successful application of the next 2 steps.

Step 4 (GA)
Made a searching and fearless moral and financial inventory of ourselves.

Step 4 (CBT)
We thoroughly assessed the negative consequences of our gambling addiction on all aspects of our functioning, especially our relationships with others, to ourselves, and our finances.

Step 5 (GA)
Admitted to ourselves and to another human being the exact nature of our wrongs.
Step 5 (CBT)

We accepted the results of this self-assessment and engaged in a collaborative relationship with a therapist with whom we could share and discuss these findings and receive appropriate and accurate feedback and support.

Steps 4 and 5 reflect the importance of a thorough assessment of the effects of gambling on various life domains. Such an assessment not only serves as a potent source of motivation (e.g., guarding against relapse, minimizing the seriousness of the crisis, identifying the negative consequences of gambling) but also specifies the exact areas of functioning that will require behavioral change (e.g., improved interpersonal relationships, money management). This important awareness-raising exercise serves to identify and prioritize the changes that may need to be made. CBT excels in the assessment of the behaviors, interpersonal relationships, and cognitions necessary to properly conceptualize a clinical problem and developing an adequate treatment plan (Beck, 1995; Sobell & Sobell, 1993). The assessment of the impact of gambling upon oneself and others, both significant (e.g., family, friends) and less significant (e.g., employers, bank managers, utilities) others, critically informs the treatment plan within CBT or the recovery process within TSP. This cognitive and behavioral assessment requires both honesty to oneself and others (i.e., the information gathered must be reliable and valid) and a genuine desire (i.e., the motivation should be intrinsic rather than extrinsic) to extend the insights identified in Steps 1 through 3. This process may sometimes be aided by significant others who can contribute to the assessment.

Step 5 also explicitly indicates the need to share with others the analysis of the consequences of problem gambling. The role of the therapist within CBT, and of other GA members within TSP, is paramount insofar as these relationships may be one of the few remaining human interactions for the recovering gambler where there is acceptance, empathy, support, and understanding. If the client is attending group therapy, other members can also act as the recipients of this shared communication. It is within this safe communication that the recovering gambler is encouraged to become fully aware of the consequences of gambling assessed in Step 4 without fear of censure, attack, criticism or ridicule. The presence of a significant other in the recovery process (e.g., therapist, Higher Power, GA members, GA sponsor) with whom this communication takes place also acts as a source of feedback, clarification, elaboration, and support but can also prevent self-deception by pointing out inconsistencies, maladaptive thinking or erroneous conclusions. Thus, the therapist or GA member also serves as a mirror to provide the gambler veridical feedback regarding the impact of problem gambling on the individual's life. Such communication also prevents the gambler from excessive self-condemnation or self-derogatory attitudes that may impede recovery and assist the maintenance of the correct attitude that will facilitate recovery. Thus, discussing the results of this assessment process produces a more complete and accurate understanding of where the gambler will need to focus to help maintain their recovery.

Finally, Steps 4 and 5 encourage the gambler to develop humility, a rational understanding of one's limits, powers and intelligence, the lack of which may have fuelled the cognitive context of the problematic gambling behavior and also prevented the awareness of the consequences that have subsequently accumulated. The test for humility arrives when one must share the results of the self-assessment with someone else. While it is easy at times to admit to oneself the negative impact of gambling, it takes an additional measure of motivation, self-understanding and seriousness to then verbalize these matters with another. It is in this attitudinal transformation from self-interested arrogance and denial to admission, surrender, and humility wherein the power of these two steps lie.

Step 6 (GA)
Were entirely ready to have these defects of character removed.

Step 6 (CBT)
We were motivated and prepared to modify our habitual and automatic maladaptive interpersonal behaviors.

Step 7 (GA)
Humbly asked God (of our understanding) to remove our shortcomings.

Step 7 (CBT)
We worked in collaboration with a therapist whom we acknowledge has the expertise to guide us in modifying inadequate and dysfunctional patterns of behavior.

Steps 6 and 7 acknowledge that addressing the results of the self-assessment identified in Steps 4 and 5 require an ongoing readiness and continued effort to change and that such change may frequently require the help of others (e.g., God, therapist, family). Even problem gamblers who prefer to recover without the assistance of therapy, a reliance on a transcendental value will still be at work (e.g., health, higher self, being the best one can be, happiness). An important function of steps 6 and 7 is the fostering of an attitude of openness to the help and guidance (within TSP) or treatment (within CBT), which is a necessary component in resolving the problems facing the gambler. Step 6 also signifies the acceptance of responsibility for the gambling-related problems by identifying specific interpersonal behaviors and habitual and automatic ways of thinking, feeling and behaving (i.e., character defects) that have contributed to the development of the gambling problem (e.g., anger, arrogance, egotism, intolerance). Steps 6 and 7 begin the important work of re-establishing healthy relationships with others that have likely been severely strained or damaged as a result of gambling. However, it is acknowledged that it is not usually possible to re-establish these relationships without also modifying one's own interpersonal behavior and identifying and correcting character defects that may have contributed to the development of the gambling problem.

Step 7, within the context of CBT, requires the establishment of a good working alliance, an important mediator of therapeutic change, between therapist and client (Beck & Emery, 1985; Miller & Rollnick, 1991). Treatment may frequently include the involvement of significant others, or the provision of therapy within a group format, a standard approach within TSP. The inclusion of humility in Step 7 signifies the individual's willingness to accept support (i.e., from higher Power, therapist, GA sponsor), which would not be possible if the individual believed that such support was unnecessary or impossible. Excessive pride, social isolation, or the damaging effects of intense emotions such as depression, despair or anger can present obstacles to benefiting from others who may genuinely care for the gambler, which may include friends, family, the therapist or spiritual forces. The acknowledgement that help may be needed (Step 7) does not signify the surrender of responsibility within the TSP (any more than receiving treatment from a therapist or physician is a surrender of responsibility within formal psychological or medical treatment systems) but a reflection of the individuals' preparedness to address the gambling problem and improve their behavioral, cognitive, and emotional functioning by taking advantage of the expertise and experienced support available to them.

Finally, Steps 6 and 7 acknowledge that stopping the gambling problem is not equivalent to recovery. Without addressing the highly-learned, dysfunctional and habitual interpersonal and intrapersonal behaviors associated with the gambling problem, the risk of relapse remains high. Thus, these two steps are the beginning of the relapse prevention process as well.

Step 8 (GA)

Made a list of all persons we had harmed and became willing to make amends to them all.

Step 8 (CBT)

We became aware of the negative impact of our gambling on others and were prepared to take responsibility for improving these relationships. [H5]

Step 9 (GA)

Made direct amends to such people wherever possible except when to do so would injure them or others.

Step 9 (CBT)

Where possible and free of negative consequences to others, we made concrete changes in our relationships with individuals who may have been harmed by our gambling.

Steps 8 and 9 continue the work of Steps 6 and 7 on the repair and re-establishment of interpersonal relationships damaged through gambling, an important outcome of a successful recovery. Steps 8 and 9 are the behavioral or active component of this aspect of recovery whereas Steps 6 and 7 represent the cognitive or intellectual analysis of the gambler's interpersonal behavior. This process includes the empathic identification and awareness of feelings significant others may have about the individual's gambling, (e.g., anger, depression, rejection) as well as the gambler's own depression, despair, guilt, shame. Successful completion of these steps may require the development of empathic skills, learning to sacrifice self-needs, modifying maladaptive interpersonal behaviors, and the adoption of more effective coping skills to deal with the gambling triggers. It often requires putting the needs of those who have been damaged by the gambling behavior ahead of the gamblers'. In some cases, social skills training, assertiveness training and other interpersonal skill development may be necessary. When relationships have been irretrievably ruptured (e.g., separation, divorce, bankruptcy) the necessity of mourning the loss of the relationship and processing the emotional after-effects is critical.

The insights made in Steps 1 through 3, the awareness and assessment of the consequences of gambling achieved in Steps 4 and 5, and the readiness to change expressed in Steps 6 and 7, culminate in Steps 8 and 9 in the difficult work of actually modifying one's relationship with others begins. Since many problem gamblers have character pathology (Blaszczynski, & Steel, 1998; Rosenthal, 1986), this work may require considerable time, guidance and input from the therapist, other GA members, GA sponsor and other patients (if group treatment is the modality) since such maladaptive behaviors are often highly automatized and resistant to modification without the assistance of others. Depending on the gambler's intrapersonal strengths, resources and willingness, this phase of recovery can be prolonged. Within CBT this may necessitate participation in a long-term group or treatment specifically designed for individuals with character pathology. The successful result of this process is the development of a healthy social support network which becomes available to help the former gambler cope with urges, temptations or any other stimuli associated with gambling. The development of healthier, authentic interpersonal relationships also forms an important component of an alternative lifestyle incompatible with gambling and protection against relapse. Perhaps the most significant implication of these two steps is the resumption of non-manipulative relationships between the recovering gambler and significant others which is modeled in the relationship between the gambler and the therapist or GA sponsor / member.

Step 10 (GA)
Continued to take personal inventory and when we were wrong promptly admitted it.

Step 10 (CBT)
We continued to self-monitor our thoughts and behavior and immediately corrected maladaptive beliefs and behaviors that we become aware of.

Step 11 (GA)
Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for the knowledge of His will for us and the power to carry that out.

Step 11 (CBT)
We remained aware of, and endeavored to think and behave as consistently as possible with, our highest motivations and values.

Steps 10 and 11 stress the importance of ongoing self-awareness and self-monitoring, reflection, and self-analysis in order to minimize the influence of cognitive distortions, erroneous perceptions, conditioned responses, or emotional reactions on long-term recovery. Step 10 is comparable to relapse prevention common in the CBT of addictive behaviors (Dimeff & Marlatt, 2000). Psychological vigilance is as important in ensuring a stable long-term recovery as the behavioral changes described in the preceding steps. Consistent ongoing cognitive assessment makes available to memory the consequences associated with the decision to initially stop gambling and hinders the fading of memory that may weaken the commitment to recovery (Miller & Brown, 1991). Similar techniques are common to TSP. Step 10 also suggests that regular self-monitoring behavior (both overt and covert) is a potent means of rapidly becoming aware when any aspect of our behavior is a potential risk factor for relapse and should thus elicit immediate remediation or correction (e.g., contemplating a visit to Las Vegas, indulging anger).

Step 11 further stresses that recovery should be guided by the most positive and healthiest motivations defined in earlier Steps. For example, a recovering gambler who has committed themselves to developing honest and authentic relationships with people will not only develop an excellent means of avoiding a relapse to gambling but will experience benefits in others areas of their life which will further sustain recovery. Step 11 thus appeals to the need for the individual to strengthen the healthiest and most adaptive aspects of their functioning. To adhere to these higher values requires specific actions that are consistent with the value and thus a powerful bulwark against the influence of harmful influences on behavior.

Step 12 (GA)
Having made an effort to practice these principles in all our affairs, we tried to carry this message to other compulsive gamblers.

Step 12 (CBT)
Once we were certain that the cognitive and behavioral changes we had made were stable, we acted as a role model for other problem gamblers.

Step 12 is the final outcome of a successful therapy insofar of recovery as the recovered gambler is now in a position to also actually help others with gambling or other problems, whether formally (as counselors) or informally (as role models). It represents the mastery of dysfunctional behavior and attitudes and their transformation into prosocial and effective interpersonal and intrapersonal functioning. Only through repeated practice and rehearsal of the adaptive ways of thinking, feeling and behaving and continuous self-assessment to ensure that any threats to recovery are rapidly addressed can the changes that have been made become a well-learned, permanent and resilient part of one's day-to-day functioning. This Step also exposes the former gambler to powerful social reinforcements that can further strengthen and maintain long-term recovery from problem gambling. As a role model, the recovered gambler continues to strengthen their own recovery through continual rehearsal of functional living as well as becoming a potent source of reinforcement for other gamblers in recovery (whether in a therapy or GA group). This Step also stresses the importance of integrating the changes that one has made during the recovery process into all areas of functioning and to be on guard against any aspects of the self that remains vulnerable to the temptations and dangers of gambling and that may serve as a portal for it's reoccurrence.

Summary

As this analysis has demonstrated, the goals, processes, and outcomes of both the TSP and CBT with respect to pathological gambling are highly similar, comparable and complementary. Consequently, there would appear to be few obstacles in combining elements of both approaches in helping the gambler (McCrady, 1994). Perceived differences between TSP and CBT, such as the adherence to an abstinence goal, the role of spirituality or the causes of addiction, are less central to the change processes common to both approaches. The use of the group approach to treatment favored by the TSP appears to be consistent with the growing literature of the effectiveness of this modality in CBT. While some of the concepts employed in TSP appear alien to practitioners of CBT, they reflect different traditions rather than underlying different concepts. For example, higher Power corresponds to highest values or motivational variables, powerless over gambling corresponds to insight that control over gambling outcomes is an illusory belief, turning our lives over to the higher Power corresponds to increasing the influence of higher values and ideals in the control of behavior, and so on. Since clients often do not have ideological preferences when seeking treatment but are interested in receiving the most effective treatment, it is important that practitioners of CBT consider the potential contribution of twelve-step approaches to assist their clients (especially in the long-term).

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Why Swedish people play online poker and factors that can increase or decrease trust in poker Web sites: A qualitative investigation

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Abstract

Three face-to-face focus groups that included 24 online poker players were conducted in Stockholm to investigate their motivations for playing online poker and issues relating to their trust of poker Web sites. Casual players played because they liked the convenience, the ease of learning, the low stake size, the relief from boredom, and the social interactions. “Professional” players played to win money and utilised several features of the online game for psychological tactics. They also tended to play several tables at once.

Factors that affected how much a player would trust an online poker Web site included the size and reputation of the operator, the speed with which winnings were paid out, the clarity of the Web site design, the technical reliability of the service, and the accessibility and effectiveness of the customer service. Responsible gaming measures also increased levels of trust by demonstrating company integrity and by reducing anxiety about winning from other players.

The findings indicate that providing a safe online environment with effective responsible gaming measures may be much more than just a moral and regulatory requirement. Players in this study suggested that such features are sometimes necessary in order to achieve an enjoyable gaming experience. Consequently, responsible gaming initiatives and good business practice do not have to be mutually exclusive. Indeed, in this particular scenario, they might even be considered mutually dependent.

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Keywords: responsible gaming, trust, online poker, motivations to gamble

Introduction

Over the last few years, there has been a worldwide explosion in the participation and the popularity of online poker (particularly games such as *No Limit Texas Hold 'em*). Possible precipitating factors for this trend might include the increasing number of celebrities endorsing and playing poker; poker being shown via television (both terrestrial and cable channels) and the Internet; players learning to play for free; players playing for low stakes (as low as one cent); and individuals having 24-hour access and playing at any time, on any day via the Internet (Griffiths, Parke, Wood, & Parke, 2006; Wood, Parke, & Griffiths, 2007). Furthermore, online poker provides excellent financial value for the gambler. There is no casino house edge or bookmakers' mark-up on odds. Players have the potential to win because there is an element of skill in making their bets, and they are able to compete directly with and against other gamblers instead of gambling on a pre-programmed slot machine or making a bet on a roulette wheel with fixed odds (Griffiths, 2005; Griffiths et al., 2006).

However, there is currently a paucity of published empirical studies that have examined online gambling from the perspective of the player, although there are papers on the transferable skills in poker (Parke, Griffiths, & Parke, 2005) and advice for clinicians (Griffiths & Parke, 2004). Wood, Williams, and Lawton (2007), in a largely quantitative study of online gamblers in general, found that the reasons given for online play related to the relative convenience and comfort of playing online, an aversion to the environment and clientele at land-based venues, and a preference for the particular structural characteristics of online games. In relation to online poker playing, as far as the authors are aware, there have only been two published studies that have examined motivations for playing, attitudes towards online poker, and related concerns. Wood, Parke et al. (2007) examined online poker playing in the United Kingdom by using a sample of 422 student online poker players. The main motivations for taking part included relaxation, excitement, winning money while socialising, escaping problems, relieving boredom, developing skills, and feeling lucky. More players reported that online poker was mainly a game of skill (38%) than mainly a game of chance (32%), or that it was equally skill and chance based (30%).

An interesting finding was that some players "gender swapped" whilst playing online. More female players (20% of females) than male players (12%) reported swapping gender when playing. Typical reasons that female players gave as to why they did this were that they believed males would not take them seriously if they knew they were playing against a woman. Gender swapping also gave a female player a greater sense of security as a lone woman in a predominantly male arena. Males agreed that females were not taken as seriously as males, but believed that pretending to be female would give males a strategic psychological advantage. Different male players reported that the advantage arose for one of two reasons. One suggested reason was that males believed that other male players were less aggressive in their play towards female players. The other reason given by some males was that they believed that other male players felt that they could intimidate female players, and so the males posing as females could lure those males into a false sense of security, thus potentially winning more money.

The Global Online Gambler Survey (Parke et al., 2007) conducted by eCOGRA (eCommerce and Online Gaming Regulation and Assurance) collected data from 10,865 participants world-wide who reported that they had gambled at Internet casino sites, Internet poker sites, or both within the 3 months prior to the research. The survey focused on demographic variables, information on behaviour and attitudes (basic play, casino and poker play), player protection and satisfaction, responsible gambling, and positive and negative aspects of Internet gambling. In addition to the survey, a series of focus groups were conducted in the United Kingdom, the United States, Canada, Sweden, and Germany.

The majority of the results from the study were aggregated and so were not presented according to country. However, two findings that were reported were that Swedish online poker players reported the highest average monthly financial outcomes of all countries examined, followed by Germany, and then by New Zealand. The other geographical finding reported was that there were big differences between the North American players and the European players in terms of their attitudes and beliefs about operators engaging in unfair practices. North American players were more likely to report the belief that "pokerbots" existed online, which were operated by the sites themselves. The report speculates that differences in these beliefs may be explained by the general uncertainty regarding regulation and legal issues in the United States and Canada. The report suggested that more players may be concerned about operator legitimacy if these commercial operators are seen to be operating in an illegal or quasi-legal industry.

In a similar finding to that of Wood, Parke et al. (2007), Parke et al. (2007) found that around 12% of players pretended to be a different gender when playing online. Those who always swapped genders when playing poker reported having less profitable play than did any other type of player. Parke et al. (2007) concluded that the players in their study may have been less successful as a consequence of over-estimating the advantage of playing poker as a different gender.

The Global Online Gambler Survey found overall support from both online casino and online poker players for the presence of responsible gaming features, with the majority of players in favour of self-imposed spending limits (70%), self-imposed time limits (51%), self-exclusion (58%), regular financial statements (75%), and self-assessment tests (62%). Players in the focus groups were also more in favour of self-imposed measures and general information than they were of mandatory responsible gaming measures. Some participants in the focus groups were sceptical of the motives of operators utilising responsible gaming practices, suggesting a conflict of interest. However, other participants suggested that the presence of responsible gaming practices allowed them to trust the gaming operator more. They suggested that they would rather play with a company that had a responsible gaming policy than with a company that did not. The greatest area of concern overall related to technical issues such as being disconnected from the game or malfunctioning software. Furthermore, 87% of the players reported that they preferred to play on the "biggest named" sites, as they believed that cheating was less likely.

To date, there has been only one empirical published study that has specifically focused on issues of trust in relation to online gambling. Shelat and Egger (2002) conducted a brief survey of 31 online casino players, focusing on those factors that increased or decreased their level of trust when visiting a gambling Web site. The authors found that the biggest influence came from the *informational content* of the site. Potential players wanted clear, easy-to-find information about who owned the Web site, what the policies were, and how the staff managed the site. After that, players reported that *relationship management* was the next most important factor in building trust. This meant that it was important that players could easily contact the company, that they were taken seriously, that they were paid their winnings quickly, and that the company fulfilled their promises. Following that, *interface properties* were the next most important factor, meaning that the Web site should be easy to follow, quick to load, and contain accurate information. Finally, *pre-interactional filters* referred to the prior experiences of players on similar casino Web sites. Not surprisingly, bad experiences reduced players' overall (initial) trust of subsequent gambling-related Web sites. However, whilst these are interesting findings, we should be cautious about their generalisability, as they are based on a small sample of online casino gamblers and may not be representative of online gamblers in general or of online poker players specifically.

Studies of Web sites in general have found that specific design features play a critical role in influencing the perceived trustworthiness of a site, including the ease of navigation (Cheskin-Sapient, 1999), the clarity in financial transactions (Nielsen, Molich, Snyder, & Farrell, 2000), the extent to which the Web site has a professional look and feel (Belanger, Hiller, & Smith, 2002; Kim & Stoel, 2004), and the appropriate use of visual design elements (Kim & Moon, 1998). Mixing advertisements and content will diminish trust (Jenkins, Corritore, & Wiedenbeck, 2003), as will poor Web site maintenance (Nielsen et al., 2000). Promoting honesty, a lack of bias, and shared values with the user, as well as providing accurate and comprehensive information, have all been shown to increase trustworthiness (Fogg et al., 2001).

Given the current lack of qualitative research available for understanding online poker playing, the present study set out to investigate in more detail the motivations of Swedish online poker players, the factors that increased or decreased their trust of the Web sites that they play on, and player attitudes towards responsible gaming initiatives. Previous research (Parke et al., 2007) noted that many online poker players welcomed the addition of voluntary responsible gaming measures on a poker Web site. Examining the utility of responsible gaming initiatives, other than to directly help players avoid developing problems, is beneficial as it can show where initiatives may have added value for the gaming operator beyond the operator's basic moral and regulatory obligations. Arguably, initiatives that have mutual benefits in this way demonstrate how a genuine concern for player well-being should be central to the policies of any online gaming operator.

Method

Participants

Twenty-four online poker players took part in the study in response to an advertisement placed in a local Swedish newspaper in Stockholm from which 38 affirmative responses were received. Sixteen participants were male and eight were female. They ranged in age from 18 to 60, with the average age being 32 years. Participants were selected as a quasi-opportunity sample with all the female respondents selected and the males selected to represent as broad a demographic as possible from the available responses.

Design and procedure

The aim of the study was to examine Swedish poker players' attitudes towards and perceptions of online poker playing, as well as to discuss issues such as trust and responsible gaming. Three focus groups were conducted in Stockholm in November 2006. Participants took part in one of the sessions held at 12 p.m., 2 p.m., and 4 p.m. in a private room below a popular city centre café. All focus groups were conducted in person by the first author of this article. Each focus group session was recorded in English on tape and was later transcribed verbatim for the purposes of analysis. All of the participants spoke English well and, where occasional words proved difficult to translate, the focus group participants helped each other to translate them. A translator was also on hand to help facilitate the conversation but in practice was rarely needed. Sweden is a country where English is taught at school from an early age and it is a widely spoken language. Each participant was given 400 SEK as compensation for their time and for any travelling expenses incurred. Each session lasted around 90 minutes. Transcripts were analysed by using thematic analysis. In the first stage of the thematic analysis, the researchers separately read the comments twice to become familiar with the data and then searched for the main themes that emerged from the responses to each of the four questions. After the first stage of analysis, the authors discussed the themes with each other before re-reading the transcripts, paying particular attention to the overall fit of the preliminary themes. The responses were then re-read by both authors to see if they contained any relevant information further to the provisional themes; the themes were then given their final analytical form and definition. Quoted comments from participants have been selected to represent the breadth and depth of the themes and are reported verbatim. Discussions focussed on the following areas:

Motivations to play
- Positive and negative aspects of online poker playing in Sweden
- Most important factors when playing
- Perception of online poker Web sites

Experience of playing online
- Use of chat facilities
- Tactics
- Multi-table play
- Disputes
- Gender swapping

Trust
- Factors that increase or decrease trust overall
- Perception of the integrity of online poker Web sites
- Perception of cheating

Responsible gaming
- Attitudes towards responsible gaming features
- Whose responsibility is it?

Perception of Swedish online poker players
- How do Swedish poker players view themselves?
- How do other nationalities view Swedish poker players?
-

Results

Casual players' motivations

There were big differences in the motivations and styles of playing that were used to define players as either casual or professional. Casual players were defined as those who reported playing online poker because it was easy to learn for a beginner, they enjoyed wagering with small amounts of money, they liked being able to do other things at the same time, and the excitement and socialising during online play was appealing.

Easy to learn: Several players suggested that it was daunting to play in a real casino, particularly when they were beginners. The ability to lurk and observe other people playing allowed them to gain experience in how the game worked before they joined in. The relative anonymity allowed the online players to feel less inhibited in taking part in a game.

Group A:	- If you go to casino, they will see that you are just a beginner.
Interviewer:	- Somebody who just started?
Group A:	- Yeah, exactly. Um, and then so I think that it makes it a lot easier (online) for people who are not sure how they are supposed to play.
Interviewer:	- So, it kind of gives you a chance to practice?
Group A:	- Exactly, and you can be anonymous, so it's much easier.

Low stake size: Similarly, the fact that real casinos were perceived to have high minimum stake sizes was off-putting for casual players. In comparison, a player could take part in an online poker game for a relatively small amount of money, and that money could last for a long time. Therefore, these players viewed online poker as a value-for-money leisure activity:

Group B:	- I think an important thing is that you can play for any amount of money which you can't really do when you play live. You can play in a tournament for entertainment for a dollar or 5 dollars, or free, well not free but you can play for whatever amount you want.
Interviewer:	- Yeah, it's true I guess the minimum stakes in the casinos tend to be relatively high.
Group B:	- Especially when it comes to poker, it's a hundred times higher than the minimum stakes online.

Convenience: Players also reported that the convenience of being able to play in the comfort of their own homes was an important reason for playing. Several players did other things whilst they were playing, like watching TV, listening to music, or doing paperwork. Sometimes this was because the game was slow, but at other times it was because they had things to do. Similarly, some players were not able to leave their homes and play in real tournaments because they had young children to look after. They reported that online poker gave them something to do when the children had gone to bed.

Group A:	- Also, you can get bored if the game is slow, like if you play poker, you can play for 10 minutes and just quit. So, if you think things move too slowly, you can combine it with watching a movie or you can listen to music. You have control of time.
Group C:	- For me it's the time. To play the (online) tournaments, I find … time … because I've got two kids and it's easy for me to play when they are in bed.

Boredom and excitement: Casual players reported that alleviating boredom and getting some excitement were their main motivations for playing. With the convenience of the Internet, online poker gave players the opportunity to engage in a game quickly and for relatively low stakes. The excitement of playing filled gaps in their lives when there was not much else to do.

Interviewer:	- What is it that you get out of playing online?
Group C:	- I compare it with offline, it's like if I'm bored I can just turn on the computer and there is a nice game, I think "it's like I am going to the casino."
	- You can always find a good game.
Group A:	- Why do I play? Because of the excitement. It's not so much about the money, it's the excitement, I like the excitement. That goes for live games, too.

Social interaction: One of the big differences between casual and professional players related to their relationships with other online poker players. Many of the casual players reported that they enjoyed talking to other people. For some of these players, the social interaction was the most important aspect of their game playing. At the same time, it was acknowledged that other online players could at times be rude. However, it was recognised that the nature of online poker is such that the player could move to another game if they did not like the present company. In contrast, it was noted that playing with real people meant that you were stuck playing with them for some time.

Group B: - I choose the game mainly because of the company. I have some poker friends I often play with. But it's true, I often switch tables. If I found a table with good, funny people, I stay even if I lose, just because of the people.

Group A: - Online there are massive amounts of tables that you can switch. If you don't like the players, or maybe you have a hard time with them, you switch.

Group B: - I will pick a poker room sometimes just for fun if they have chat functions where you can actually talk to other people. Because then you have a little bit of offline feeling.… It is fun to sometimes get that kind of interaction with other people.

Professional players' motivations and tactics

In contrast, the professional players were predominantly defined by their motivation to play online poker as a way to make money. For them, the game was mostly about skill and they used a variety of tactics to try to influence other players.

Group B: - Like my husband always loved to play for money. So, like a salary, like a monthly salary and so he's played for like 2 years. But he reads a lot of the books and stuff about gambling.

Group C: - So, for me it's basically the money and it's not a part-time thing, the goal is absolutely to win money. I don't get too excited, it's not the thrill in itself.

Psychological tactics: Most of the conversation from the professional players centred around the different tactics that they used to try to "psych" out other players, or how they would write down information about the playing style of other players. However, they were aware that other players also took notes and so they often played under different user names. Sometimes, some of the male players would pretend to be female, as they believed it gave them an advantage. In addition, they tended to play several tables at once and so had to use different characters. Sometimes the players would deliberately use the chat facility to try to make other players angry. Another tactic was to play the game slowly, as that would also annoy other players. However, slow play was sometimes a function of the physical and cognitive challenges of having to attend to various games at the same time. Parke et al. (2007) noted that four is the optimum number of tables that can be played by most players before overall profitability is adversely affected.

Group C: - It's just that most women don't gamble. So if you play a bluffing game, to be seen as a woman can be an advantage, if they believe you are a woman.

Group A: - For me, I sometimes play two or three tables at a time, so then you don't have time to write messages so … I will wait a long time, and many people will be upset and angry and if they are in a hurry, why don't they play on another table? So, and then after a time, it will go much better for me. And sometimes they write "Is it a bot," or something?

Group B: - But they change their names, like I do, too. If you see a bad player, he can't play, you write him down, you write everything about him and sometimes if you have time, especially on Friday around 4 o'clock, you look for him.

Group A: - If somebody is playing bad, just insult that person, basically call him a chicken and say you're not going to quit and then people always stay and lose their money. Probably quite efficient to insult people that way but it's very rude and it's supposed to be illegal but most sites don't do anything about it.

Choosing the right tables: The professional players also reported that they chose their tables carefully in order to identify the most profitable players to play against. If the players were too good, they would avoid that table. However, if the players were novices, then they would avoid those tables, too. This was because novice players were reported to be unpredictable; these players tended to stick to lower stake tables, but not always.

Group A: - Sometimes you're at a table with too good players and that's bad [sic], I want to earn money, so I won't go again. For me, it's not just a game and I play to win.

Group C: - You know, they always say, never play people that don't play poker, because they'll probably beat you because they don't know what they are doing. They don't know the odds. They are not predictable. They'll just call on anything.

Group B: - If it's too low, then you get people who don't play for a living, don't really know what they are doing and they make crap calls and get paid for it. But then if you go too big, maybe 2-3000 crowns to register, the players are too good.

Developing and maintaining trust

Integrity through size and reputation: It was important to all of the players that they should be able to trust the gaming Web site that they chose to play on. A big part of the decision about who to play with was associated with trust. Players trusted the more well-known Web sites than they did the lesser-known Web sites, and the reputation of the Web site was important. This related to fears about providing credit card details but also to the likelihood that winnings would actually be paid to them. In this respect, winnings being paid quickly was seen as important so that players were quickly reassured and did not have to wait and wonder when they would receive winnings.

Group A: - I tend to trust the big names right away, because if they weren't big, they would have nothing to lose, and if they are big it is probably because people keep playing with them, and so they must be easy to trust.

Group C: - I would say that I would go by what I have heard about a Web site that is supposed to be safe or by what friends tell you. I would never try out a Web site that is new to me unless I've heard about it. If I do hear about it, I might check it out and try to find some information about the company but I tend to stick with the big ones that I know are safe.

Group B: - I only play on Svenska Spel, No bonus.
- (Laughter from everyone)
Interviewer: - So you'd rather have the security of playing with Svenska Spel, and you would give up the bonus?
Group B: - Yeah, and the money goes back to the players.

Clarity of design: The design of the Web site was important, and it had to be clear and easy to understand, with no pop-ups that advertised other services. Flashy graphics were not seen as something that added to the experience by most players. Although a few players suggested that they liked the idea of a fantasy setting or a virtual character, overall the key concern was that the Web site should be easy to understand and work well.

Group B: - I think less graphics is better [sic], I don't like the characters and stuff, it's just confusing. I just want to see my cards and my chest. I mean it's not that important with animated tables and characters. It's not giving you any confidence in the game.
-Yeah, It just gets in the way.

Group C: - I would say that I trust operators based on how easy their layout is as well. If I go check out a Web site and I find the layout and things are hard to find, to me that is an indication of them trying to lure you into different sections. If it's very visible, I trust them more, because there is less potential of me doing something that I am not aware of.

Reliability and customer service: A major concern of all of the players was that the service should be reliable. The professional players in particular were concerned about connection drops. When this happened, it was important that the operator responded in a positive manner; otherwise, the player lost trust and would be less likely to play on that Web site again. The ability to reach someone quickly on the phone was seen as an essential part of the service if the operator was to be seen as trustworthy overall.

Group B: - I am a careful player, I like to be safe…..I played in Swedish *Svenska Spel*. It was a secure site.…For me it's easy to reach the people, they have telephone numbers. I have played before the ___ poker, it's an American site, but although its features are good, it's very hard to get in touch with them if something goes wrong [sic].

Group C: - The most important thing is to keep your connection working. I hate to get disconnected, especially when it really looks good.

Interviewer: - So they agreed with you (about connection drop) and paid up?
Group A: - More or less. Well, one time it kept losing connection and they said it was me and then I went on to the forum and everybody was "what's with the connection, we are having problems?" So they gave me back about 6000 crowns one time for fees that I paid and then another time it just happened that I kept losing connection when I was sitting on aces or kings with two people left in the tournament you know, and I've got more chips and then bang, the connection goes and I'm like, fuck! I would have won that. So I actually talked them into actually paying out because I was in the lead with the leading hand probably, and probably should have won the tournament, so they paid me more than it would cost to enter.

Dealing with cheating: The biggest concerns that the players had related to cheating by other players. The response of the operator to these issues played a major role in whether or not they were trusted in the long term. There was a lot of suspicion amongst the professional players that sometimes they were playing against computer programs (bots), particularly when they lost. Similarly, there was a fear amongst some that certain computer viruses could be used by another player that would allow them to see other players' cards. Talking to other players using the chat facility was one way that a player could be sure that they were in fact playing with real people. Once again, the response of the operator to alleged cheating was important for maintaining trust in their site.

Group A: - I also trust sites that take cheating seriously. Because there are a couple of ways of cheating. You can play with friends or like play a couple of people at the same table. There is also software that some people use that even if you never bet against somebody before, there is software that can tell you exactly how that person has played before.
Interviewer: - OK
Group A: - And some poker sites take that seriously. Really try to track that software and kick out people that are cheating and some sites don't seem to care.

Group B: - Yeah. And the newest thing to do in the poker, you maybe don't know yet but, I am the first guy who is going to say this … the Internet poker is going to go down because it's first, the robots, and after the robots, it's people, very, very technical players. Poker players. It's poker players that, if you have the … I can't explain in English. [Something in Swedish]. This is the newest thing in poker and I know it's like this.
[Other players translate]
- I send a poker virus to your I.P. number and it's getting reflected, and I can see your cards.

Responsible gaming policies build trust: The presence of responsible gaming features contributed to a sense of overall trust in the Web site. Most players suggested that it was an operator's duty to be concerned with vulnerable players and pointed out that genuine concern for these players showed that the operator cared about more than just the customers' money. Responsible gaming features were seen as a mark of the overall integrity of the gaming operator, and players felt assured that they would not be badly treated. Consequently, around half of the players suggested that they would only ever play on Swedish Web sites. A couple of players reported that they thought it was entirely the individual's responsibility not to gamble excessively. However, these players did not object to the visible presence of responsible gaming features on a site.

Interviewer:	- So if a gambling operator had measures that addressed problem gamblers, would you have a better opinion of them?
Group A:	- Yes, they would take some responsibility. - I would.
Interviewer:	- So, it's kind of overall integrity?
Group A:	- Yeah. - It is a good way to show that they care about their players.
Interviewer:	- So, does everybody think that it's good to have these things on a gambling site?
Group B:	- Well, a computer can never get you to leave (if you have a problem). - Yeah, it is a good thing. - I think the companies should contact the players that lose a lot of money like "have you thought about your situation here?" "You are losing a lot of money, we can help you. Here are some products to help you," and then ban you for a week.
Group C:	- Gaming in Sweden, it's pretty safe, if it is safe in other countries, I have no idea.

Feeling good about winning: Responsible gaming features were also reported as something that helped the player to feel better about winning money from other players. Some players were not at all happy to win money that might be coming from people who could not afford to lose it in the first place. Similarly, it was suggested that playing online, against strangers, was better than playing with friends because taking money from friends was awkward and ultimately took away some of the enjoyment of winning:

Group B:	- I hope that many people have lots of money and can afford it.… I don't want to win my money from some person that has problems, so I think it should be really fair if the company takes some responsibility.
Interviewer:	- So if you go to a gambling Web site and you see that they have an area to help problem gamblers, how does that make you feel?
Group C:	- I think it's nice that they do that. - It looks good. - To me it's a gesture that says "it's not really our problem but people tell us that we have to." To me it's not that genuine, but at least they are doing something and I don't have to feel bad if I win their money.
Group C:	- The reason I don't want to play with friends is because if you win a lot, you don't feel so good. You've got to give it them back. It's not good. But if you don't know the people, then it's O.K. to win

Perceptions of Swedish and foreign players

Whilst around half of the players in the focus groups played only on Swedish sites, the rest played against players from other countries. There was a general feeling amongst these players that Swedish players were on average more skilled than were those from other countries. There was also recognition that Swedish players had a reputation in some other countries as being calm and calculating players.

Group B: - The Swedish players are very, very good. If you go into the library, book shop, you can see like 700 books about poker and today the 18, 19, 20 year olds they are reading these poker books. Everything they do they consult the proper book because it's not just to play poker, you need to learn, it's also very psychological.
- It's an art.

Group B: - I play on the *Unibet* because *Unibet* is a lot of Swedish players. It's very very hard to play on *Unibet*. A lot of good players play on that but that guy told me to play American people because they don't have that patience as good as the Swedish players. They told me "you are a good player, I see you play, why don't you play against Americans?"

Group C: - I love to play against English people, because they are drunk.
[Laughter from everyone]

Group A: - Because a lot of people think that there is a certain way that Scandinavians, all Scandinavians play. And uh … sometimes in poker, if they make a certain move they say "typical Scandinavian move" because they think all of us are the same.

Group B: - I think that it is our (Swedish) nature to be calm. We don't take any risks, we have the money, we don't panic, it's more psychological.

Discussion

The study identified two distinct groups of Swedish online poker players and defined both in terms of their motivations to play and the ways in which they played. For casual players, the overall experience mattered most. For professional players, the ability to win money was their main motivation to play. Professional players sometimes used psychological tactics in order to provoke other players into getting angry. This could have the effect of reducing the pleasurable experience of the casual player who sometimes saw such actions as "rude." It was observed by some players that this kind of abuse was frequently ignored or undetected by online poker Web sites. Such experiences may deter some players from continuing to play online or encourage them to switch Web sites if left unchallenged by the operator. However, casual players noted that one advantage of online poker is that it is easy to switch tables if you do not like the present company. This observation may further explain the findings of Wood, Williams, and Lawton (2007), who noted that some online players reported a dislike for the clientele in land-based gambling venues. Furthermore, players who were just starting out and on the lower-stake tables were less likely to encounter such professional players, who favoured higher-stake tables. One consideration for an operator may be to have some non-tactical play tables, where any provocative actions are not tolerated. Social features on these tables could then be maximised. Encouraging players to avoid aggressive play may help them to avoid becoming overly aroused and entering a dissociative state in which excessive spending is more likely. However, some provocation may be deemed a legitimate part of the game for some players, and so other tables where this is tolerated (within reason) might also be considered.

It was interesting to note that some players gender swapped in order to gain a perceived psychological advantage. Wood, Parke et al. (2007) noted that sometimes this is because a female player feels more intimidated playing as a female in a traditionally male environment. Although it was only males in the present study who reported gender swapping, there were only eight female players who took part. Females have previously been shown to gender swap more than males (Wood, Parke et al., 2007). Given that poker is, currently, a predominantly male activity (73.8% according to Parke et al., 2007), it may be worth considering offering female-only games, where women may feel more at ease competing with each other. However, ensuring that only genuine females played could be a challenge in itself.

Trust was a critical element for deciding which Web site to play on. In accordance with previous findings on trust of Web sites in general, this study also found that several factors were critical. Reputation was paramount, and larger established companies were trusted more than unknown operators. However, reputation also came from personal experience and through discussions with other players. Some players would even forgo a bonus in favour of a reputable operator whom they trusted. Also key to maintaining a good reputation was a clear design that was easy to follow and functioned efficiently with all the necessary information present. Winnings needed to be paid quickly to reassure players that everything worked. Similarly, connection drops were reported as one of the most annoying factors, particularly for professional players. Responding quickly and fairly to technical problems was also critical in maintaining trust, as was dealing effectively with any allegations of cheating. In these respects, an efficient customer service department is essential for the long-term reputation of any online poker operator. Furthermore, highly visible statements about the security of the games offered and how the company responds to cheating may also increase levels of player trust.

The study found that responsible gaming policies were linked to trust for many of the players, by demonstrating an integrity that goes beyond just offering an efficient service to one that cares for its players. Consequently, this finding supports and extends aspects of The Global Online Gambler Survey (Parke et al., 2007). Furthermore, online poker playing was defined as a game in which it is easy to understand that winnings are coming directly from another player and not from the gaming operator as such. Winning against the house may be thrilling; taking away someone's grocery money for the week is likely to be less so. Whilst such assertions may not always be obvious, it seemed clear that they were at least in the back of the minds of some of the players. Therefore, developing effective responsible gaming policies is not just an ethical choice and a regulatory requirement; doing so may also provide two important elements of economic value for the operator. The presence of adequate responsible gaming measures appears to increase the level of trust that some players have for an operator, making it more likely that they will play with an operator who has a prominent responsible gaming policy than with one who does not. Furthermore, visible responsible gaming measures allow the conscientious player to feel good about winning and can therefore add to the overall enjoyment of their gaming experience. These findings therefore emphasise the benefits to all parties in developing a genuine concern for player well-being.

The present study has uncovered a number of interesting findings about the factors that can both increase and decrease player trust of an online poker operator, as well as some of the motivations for playing. We should bear in mind that the study was conducted with a small sample of players, although it was adequate for a qualitative study of this kind, and the players were self-selecting and from one particular country (Sweden). Further research might survey a much larger representative sample of players by using the factors identified in this study to determine the extent to which these findings apply to online poker players in general. The online nature of these activities should make this a simple task in relation to current players. However, it would also be interesting to see what the public in general think about these issues, as they may, in part, determine people's decision to play, or not to play, online poker games in the future.

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Differences in monthly versus daily evaluations of money spent on gambling and calculation strategies

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Abstract

This study investigated whether reported amounts of money spent on gambling — when calculated retrospectively on a monthly basis — differ from the amounts recorded on a daily basis. Participants were required to retrospectively report monthly gambling expenditure and also complete a "daily gambling expenditure chart" for 4 weeks. Fifty participants responded to a media call for volunteers and completed the data collection. Results indicate that retrospective estimates of a previous month's expenditures tend to be lower than daily self-reported expenditures. Further, results show that an often-used, conventional self-report gambling question tends to over-estimate expenditures in comparison with calculations using a net expenditure strategy. The findings indicate important biases when reporting gambling losses, thus casting doubt on the validity of estimated gambling expenditures. The implications of these results suggest possible inconsistencies in gambling literature based on players' estimates of previous gambling expenditures.

Key words: gambling, gambling expenditure, money spent gambling, prospective gambling expenditure

Introduction

Gambling behaviours, defined in terms of frequency and amount of money lost, are important variables in gambling studies. The success of a certain form of therapy often depends on the reduction of expenditures related to gambling activities. Because gambling problems are largely related to monetary losses, this variable occupies a central place in prevalence studies and constitutes a social cost marker related to excessive gambling (Walker & Dickerson, 1996; Williams & Wood, 2004).

However, the evaluation of monetary gambling expenditures has not been standardized. Considerable differences exist between the participants' reported results (Blaszczynski, Dumlao, & Lange, 1997; Blaszczynski, Ladouceur, Goulet, & Savard, 2006). The fact that the majority of studies collect the data retrospectively could lead to biased measurements (Walker et al., 2004). The gamblers appear to estimate the amount spent during a single gambling session and then generalize it for all their sessions (Blaszczynski et al., 1997). This estimate is done subjectively, without necessarily using any kind of mathematical strategy that could be constant from one individual to another and from one study to another (Walker et al., 2004). Some authors suggest that using a daily self-reporting method would provide more valid data than would a retrospective report about expenditures related to gambling activities (Williams & Wood, 2004).

Another problem related to reporting gamblers' monetary expenditures is that few studies specify how to calculate the gambling expenditures. The ultimate goal is to know how much money was spent on gambling, that is, the difference between the amount of money at the beginning of the gambling session and the amount left at the end of the gambling session. In this regard, Blaszczynski et al. (1997) showed that the gambling expenditures reported by gamblers mostly depend on the decision whether to include or exclude the gains made during a gambling session.

The differences in the way that gamblers calculate the amount of money spent on gambling raises a problem. Blaszczynski et al. (2006) found that gamblers who calculate their gambling expenditures by including both the wins *and* the losses made during their gambling session usually report significantly higher expenditures than those who report the same expenditures using the "net expenditure strategy" (explained below).

The main objective of this study was to verify if the amount of money spent on gambling and calculated retrospectively for a monthly window differs from the (summed) amount recorded on a daily basis. The hypotheses were as follows:

1. The monthly estimates of gambling expenditures will reveal different monetary amounts than those reported using the daily self-reporting chart.
2. The amount revealed by calculating the total gambling expenditures will be different than gambling expenditures calculated using the net expenditure strategy.

Method

Participants

One hundred and three individuals were recruited through an advertisement (dimensions: 12.5 cm X 16 cm) posted in a local newspaper and from a list of individuals who had previously phoned in order to participate in gambling studies. Of this number, 53 individuals stopped participating during the experimentation period. The final sample

comprised 50 participants (25 female and 25 male), with an average age of 43.8 (*SD* = 14.3 years). To be eligible for the study, the participants had to be at least 18 years of age and gamble at games of chance or betting games at least twice a month.

Data gathering

The instrument used was a self-reporting chart that has already been used by Williams and Wood (2004; see Table 1). For 28 consecutive days, the participants were asked to record all gambling activities that took place each day. They replied to the question: "Did you gamble today? (yes or no)" If the answer was yes, they completed five questions related to their gambling expenditures that day: (1) "How much money did you spend?" (2) "What activity (activities) did you gamble on?" (3) "How much money did you have on you at the beginning of the gambling session?" (4) "How long did you gamble? (in hours)" and (5) "How much money did you have on you at the end of the gambling session?"

Table 1

Daily self-reporting- expenditure chart for gambling							
Week from _____ to _____	M	T	W	Tr	F	Sat	Sun
Did you gamble today? (Y or N)							
(#1) How much money did you spend?							
(#2) What activity (activities) did you gamble on?							
(#3) How much money did you have on you at the beginning of the gambling session?							
(#4) How long did you gamble? (in hours)							
(#5) How much money did you have on you at the end of the gambling session?							

Procedures

Participants were contacted by telephone and received information on the procedure of the study. In phase 1, they were asked to complete the consent form, a socio-demographic questionnaire, and various gambling-related questions, including: "How much did you spend on gambling and betting games during the last month?" Then, in phase 2, the participants completed a daily self-reporting chart for a 1-month period. Each day, they reported if they had gambled or not, and if so, how much money they spent. They also listed their gambling activities, for example, lotteries, bingo, and video lotteries, without specifying the amount spent on each game. At the end of 4 weeks of monitoring, they returned the completed self-reporting charts in a pre-stamped envelope. For each phase, they specified if the reported amounts were typical of their monthly or daily gambling expenditures. Respondents who completed the two phases received a cheque for $20 (all currency in this paper is expressed in Canadian dollars).

In order to test the first hypothesis, the daily expenditure estimates were summed and compared with the retrospectively-assessed monthly estimates. To test the second hypothesis, two separate total gambling expenditure amounts were calculated using responses from the daily self-report charts (see Table 1). The first amount was established by adding up the expenditures of the 28 days (as reported by the participant in question #1), and the second total was calculated using the net expenditure strategy, by calculating the difference in the amount of money the participant had on him/her before the gambling session and after the gambling session (as reported in questions #3 and #5).

Results

Monthly versus daily self-reported expenditures

A bi-directional *t* test for paired data was used to compare the participants' (n = 50) average monthly expenditures to the expenditures calculated with the daily self-reporting chart. The results indicated that the average amount retrospectively reported to have been spent during the past month ($335.10, SD = $626.58) was significantly less than the amount reported using the daily self-reporting chart ($532, SD = $815.54; $t(49) = 2.382$; $p = 0.021$).

For the participants (n = 50) who answered all the daily self-reporting chart questions, the average reported expenditure during the past month was $530.23 ($SD$ = $853.68). This amount is significantly higher than the average amount of these same expenditures calculated using the net expenditures strategy, that is, $354.99 ($SD$ = $809.29; $t(42) = 3.233$; $p = 0.002$).

Discussion

The goal of this study was to evaluate the potential differences in gambling expenditures reported on a monthly basis, as compared with using a daily self-reporting chart. The hypothesis, which stated that global monthly evaluation of gambling expenditures will reveal different monetary amounts than those reported using the daily self-reporting chart, was confirmed. The results indicate that the monthly estimate of gambling expenditures was lower than that calculated using the sum of daily self-reporting expenditures. Gamblers under-estimated their gambling expenditures when they evaluated them on a monthly, as compared with a daily, basis. This result is the same as those previously reported by Walker et al. (2004), which suggested that the larger the temporal window, the more likely gamblers will give approximations that may not be valid. Although there is reason to question the validity of the data reported in studies about gamblers' expenditures, it is important to emphasize that no gold standard method has yet been established to collect the information concerning how much money a gambler spends in a given period.

The second hypothesis stated that the total gambling expenditures would be different if the net expenditure strategy was used. This hypothesis was confirmed. As expected, the total expenditure amount over the last month was higher than the amount calculated by taking the difference in the amount of money the gambler had on him/her before and after the gambling session. This finding runs parallel to that of Blaszczynski et al. (2006), where it was revealed that half of the gamblers included the profits that they made during a gambling session when indicating the amount of money they spent gambling. Thus, the amounts reported by the gamblers on a daily basis proved to be over-estimated in comparison to what the researchers really want to know, that is, gambling expenditures calculated using the net expenditure strategy. This high estimate could be the result of participants using the turnover strategy to report their expenditures (i.e., a strategy that incorporates the money “churned” while gambling into expenditure calculations) (Blaszczynski et al., 2006).

This study has one important limitation: About half of the participants dropped out. This number could be explained by the burden of the task, which consists of filling in the chart on a daily basis for a period of 28 days. However, the number of participants that quit the study is representative of the population being studied — active gamblers. Yet, 50 participants completed the self-reporting four charts for the entire duration of the study, without missing any information, and this is certainly not insignificant.

In conclusion, when gamblers are asked to report their gambling expenditures retrospectively for the preceding 1-month timeframe, they tend to under-estimate their expenditures. However, when asked to monitor and report their gambling expenditure on a daily basis, they have a tendency to over-estimate expenditures. These results as a whole indicate that there are inconsistencies in the literature that cast doubt on the validity of these data. We must therefore continue to be critical of data collected in response to items to the question: "How much money did you spend gambling?" When expenditure calculated on a daily basis was compared to an estimation for a 1-month period, the data did not concur. These data must be considered as indicators rather than as the gamblers' actual expenditures on games of chance and betting games. It is evident and urgent that this variable be examined in future research, and a gold standard delineated soon.

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first person account

It could be said that gambling affects not just the gambler but the circle of people close to them. This *third-person* account is one such person's effort to understand what might be going on with the gambler.

It felt like forever

"Good evening Sir, please come again".

As the casino door slammed behind him, Paul[i] felt an icy shiver. It always seemed that he moved into another dimension when he left there; that the world had changed, that he was in a completely different place. Time moved faster, people weren't as friendly, and all hope was gone. This world was a nightmare, a bitter bottle of wine that left you with a hangover that never went away.

At least he still had a cigarette left. But tonight even that couldn't make him feel better. Receipts fell from his pocket as he walked quickly past the traffic. Cars rushed by him; people were probably driving home to their loved ones. Paul stared into the traffic. Although he felt empty and hopeless, he couldn't help but wish he was one of them. He wanted to be them! He wanted to drive home to his wife and run upstairs to the kids' rooms to give them their good night kisses. He wanted to hug his sister and listen to her grumble about her biology exam. He wanted to feed the cats and walk the dog. He wanted to cut the lawn and serve drinks to his guests out on the patio. He just wanted to be normal.

The cool air was a reminder of where he was headed — right back to his hopeless life, the bitter reality of facing the consequences of his bad choices. *Clink clink clank.* Thoughts running through his head like a train racing in the midnight. *Ding ding ding*. The past few years had been hell for Paul. A hell that he couldn't explain because he never felt that he was part of the destruction. How can you explain something that you feel you have no control over? Yet you are always the one pushing the buttons. Always.

The casino loves you pushing those buttons. But it just gets worse every time. Family and friends constantly pointing fingers at him. Yelling and screaming, crying, and shaking their heads.

"Welcome to the casino Sir. Enjoy your stay".

Machine sounds fill his mind. *Clink clink clank. Ding ding ding.* He walks fast but he doesn't know where he's going. He can barely see the casino anymore. Where should he go? Traffic is still whizzing past him. A young man gets off the bus and lights up a cigarette. Paul rushes over to the man.

"Hey, can I bum a smoke?"
"*Sure. You look like you've had a rough night*", jokes the man. He looks like he just got off work. Paul stares at his briefcase.
"Yeah. Something about these rainy cold nights. I dropped my last cigarette a block away". Paul lies. He lies so much these days he actually believes them. The friendly stranger nods his head.
"Well, have a good night".

Paul sighs. If only he could ask the man for his life; who cares about the cigarette anymore! What's the difference? He's dying anyway, but chuckles at his insanity,
"Excuse me sir. I dropped my life a few blocks away, at the casino. Can I bum one from you?"

Thoughts continue to race through his mind as he walks faster to get away from the rain. The cigarette joins the receipts spilling out of his pocket. Her words are footprints in his mind.
"*Paul*", she screams, *"this is it. I told you last time that I was through. Then I even gave you another chance. What is wrong with you! What do we have to do?? I can't do this anymore. I can't. The kids don't even know you. We have no money. I don't trust you!"*

"I don't trust you!" Her words shoot through his head. *I don't trust you*. Lisa was three months pregnant with their third child. Three children and he hadn't even grown up himself. The rent was two months overdue and the bank card was empty. He was walking home to tell her that he had screwed up again. Or was he…

Paul kicks a stone from beneath his tattered shoe. The rain isn't as heavy anymore. Paul lights up the cigarette. The sounds of the casino join Lisa's desperate voice in his head. *Clink Clink Clank…What is wrong with you?… Ding Ding Ding*. Together, they play like an out-of-tune orchestra in his mind. The music would knock a songbird dead. Although far from the casino, his mind is still there. He is still playing the machines. He is still going to the bank for another $20. He is still avoiding the stares from the casino security. He is still there. A tear rolls down his cheek. He stops in the middle of the street. A payphone isn't too far away. But his last quarter is back in the casino.

Feeling sad, Paul walks back towards the casino. He needs to call Lisa but his last quarter is in a machine. Then, his heart fills with hope again. His steps aren't heavy. A smile spreads over his face. An older couple walks by and nods at him. Paul returns their nod with a grin. He walks faster. Soon he can see the casino again. He feels like he is watching the sunrise. Minutes later he is back where he started. The casino staff opens the door for him.

"Good evening Sir. Enjoy your stay".

Paul smiles. It felt like forever.

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Epilogue: For Lisa and the kids, too, “it felt like forever”, but one day Paul did call from a payphone. His counselor also remarked that “it felt like forever”, but Paul did seek help and eventually joined the people in the traffic, rushing home to tuck the kids into bed at night. Most importantly, Paul saw the sunrise, away from thoughts of the casino.

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Written by “Lisa”, and dedicated to the “Pauls” out there. This first-person account was written to inform the general public what it feels to be a Paul. Problem gambling can be a devastating disorder, filled with misperceptions and false hope. I know because I once lived with a partner affected by it. I would like to add, however, that there is hope and it is possible to break free from the cycle. I know because Paul eventually became free, and in doing so...so did I.

This article was not peer-reviewed.

Competing interests: None declared.

[i] All names in this First Person Account are fictitious.

book review

One More Time: The Gambler's Mantra

By S. Hale Humphrey-Jones and Melvin A. Slawik. (2005). Austin, TX: Langmarc Publishing, 120 pp., ISBN: 1-880292-955 (paperback only). Price: $12.95 USD, $15.95 CAN.

Reviewed by Joanna Franklin, Baltimore, Maryland, U.S.A. E-mail: ncpgambling@aol.com

One More Time is a short collection of composite (truncated) vignettes. The authors state that the book is "not a scientific work" but rather "written in a conversational manner." The book's goal is to highlight elements of gambling problems using various scenarios followed by an "Authors' Note" or a few words from the authors "based on our experiences with gamblers over the past eight years."

The book is divided into 12 different stories about individual women and men with gambling problems, plus 5 additional stories about couples with gambling problems. Short sections on "Assessment" and "Treatment" and an "Authors' Overview" complete the book.

The authors' efforts to engage the general public in understanding problem gambling with short, tightly focused discussions of some key elements of problem gambling have succeeded on some levels. Clearly the one- and two-page composite stories make it easy for even those with limited time to read several of the stories.

Unfortunately, in any effort to be concise, something has to be sacrificed, and the authors have chosen to compromise facts, detail, and some accuracy of interpretation to convey their general points about problem gambling. Speaking in absolutes and oversimplifying have left the reader with a great many generalizations that are not helpful to the uninitiated.

Each of the stories says a little about a particular aspect of problem gambling. The first one, called "Susan," is about a machine gambler chasing her losses and neglecting her young son. The story, though short, touches on several aspects of slot machine gambling meant to paint a compelling picture of the progression of this disorder. The authors reach back 21 years to Robert Custer's (1984) description of a three-phase progression of the disorder. The authors could have better served readers with the more current description of the four phases in the progression (Rosenthal, 1992) and by noting that today we believe not all gamblers, especially escape gamblers, necessarily go through the same progression with their gambling. Story number two describes the escape quality of gambling for a corporate wife whose anger toward her disapproving husband helps escalate her gambling. From one story to the next, we visit with middle-aged women looking for support in male-dominated Gamblers Anonymous meetings, such as a widow who loses everything and is bailed out by her adult children. The authors generalize: "…[S]eniors do not have the option of recovering the damage done by gambling." This narrow and less than hopeful message is coupled with a brief description of failed harm reduction and the misery of being old, abandoned, and isolated with only casinos as a source of comfort. I am not sure depressed clients would be helped by this truncated view.

During the whirlwind tour of women problem gamblers we next visit a "caretaker" in a brief scenario. She has cared for others for many years and feels "it's my entitlement" to gamble. In this chapter the authors try to help the reader identify with feelings of overwhelming stress and temptations to gamble coming from all sides. In another troubling generalization they state, "many women believe that they do not deserve to be treated with respect and dignity." Readers should not take this as a reliable assertion about women and gambling, but rather as a statement about *some* women gamblers with issues around codependency and limit setting. In another short scenario a female gambler commits a felony to fund her gambling habit. The authors' notes focus on shame and guilt for a page and a half, sharing short definitions and advice on bravery and courage. These words of reassurance may offer some support to those who can identify with the oppression of shame and guilt in the short story.

Section 2 contains stories of male problem gamblers. Jack is the stereotypical sports bettor who is used to illustrate the dated original three (as opposed to the more current four) phases in the 1985 description of the progression of the disorder. The statement "[M]ales frequently experience an emotional distance at times referred to as alexithymia" is based on no factual evidence at all and seems to be a misuse of the term (see Taylor and Bagby, 2000). The pluses of the book's ease of reading and engaging short stories is now outweighed by the generalizations and oversimplifications that paint an inaccurate picture of the disorder and the people who suffer with it.

A more serious concern arises with Vince the track bettor. The authors write about antisocial personality disorder (ASPD) and label it narcissistic personality disorder. What at first promises to be a look at both disorders becomes confusing and contradictory, and then appears to be out-and-out wrong. If by "con men" the authors are referring to ASPD, then to suggest that most con men suffer from narcissistic personality disorder seems to indicate all male action gamblers are narcissistic, and this is just not true. Again, the gross simplification of "poor self-esteem leading to anti-social and/or narcissistic personalities" misinforms and confuses.

The brief examples from the Gam-Anon program are well described but painted as possible traps for the unaware and loving Jennifer, wife of Vince. She has missed the "warning signs" of the personality disorder and is trapped in a futile effort to support a husband with an ASPD, all to her own detriment. The case of Danny gives more misinformation. The authors state, "ASPD is found in a high proportion of gamblers." What does a "high proportion" mean? Likewise disturbing is the claim that "the gambler operates from a purely hedonistic level." Stating in a categorical tone that "any skill involved is more delusion than a reality" leaves out the truth about probability and odds. In some games there is indeed a skill factor. The authors move so quickly from their definitions of the negative influences of passive entertainment to Victor Frankl and *Man's Search for Meaning* that the helpful words on the importance of "connectedness" seem disjointed and a last-minute undervalued addition to the chapter.

The story of Max goes on to clearly illustrate the authors' misunderstanding of the use of harm reduction in gambling treatment. The inaccurate statement, "In most cases the plan [harm reduction] acts to increase insight into the fact that abstinence may be necessary" illustrates the limited understanding the authors have about the nature and intent of harm reduction. They also seem to use Max's death as their own exclamation point to stress their dislike of this approach in gambling treatment.

The section on couples continues to intrigue the reader with interesting stories, but then also to under-inform or misinform the reader. Bailouts are described, and complications from co-occurring disorders leave a picture of frustration and hopelessness.

The assessment chapter again has some facts missing: the South Oaks Gambling Screen (SOGS) has 20 scored questions; the NORC Diagnostic Screen (NODS) has by no means "replaced the SOGS among most treatment provider groups." The Lie–Bet Screen (Johnson et al., 1988) is its own brief instrument as published by its authors. GA's questions and steps are listed but there is no mention of Gam-Anon's. There is a quotation from the GA Combo book, but without quotation marks the paragraph seems to be written by the authors—clearly an oversight by the editor.

Many general concepts are conveyed clearly, and the authors' general support and care for problem gamblers is convincing. However, the authors provide so many errors and introduce so many incomplete or confusing notions that the strength of their "short and sweet" approach has turned their well-intentioned effort into a poorly executed one. The book was not served with a solid editing that would have helped tremendously by giving clearer descriptions of its real messages, and nor was it served by its grammatical and typographical errors. This book will do little to help anyone trying to better understand problem gambling. Pathological gambling is a confusing disorder as it is. This anecdotal volume is too simplistic and too full of questionable conclusions and incomplete analysis. With the intention of creating something simple for the lay reader, the authors have missed the mark by oversimplifying and omitting too many or giving very short shrift to the facts. Unfortunately, it does not make a noteworthy contribution to the literature on compulsive gambling.

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book review

Pathological Gambling: Etiology, Comorbidity, and Treatment

By Nancy M. Petry. (2005). Washington, DC: American Psychological Association, 417 pp., ISBN: 1-59147-173-7. Price: $59.95 USD.

Reviewed by James P. Whelan, The Institute for Gambling Education and Research, The University of Memphis, Memphis, Tennessee, U.S.A.

In the early 1980s, gambling research was championed by only a few pioneers and appeared infrequently in mainstream psychology and psychiatry journals. As gambling became more widely available and accepted, the topic began to draw the attention of a greater number of researchers. A study of gambling citations from 1903 through 2003 (Shaffer, Stanton, & Nelson, 2006) reveals that the frequency of scholarly journal articles increased rapidly beginning in the mid- to late 1980s. Furthermore, as of 2006 almost a third of all gambling-related citations that have ever been published appeared in print between 1999 and 2003, meaning that much of our knowledge about gambling problems has only recently been published.

For many reasons 1999 was a seminal year in problem gambling literature. Among that year's gambling publications were two that especially stand out. For example, the Shaffer, Hall, and Vander Bilt (1999) meta-analysis on the prevalence of problem and pathological gambling appeared in the *American Journal of Public Health*. The National Research Council (1999), having secured the expertise of some of the top gambling researchers, published an important book entitled *Pathological Gambling: A Critical Review*. These two publications made important connections between problem/pathological gambling problems and the broader psychological and psychiatric literatures. In addition, these publications provided a conceptual framework for researchers. As a result, sound estimates of the prevalence of problem and pathological gambling were empirically established. The knot of terminology was untangled. The promise of interventions and a matrix of potential etiological factors were brought to light.

In 2002, Dr. Petry started work on this book by following up on a period of tremendous growth in the scholarly information about gambling. She took on the challenge of compiling a comprehensive review of the etiology, comorbidity, and treatment of gambling problems. Interestingly, at the start of the project she feared that there was "not enough research to conclude much" (p. ix). Her fear was mistaken. In reality she took on a project greatly needed by clinicians and researchers alike. Fortunately for us, she was the right person to take on this task. While establishing herself as an important voice in the gambling literature, Dr. Petry competently organized the incoming flood of information on problem and pathological gambling literature. Her book makes a significant contribution to the framework that was launched in 1999.

Dr. Petry states two objectives for this book. The first was to inform clinicians and treatment providers seeking a more in-depth knowledge about pathological gambling and its treatment. She is well qualified for this task, for her team at the University of Connecticut has evaluated and treated several hundred individuals with gambling problems. The second objective was to provide a comprehensive source of information about gambling problems. To accomplish these objectives, the book presents a balance between delivering detailed information needed by researchers and informative clinical vignettes to facilitate a clinician's application of the research findings. The book is organized into five sections: foundational issues, etiology, interventions, a treatment model, and some concluding thoughts.

The opening, or foundations, section of the book orients the reader to issues central to problem gambling. In defining the problem, Dr. Petry adopts the conceptual model that gambling involvement and gambling problems exist on a continuum, with the end of the continuum representing those who meet the diagnostic criteria for pathological gambling. She discusses issues related to prevalence rates and at-risk populations before moving to a chapter that focuses on methods for screening and assessing an individual's level of gambling problems. This section of the book might be considered by some as too detailed, but these details should be seen as essential for someone who needs to understand the issues of defining and describing gambling problems. Dr. Petry also gives the reader access to many of these assessment and measurement tools. The chapter on assessment measures is thorough and useful for both clinicians and researchers.

The three chapters in the etiology section give a detailed discussion of demographic correlates, comorbidity issues, and possible biological bases for gambling problems. As a researcher, this reader was particularly impressed with the volume of research that Dr. Petry was able to review. The text is detailed, informative, and highly balanced in its presentation. I do wonder whether some clinicians reading this section might be frustrated by the lack of consensus or definitive conclusions that can be drawn from this literature. This presentation of the research, however, is accurate.

In the third section, Dr. Petry reviews the research on interventions, including natural recovery. Other intervention approaches included in these chapters are pharmacotherapies, family interventions, psychoanalytic approaches, behavioral interventions, and cognitive therapies. This section provides the therapist with a detailed overview of each of these literatures. Clinical case information is included where appropriate. I was surprised to see the chapters on family intervention and psychoanalytic approaches, for the empirical literature on these topics is meager. Dr. Petry communicated this point, but I wonder if a more general chapter that addresses general treatment issues might have been more helpful to readers.

The fourth section of the book is a detailed presentation of Dr. Petry's cognitive-behavioral treatment model and brief motivational interventions. In my opinion, these chapters contain the most important information for most clinicians and treatment providers. Dr. Petry has become a leading clinician for treating gambling problems. In these chapters, she gives away all of her secrets, providing all the information needed to deliver a treatment grounded in substantial empirical findings. Well-chosen clinical vignettes add richness to the detailed session-by-session description of treatment. In addition, all of Dr. Petry's session handouts and homework exercises are given in the appendices. The addition of these clinical tools provides the clinician with everything needed to implement Dr. Petry's treatment protocol.

The concluding section of the book covers two distinct topics. The first chapter, which covers prevention with adolescents, is well done but a bit out of place. My opinion is that youth gambling is a very complicated issue that probably needs another 300-page book to be fully addressed. In the final chapter, Dr. Petry identifies some of the issues currently being discussed in the problem gambling and pathological gambling literature. For example, her comments about the criteria for understanding the threshold for those experiencing gambling problems, but not meeting diagnostic criteria for pathological gambling, are very much on target.

In summary, I would highly recommend this book to both treatment professionals and researchers. Dr. Petry has done an impressive job of providing a readable and useful summary of the immense amount of research that has appeared since 1999. The book includes information, clinical details, and both assessment and treatment tools that the clinician will value. Also included are accurate and concise reviews of the etiological, assessment, and treatment literatures, which researchers should find very useful.

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book review

Gambling with the Future: The Evolution of Aboriginal Gaming in Canada

By Yale D. Belanger. (2006). Saskatoon, SK: Purich Publishing Ltd., 232 pp., ISBN: 1-895830-28-1 (paperback only). Price: $31 CDN.

Reviewed by John McCready, Researcher and Consultant, Healthy Horizons Consulting, Toronto, Ontario, Canada. E-mail: john.mccready@sympatico.ca

There is little literature that describes the nature of Aboriginal gaming in early Canada and the development of Aboriginal high-stakes gambling in Canada. Likewise, there is very little research that examines the effects of such gambling in Canada, including the effects of lotteries, bingo, casinos, video lottery terminals, and Internet gambling. Accordingly, Yale Belanger's book is a welcome and very important contribution to understanding the development of Aboriginal high-stakes gambling in Canada.

Following an introduction that frames the aim and content of the book, the first three chapters provide valuable historical information. The first chapter provides a historical perspective of Aboriginal gaming and early Canadian gambling policy. In this chapter, the reader learns that Aboriginal gaming was an important part of the Aboriginal culture. The second chapter provides a concise and very useful description of the evolution of Canadian gambling legislation. The third chapter offers a valuable description of the social, political, and economic context for the development of Aboriginal high-stakes gambling in Canada. Throughout the next four chapters, Belanger provides a focused description of the development of Aboriginal high-stakes gambling in the United States, Ontario, Saskatchewan, Manitoba, and Alberta. The last two chapters describe the social and political responses to Aboriginal high-stakes gambling and recent developments. The book concludes with a chapter that suggests there is room for optimism.

Aboriginal gaming was culturally accepted and community oriented, and it served as an entertaining and, perhaps, unifying set of activities before Europeans came to Canada. Aboriginal gaming and wagering involved many activities, including bowl games, straw games, counting games, and lacrosse and other sports-related activities. Gaming was pursued for social, spiritual, and cultural interaction purposes. As all aspects of Aboriginal life and culture were adversely affected by the arrival of Europeans in Canada, so too was Aboriginal gaming. Aboriginal gaming was attacked by missionaries, settlers, and government officials. The European settlers brought with them moralistic, Puritan views of gambling and were critical of "primitive" and "pagan" Aboriginal gaming. After Confederation, the federal government prohibited gambling in Canada through the Criminal Code and the Indian Act.

The acceptance and expansion of high-stakes gambling in Canada are relatively recent developments, as is the parallel development of Aboriginal high-stakes gambling. The legalization of gambling in Canada took place in 1969, and the regulation of gambling was passed along to the provinces in 1985. As the history of the treatment of Aboriginal people in Canada is not pretty, neither is the story of Aboriginal gaming and high-stakes gambling in Canada. When the development of Aboriginal high-stakes gambling began to be sought, resistance came from the general public and the provincial governments that regulate gambling. In spite of the considerable difficulties and delays, the first five Aboriginal casinos opened in 1996.

The main strength of Belanger's book lies in its description of the development of high-stakes Aboriginal gambling in Canada within a social, political, and economic context. The treatment and plight of Aboriginal people in Canada are known to have been very poor. Although there have been some economic development initiatives, these efforts have not produced much improvement. In the 1970s, there was considerable discussion of the value of self-government for Aboriginal communities. All parties understood that the success of the quest for self-government would need to be accompanied by significant economic development. The legalization of gambling in Canada, the development of high-stakes gambling by some American Indian tribes, and the acceptance of the aims of self-government, nation building, and economic development for Aboriginal people provided the context within which Aboriginal high-stakes gambling could be pursued and developed in Canada. At least some First Nations communities in most Canadian provinces have seized the opportunity.

Belanger's book reports that there were eight Aboriginal casinos operating in Canada at the time of its writing: four in Saskatchewan, one in Ontario, two in Manitoba, and one in British Columbia. There are provincial agreements in Nova Scotia, New Brunswick, Manitoba, and Quebec that permit Aboriginal communities to operate video lottery terminals, hold bingos, and sell lottery tickets on reserves. In Quebec, the Mohawks of Kahnawake play host to Internet casinos with little interference from the provincial government.

Although Aboriginal high-stakes gambling enterprises generate much-needed revenue, employ Aboriginal people, and share revenues with First Nations communities, the development of Aboriginal high-stakes gambling looks more like the adoption of the high-stakes, profit-seeking gambling model that has been led by the provincial governments in Canada and less like an "evolution" of the culturally accepted, "authentic," and "pure" Aboriginal gaming that was previously practised within Aboriginal communities by Aboriginal people. Aboriginal high-stakes gambling enterprises do not use Aboriginal games. Aboriginal casinos offer the same games as non-Aboriginal casinos and, to be successful, Aboriginal casinos are known to depend on outside non-Aboriginal populations and sometimes utilize outside management services.

Lest we consider the "evolution" of Aboriginal gaming in terms that are too noble, keep in mind that the provincial governments also claim that high-stakes gambling produces revenue, creates employment, and shares revenue with the public. It is worth noting that the resistance of Aboriginal casinos to provincial smoking bans places profits ahead of the public health interests of employees and patrons, and the resistance to unionization places profits ahead of the interests of employees, many of whom are Aboriginal workers. Whereas Belanger does not refer to the presence of significant gambling problems from early Aboriginal gaming, there is growing evidence that a greater proportion of Aboriginal people experience gambling problems from high-stakes gambling than do members of non-Aboriginal populations.

Belanger's book is a very important contribution to understanding the development of high-stakes gambling in Canada and Aboriginal high-stakes gambling in Canada. The book is well researched and well referenced. The book tells the story of the development of high-stakes gambling by some Aboriginal communities in Canada, but it is a story that needs continued documentation and evaluation. There is still plenty of room for more literature and more research.

This book is essential reading for those who want to understand the nature of culturally accepted Aboriginal gaming, the development of high-stakes gambling in Canada, and the development of Aboriginal high-stakes gambling in Canada. Accordingly, the book should be read by students, researchers, policy personnel, and the variety of other people who are involved in gambling-related fields. Of particular interest to researchers and policy-makers, the last chapter ends with a significant list of some of the unanswered questions on the effects of Aboriginal high-stakes gambling. Perhaps the author's optimism, suggested in the subtitle to the conclusion (“Room for Optimism”), will be found in the results of the much-needed research on the effects of Aboriginal high-stakes gambling in Canada.

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book review

Governing Fortune: Casino Gambling in America

By Edward A. Morse and Ernest P. Goss. (2007). Ann Arbor, MI: University of Michigan Press, 344 pp., ISBN: 0472099655 (hardcover), 0472069659 (paperback). Price: $80.00 (hardcover), $29.95 (paperback).

Reviewed by William N. Thompson, Professor of Public Administration, University of Nevada Las Vegas, Las Vegas, Nevada, U.S.A. E-mail: william.thompson@unlv.edu

Governing Fortune is (yet) another volume purporting to be a comprehensive analysis of casino gambling in America. The authors, faculty members (law and business) at Creighton University in Omaha, do accomplish the goal of writing such a book, but they do so in a way that leaves this reader wondering "to what end." A lot of the good information is presented in a well-organized way, but most of the information is old information—or at least information that is generally known: casinos can be tools for jobs and economic development, casinos engender social costs, casinos can provide taxes and tax relief but not everywhere, the Internet presents difficult issues for governments as do other casino regulatory matters, and tribal gaming is also fraught with difficult issues. The writers do emphasize the economic performance of gaming properties more than other books do, but then this reader wonders what the information about price to earnings ratios and stock prices means for citizens and policy-makers, or even scholars. There is no guiding theory. To what end am I being told all this stuff (albeit "good stuff").

The writers did establish themselves as gaming scholars with their studies of bankruptcies among players, and they are to be commended for including data from their earlier studies here, but still I feel I may be missing the point. While they dwell on economic costs and benefits, they add nothing to what Earl Grinols told us in his book *Gambling in America: Costs and Benefits*. We find a chapter on history, but its offerings seem less fruitful than the histories provided long ago by Chavetz or Asbury, or more recently by I. Nelson Rose or David Schwartz.

It is not a bad book; actually it is a pretty good book. It is a book that all scholars of gaming should buy and have on their shelves. However, once put on the shelf, it may gather dust because it lacks a focus that will cry out to a researcher in a time of need: "grab me."

The book can be faulted for overpromising. The writers tell the reader that they will talk about major players in the industry. But their chapter on the industry dwells on economic minutiae while ignoring the likes of Adelson, Kerkorian, Wynn, Kerzner, and the other giants of Las Vegas, Macao, and other world casino venues. Their history ignores the likes of Lansky, Siegel, Dalitz, Binion, Sarno, and other Las Vegas pioneers. The chapter on politics gives a very minor campaign in Omaha greater attention than campaigns in New Jersey, Florida, and California. Actually, the New Jersey campaign is not even mentioned.

There is also a problem with sources. Though the product contains much good information (indeed very good information), the information is selected from secondary sources that ignore the main bodies of literature in gaming.

Materials from *The Journal of Gambling Studies* are cited only one single time—this *is* the leading academic journal on gambling. Minuscule law review articles are given extensive treatment, yet there is not a single reference to any article in *Gaming Law Review*, the only law review publication devoted specifically to gambling. The leading trade journal, *International Gaming and Wagering Business*, is ignored as a source—yet it is the leading periodical source of financial data on the industry. The authors have taken their central concluding idea from Professor Bill Eadington (this is discussed below), and yet they do not cite him, nor do they cite his edited proceedings from 14 separate international conferences on gambling and risk taking. These conferences, which have been held since the 1970s, are totally ignored. They are collectively and individually the seminal academic gatherings for worldwide scholarship on gambling. Tony Cabot's and this writer's three editions of *International Casino Law* receive only one reference. Cabot's extensive works on Internet gaming are ignored. So too is Rose's *Internet Gaming Law* treatise—these volumes are the essential writings on the topic. Perhaps I have just a bit of an empty feeling reading extensive accounts of campaigns for casinos—especially in Omaha, Nebraska, when the book I authored with John Dombrink—*The Last Resort: Success and Failure in Campaigns for Casinos*—is totally ignored (in citations, anyway). We covered the topic with over three decades of historical records in detail. Newspaper clippings and Internet entries are given precedence. But I should not feel too chagrined. The leading gaming law historical analyst of our era, I. Nelson Rose, has his basic themes ignored, and in the final page of the book he is thrown a single footnote that totally misses the essence of his career's work. The authors "use" his idea of waves of gaming history, but give him no credit as they do so.

What are we to conclude? What do the authors conclude? Very little of meaningful value. But they do offer a summary idea. Indeed, they take an idea that Bill Eadington put forth at one of his International Gaming Conferences and they elaborate upon it. Amazingly, although Eadington himself presented the idea as the major theme of his keynote address at the conference, the authors of this book do not give him so much as a footnote or bibliographic reference (unfortunately, there is no bibliography as such) for his idea. Even more amazing is the fact that Eadington wrote a cover note that the University of Michigan Press has used in promoting the book. Perhaps Eadington didn't notice the slight, or perhaps he is happy that people have forgotten that he was the one to first make the idea public. The summary idea is offered after discussions of social problems emanating from problem (and pathological) gamblers. It is this: Gamblers (players) should be licensed before they are allowed to come into casinos.

After elaborate detail about the history of gambling in America, the roles of the industry in gambling growth, the roles of government, the part played by gambling employees, and the players, gambler licensing is the conclusion. While it is interesting for parlor talk and maybe interesting for philosophical musings, the idea has no place in reality. If it is to have merit as a reform idea, the notion should be tied to the full flow of gambling money through government, through casino owners and investors, through employee hands, as well as through player hands. It isn't. Could it be? Maybe. Let me suggest how.

Maybe we don't need more comprehensive books trying to cover the waterfront, unless they are tied to a central theory. I will admit I wrote mine (that is, my "everything and the kitchen sink" book on gambling), and rather than aiming for a meaningful conclusion, I just listed my topics A to Z (actually A to Y) and called it an encyclopedia (*Gambling in America: An Encyclopedia of History, Issues, and Society*). One the one hand, maybe there isn't a good conclusion for such a book (I certainly did not attempt to offer a conclusion for my encyclopedia), and instead the authors should look at very specific questions (or topics) regarding gambling, such as we find in Schwartz's histories, Grinols's economics, and Cabot's and Rose's treatments of Internet gaming. But then using an overarching theory should not necessarily be out of the question.

Being somewhat of a political conservative, I have often relished the ideas of Adam Smith. While the authors of this book do not mention the great Scottish political philosopher, they could have done so. They highlight all the elements he used in his economic equations.

The way they write of gambling they might accept his notions (from *The Wealth of Nations*, 1776) that the collective society should benefit when everyone pursues his or her own interests with selfishness and vigor. While they caution that there are flaws in the manner in which the gambling enterprise operates today, they could suggest remedies and ways the flaws could be corrected based upon Smith's theory. Unfortunately, the vehicle they choose for correcting the flaws is way too little and way too late to be realistic or at all effective.

All the major elements involved in gambling enterprise—the captains of industry, the employees of the facilities, their suppliers, government policy makers and tax collectors, and the players (i.e., gamblers)—are all pursuing their own self-interests—seeking selfish dreams. And all, except for the players (and here only collectively), are indeed discovering their selfish dreams. Society is benefiting—if you discount the players. But then, the players are providing *all* of the revenue of the industry. Unlike with the Adam Smith formula, there is no magical hand that makes all well for everyone. The critical consumer of the industry's product is a loser. This is unlike the consumer of hard products, where the recipient of the industry's work chain receives a good that is worth (to the consumer) more than its cost. This is unlike the consumer of other service products, where the service helps sustain other productivity (restaurant meals for workers, or entertainment that reinvigorates the mind or body), or at least bears a low cost for filling idle time. The gambling industry can provide a recreational function, but unfortunately many of the costs of gambling far exceed the costs of other recreational products, and the entertainment of gambling has limits for providing the substance to reinvigorate either body or mind. Books and films can have story-lines that are mundane and repeat themselves over and over, but their nonsensical dimensions of wasting time pale in contrast to those experienced by the binge player on a poker machine. The costs of other diversions are typically borne by the consumer, not society as a whole. With gambling, the impact of costs spreads outward to many other people and to the general society.

Solutions using a Smith perspective should emphasize a healthy free-flowing gaming enterprise, if that enterprise is to be permitted (an option that could be put on the table). Smith would not be averse to total prohibition if the industry could not be healthy for society. But if we have a gambling industry, it should follow a free-enterprise model. We should remove barriers created with monopoly licensing and extractive taxation. These permeate the casino industry and in turn lead to exploitation. Open competition can reduce exploitation. So too can full information regarding the expenses in playing games. A competitive industry could also promote the true values of the casino experience, which is not simply repetitious play on machines. Rather, it is social interaction and social enjoyment. A model of an effective Smithian industry might be found in an idealized (but not too unrealistic) Las Vegas Strip, and suggestions could then be offered for ways other venues could emulate the healthy practices followed on the Strip. (The Strip has the free-enterprise features of easy entry for entrepreneurs, open product development, competitive employment opportunities with good wage packages, low taxation, and much player freedom and choice.) Licensing of players represents artificial commercial barriers imposed by government that interfere with truly free enterprise. If the book seeks to go there, the solutions presented by a flawed industry must be found in other conclusions.

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book review

The Sociology of Risk and Gambling Reader

Edited by James F. Cosgrave. (2006). New York: Routledge, 440 pp. (hardcover), 435 pp. (paperback), ISBN: 0415952212 (hardcover), 0415952220 (paperback). Price: $90.00 USD (hardcover), $39.95 USD (paperback).

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Sociology is concerned with the organization of human societies and the behavior of individuals in social interaction. While there has been some attention paid by sociologists to gambling, these efforts have been sporadic and limited both theoretically and methodologically. Given the dominance of the psychological perspective in the field of gambling studies, the most important contribution that sociology can make is to move us beyond the focus on the individual that has long dominated the field to a better understanding of the social and institutional aspects of gambling.

The intent of this reader/book, as Cosgrave notes in his introduction, is to place contemporary gambling within the context of recent developments in sociological theory. He argues that gambling in late capitalist societies is best understood as the institutionalization of contemporary orientations to chance and risk. Based on this view, Cosgrave contends that the sociology of risk—a branch of sociology that extends theories of probability to situations of everyday life—can contribute to an improved understanding of gambling. Another important area where Cosgrave believes that sociology can contribute is through a constructionist perspective that sheds light on the social settings within which gambling takes place and the interactions that occur in these settings. A third contribution that sociology can make to our understanding of gambling relates to the role of the state in shaping gambling enterprises and the gambling experience.

The first section of the reader includes selections from Giddens and Beck, two leading exponents of the "risk perspective" in sociology. These selections explore the significance of risk in relation to identity and institutions in late capitalist society and examine voluntary risk-taking as well as the "downloading" of societal risks onto individuals. A selection by Lupton draws from Foucault and the social constructivist tradition to consider the "governmentality" approach to risk whereby individuals are encouraged to govern themselves. In contrast to the risk perspective, which focuses on the social conditions that produce individual behavior, the governmentality perspective focuses on risk as a means for managing individual conduct. The fourth reading in this section is an early effort by several British sociologists to examine gambling as a specifically sociological phenomenon and includes considerations of gambling as play, gambling as "action," and gambling as a means for resolving strains in the social structure.

The second section of the reader looks at gambling from a historical and cultural perspective. The selections here include the classic functionalist account of "lower class" horse bettors by Zola, a recent Bourdieu-influenced ethnographic consideration of horse race betting by Allen, an ethnographic study of female bingo players from a Canadian research team, and a historical overview of the commercialization of gambling in the 19th century by Reith. The final selection is an essay by Benjamin that draws connections between slot machine gambling and the mechanistic conditions of labor in industrial capitalism.

The third section of the reader considers gambling from an interactionist or constructivist perspective. A selection by Benjamin in this section provides a framework for understanding the subjective experience of the gambler. A classic selection by Simmel examines "adventure"—a temporal break from the everyday that depends on a transformation of the meaning of the experience—and is intended to provide insight into the experience of risk-taking, and only tangentially into gambling. This is followed by another classic sociological account of gambling, this one by Goffman, dealing at the interactional level with the "consequentiality" of gambling as a means for individual social actors to experience and manage "fateful character tests." Another selection by Reith is included in this section, this one dealing with the gambling experience as a form of play. The final selection is taken from a book by Frederick and Steven Barthelme about their personal experiences losing a fortune at the riverboat casinos in Mississippi.

The final section of the reader moves back to the macro-level to consider the politics and regulation of gambling in late capitalist societies. A selection by Nibert uses a Marxist perspective to argue that lottery gambling diverts the attention of the poor from the systemic conditions that constrain their lives and serves as a safety valve to siphon off stress and frustration that might otherwise threaten the stability of the state. Another Marxist selection by Neary and Taylor examines the reproduction of capitalist social relations through the British National Lottery and the transformation of the state into a "lottery-like form" prompted by the globalizing forces of late capitalism. A selection by Collins focuses on ways in which categories such as "pathological gambler" are discursively constructed within particular historical and social conditions and points to the key role played by the "psy" sciences in the governing of populations. The final selection is a journalistic account of the rise and fall of slot machine gambling in South Carolina in the 1990s. While not specifically sociological, this piece highlights the role of political institutions in the legitimization of gambling activities as these become important sources of revenue for governments.

The reader brings together an eclectic array of materials ranging from classic analyses to more contemporary considerations of risk and gambling in relation to modern sociological theory. A variety of sociological perspectives are represented, including functionalist, Marxist, interpretive, and interactionist approaches. While the volume will undoubtedly be of interest to a variety of audiences, the first section—with readings selected from higher-level sociological theorizing about "risk societies" and "governmentality"—will be difficult for readers who lack a disciplinary context to follow. Another frustrating aspect of the reader is the lack of integration between the macro- and micro-level readings that have been selected. However, this reflects a larger issue in the discipline of sociology, which has long struggled with the challenge of interweaving considerations of historical, economic, and political trends with considerations of the symbolic power of information and ideas. Given the paucity of sociological attention to gambling over the years, this reader deserves a place on any gambling researcher's shelf.

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book review

The Word on the Street: Homeless Men in Las Vegas

By Kurt Borchard. (2005/2007). Las Vegas, NV:
University of Nevada Press. ISBN 978-0-874-17607-0 (hardback);
ISBN 978-0-874-17723-7 (paperback). Price: (approx.) $35.71 CND
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"Image … is everything."

Native Las Vegan Andre Agassi,
in an early-career advertisement for Canon cameras

Las Vegas is many things: some real, some imagined, some real-and-imagined. Often lost in popular imagery of the city is the observation that Las Vegas is actually a tale of two cities – both of which exist within the same geographic confines. As Erving Goffman might say, the city contains both the frontstage "LAS VEGAS!!!" that is presented to the credulous masses of 40 million tourists who visit each year, as well as the less visible backstage "las vegas" that serves as a figurative engine and storage facility for the lives and props that keep the staged events humming. Kurt Borchard's book *The Word on the Street: Homeless Men in Las Vegas* seeks to explore one oft-neglected aspect of this duality: a behind-the-scenes population of Las Vegans whose presence, at the very least, provides a bit of a backstage buzzkill that threatens to spill into the frontstage revelry.

Overall, studies of *communities with large-scale gambling* remain largely neglected – especially when compared with the rapidly evolving field encompassing the study of *individuals who gamble.* This neglect is unfortunate: in contrast to the field of alcohol studies, the field of gambling studies enjoys the advantage of several Weberian "ideal type" laboratories from Monte Carlo to Las Vegas to Macao to Singapore. In a world where gambling's wildfire expansion mandates sober analyses of community impacts, opportunities to explore these locales should not be missed.

Borchard aims to do precisely this kind of gambling-community exploration, examining the ways in which a familiar social problem—homelessness—plays out in a city that for obvious reasons manages its "presentation of self" very carefully. In doing so, Borchard leans upon a number of frameworks that are familiar to those who follow the gambling literature. One recurring theme is (personal) responsibility – specifically, who is to blame for homelessness in Las Vegas? To what degree is the homeless' plight "their own fault," and to what degree might fault be properly associated with other external or community factors?

The various perspectives presented here remind us of the popularity of the blame pastime in academic and lay analyses of social problems. Revealingly, the players (actors?) tend to point fingers elsewhere: Las Vegas politicians "blame the victim" for their own homelessness, while homeless men blame the tourism industry for their invisibilization. Meanwhile, academics take the opposite tack by pointing a finger at their *own* discipline – which they purport are uniquely equipped to explain all phenomena. Hence, when engaging homelessness, psychologists tend to point to mental illness, economists cite employment and income figures, and political scientists blame decision-making by key political entities. In this book, Borchard, a sociologist by training, uses his field's tools to help provide a complementary framework. Ultimately, his contribution helps fulfill C. Wright Mills' "promise" – that the "sociological imagination" can counter the tendency to diagnose "individual" problems while forgetting to pay attention to broader societal forces that shape all of our universes (Mills, 1959).

In engaging the personal responsibility, structure-or-agency debates, Borchard cleverly notes that in this test tube, at least, the extant structures emphasize agency. For instance, the strongly religious orientation of Las Vegas' shelters implicitly supports the idea that homelessness can be traced to individual deficiencies—and hence requires the "saving" of the individual soul. It seems, however, that the ultimate answer to the either-or question (*structure or agency?*) is simply "yes"—or as Borchard puts it, the answer lies in both "bad decisions and bad circumstances" (p. xxvi).

Of course, these "responsibility debates" have much in common with those engaging the most common subject of the gambling literature: problem gamblers. A note of caution here: though Borchard spends obligatory time on addiction in general, readers seeking an in-depth exploration of the direct interplay between gambling addiction and homelessness will be left unsatisfied by this work, as his primary focus is elsewhere. However, those seeking a subtler understanding of the inherent complexities of homelessness in a gambling-dominated economy will be sated with insightful observations such as one on the perceived bountifulness of food in buffet-drenched Las Vegas versus the actual scarcity of food accessible to homeless Las Vegans. A worker at an agency in Las Vegas that serves homeless people made this observation:

> The hotels actually run those buffets far more efficiently than what it looks like. There's not as much wasted as what you could easily think…. The other part of that is when they have it… [t]he recipient needs to … pick it up on the spot, and sometimes we don't have the resources to do that. We may not have a truck, we may not have a driver, we don't certainly have a refrigerated truck… The other challenge we have is, can this be consumed right away? [An additional problem is that] if you know you've got x amount of meals you need to prepare every day, [and] if the donation doesn't come in, what do you do? ... Then how do you determine if you've got four hundred men in the program that you've got enough food for fifty or a hundred, which fifty or a hundred gets it? … So it's not as simple as saying, 'All leftover food from the buffets ought to go to a shelter,' end of conversation. (pp. 63-64)

Borchard's narrative crackles at moments like these, when key players are allowed to speak in their own words.[i] It sputters a bit when its attention drifts from this focus, as it does when the book starts off with a content analysis chapter focusing upon the (necessarily?) sterilized local media accounts of homelessness. In a book whose strengths lie in its unflinching self-reports, this media content analysis feels a bit forced and out of place.

When it immediately returns (in chapter 2) to an in-depth account of one homeless man's life, however, momentum is restored and the reader is taken for a ride. Here, Borchard follows "Jerry" around for an entire day, and paints a harrowing portrait of homeless life. This is perhaps the greatest strength of ethnographic research, a methodology that has evolved far from its anthropological roots, but nevertheless still works best when explaining alien worlds to the uninitiated.

Our time with Jerry includes many revealing and moving scenes. We observe veterans' hospitals, conventional hospitals, a fruitless chase from one homeless shelter to another to find appropriate services, "friends" on the street who steadfastly refuse Jerry's pleas for help, an ambulance ride, an emergency room, a bus station, a transitional living facility, judges, police officers, and finally, a Knights of Columbus hall, where a scene that is not for the weak-stomached unfolds. The scene is worth excerpting here, as it reveals how qualitative data tell stories that quantitative data cannot. During their day together, Jerry and the author Kurt approach a bus

> … owned by the Knights, which has the word *Hope* on the front. We got as far as the bus and Jerry needed to stop. He grabbed hold of a handle near the bus door and said, 'Hold on.' I waited a few feet away.

> At first, I thought he had a bad case of gas. Then I noticed he was looking down at his feet… 'I shit myself again,' he said angrily.' 'I'm sorry, Kurt.'
>
> 'Oh hey, don't apologize,' I said, feeling queasy. My mind had gone completely blank from this unexpected turn, but I somehow managed to assure him that I wasn't sickened or upset by what happened. 'You had an accident,' I said.
>
> He cursed as he continued to try to clean himself. I noticed he was shaking…
>
> Suddenly he looked me in the eye. 'Are you sure this is what you want to do?' he said, referring to my research. Doesn't this depress you?' (pp. 50-51)

At the end of this roller coaster ride of a day, Borchard concludes with a movingly honest and introspective passage in which he wonders whether Jerry will want to shake his hand (he does, and Borchard accepts). As a co-author of a few quantitative government-sponsored reports on homelessness in the Las Vegas community, I was struck by the realization that quantitative data (such as seemingly ubiquitous "homeless counts") never quite speak to audiences in the way that Borchard's qualitative data do. Though many familiar caveats apply (whither representativeness and generalizability?), surely there exists a place in the literature for qualitative accounts such as these (and those such as Snow and Anderson's 1993 classic that serve as a foundation for Borchard's work).

In the next chapter, "Causes and Consequences," the author resists the temptation to assign blame for homelessness to any singular or simplistic cause. Though policymakers might long for more definitive "solutions," Borchard's work puts him in a more ambivalent analytical place:

> I sometimes found it hard to tell if a particular problem like addiction or mental illness preceded a man's homelessness, was perhaps a manageable problem that then grew worse after he became homeless, or if it only became a problem after he became homeless" (p. 54).

After spending many hours listening to homeless men explain their lives, the author concludes that homelessness is "almost never reducible to a single cause-and-effect relationship" (p. 58). In this setting, a parallel with traditional gambling research areas emerges; after all, problem gambling researchers frequently grapple with the diverse and multifaceted causes and consequences of gambling behaviors (see, e.g., Blaszczynski, 2005).

Other parallels with the broader research literature on gambling are less obvious: it turns out that both gambling problems and homeless problems can trace their stigmas to a Protestant Ethic focus upon hard work and gradual accumulation of part of goods through daily toil. As a result, one reason why both problem gamblers and homeless men feel overwhelmed by pangs of guilt is that powerful societal institutions (such as religion) have been *telling* them they should feel this way – and for hundreds of years. This complicates religious institutions' frequent attempts to "blame" problem gambling on casinos – especially when many of the most painful "problems" that problem gamblers encounter have to do with stigmatization and shame (Bernhard, 2007). As so often happens in strong social scientific research, careful sleuthing reveals that culprits abound, and can even be found in the most unexpected and ironic of places.

In Chapter 4, Borchard heads for the south end of the famous Las Vegas Strip, a rapidly developing area that now threatens to stretch into the Southern California border towns. Here he introduces us to a group of squatters in an old, abandoned hotel that has since been razed. After making a half-hearted attempt to typologize these squatters, Borchard is quick to note that these sorts of typologies run counter to the spirit of his qualitative inquiry. He then returns to his qualitative reports, and the energy returns as well.

In these explorations, we meet individuals who "show more embarrassment at their homelessness than resentment against wider social conditions that may have helped precipitate it." On occasion, however, subtler frameworks emerge, such as the moment when "Matthew," a squatter quite familiar with "American Dream" mythology, connects macro-economic (and even global) shifts with "individual" problems:

> [People come here because] it's pretty much warm all year round and very mild winters and the lure of finding a good job and kind of fulfilling the American dream… and a lot of the situations in—especially back East, a lot of plants closing and jobs going oversees to China and Japan and Taiwan and Mexico—a lot of people find themselves out of work, and they pack up the station wagon or whatever and come out here for jobs. (p. 138)

In Matthew's words, we can hear a vibrant sociological imagination. Furthermore, passages such as these reveal that literary theorists need not dominate the academic discourse on mythology; social scientists also need to devote careful and critical thought to the ways in which myths affect human lives. In doing so, as always, we need to remember that myths are not necessarily "true" or "untrue" so much as they are tales that are handed down over time—and hence have a powerful grip on both our decisions and our circumstances.

As is always the case when telling stories in and about Las Vegas, mythology pervades these narratives. Frequently, frontstage Las Vegas myths collide with backstage life: as Borchard puts it, "I have found that homeless men generally like Las Vegas … because of its warm climate and its liberal laws that promote hedonism—in other words, for the same reasons many tourists and residents like it" (p. xxiii). Later, he notes that another significant "pull factor" for in-migrating residents (including those who end up homeless) is the myth of a job market that is expanding as rapidly as the community waistline that is the Las Vegas Strip. Awaiting those buying wholesale into the mythologies of easy job opportunities, however, are the sobering data on (for lack of a better term) "acceptance rates." As the local hotel-casinos readily (and even eagerly) broadcast, supply frequently outpaces demand: New hotel-casino projects routinely brag about the strikingly large number of applicants for new jobs. Other tales—such as the (accurate) one that many employees in the local service industry need to have a Sheriff's Card, which usually prohibits those with criminal backgrounds from working—are less often told, but no less potent. Though the quantitative data on employment rates in Las Vegas paint a picture that other communities envy, Borchard's qualitative data/stories reveal a more nuanced picture that includes the lives of those who do not find work in Las Vegas.

In the last sections of the book, Borchard very insightfully infuses the goings-on with classic sociological perspectives. He unflinchingly examines violent crime that targets the homeless, and connects these observations with similar arguments made famous in William Julius Wilson's 1987 classic *The Truly Disadvantaged* (about crime victims "left behind" after upwardly mobile populations flee the inner city). He then proceeds to link Wilson's more conventional quantitative analyses with Elijah Anderson's (1999) ethnographic accounts of how extremely poor people often understandably adopt aggressive postures to deal with the constant threat of crime in their world. This sort of skillful quantitative-qualitative linkage in sociology (or in any other field, for that matter) is truly rare, and it provides a fascinating and illuminating final framework for those who have followed Borchard's work to the end.

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[i] A notable and unfortunate omission: the tourism industry is never given a chance to speak directly to these issues. Critical as we might be of their perspectives, a monograph that relies upon in-depth interviews should have made an effort to include these voices as well.

book review

Roll the Bones: The History of Gambling

By David G. Schwartz. (2006/2007). New York: Gotham,
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Gambling researchers tend to be very much focused on the here-and-now. It often seems that the entire gambling world began in our lifetimes, or certainly within the time frame between the first third of the 20th century and the present. This sense of currency is reinforced by the new casino centers—Las Vegas, Macau, Atlantic City, Indian Country, Biloxi, Singapore—and by the new technologies that characterize so much of this quarter trillion dollar a year global industry: electronic gaming devices, internet gaming and wagering opportunities, televised Texas Hold 'em tournaments, office betting pools, and multi-state and multi-country lotteries with payouts in the tens or hundreds of millions of dollars, pounds, or euros.

But the reality, as the clichés often state, is that gambling has been around as long as humankind. *Gambling is the second oldest profession. Dice were found in the tombs of the ancients. Roman soldiers cast lots for Jesus' garments at the foot of the cross.* Gambling, it seems, has had a role in virtually every civilization, from the earliest of times. It is sometimes important to be reminded of this reality. *Roll the Bones: The History of Gambling* does just that.

One has to be either a very ambitious young scholar—or Mel Brooks—to set out to write the History of the World of anything from the beginning of time to the present. But that is essentially what David Schwartz has done with *Roll the Bones*. In light of his style and productivity (this is his third book in four years) Schwartz clearly falls into the former category. Furthermore, on occasion, he does a good job at emulating Mr. Brooks as well.

From archaeological digs in Mesopotamia and ancient Egypt where primitive dice and other gambling paraphernalia were to be found, to the modern casino and pleasure palaces of the Wynn, The Venetian, Caesars Palace, MGM Grand, and cyberspace—where millions of consumers test their luck and take their chances every day—Schwartz takes the reader on a breathtaking journey of the world of gambling. The book is filled with anecdotes of great wins and losses; famous winners and tragic losers; morality tales involving bad endings; encounters with scoundrels, cheats, victims, mobsters, entrepreneurs, and degenerate gamblers of various shades; detailed descriptions of games, wagers, and the tools and implements of gambling; and brief visits to romantic, mundane, and predatory gaming venues over the centuries (e.g., in 18th century London, gambling clubs along Piccadilly and St. James Streets were referred to as "hells." The more down-market gambling clubs to be found elsewhere in London were called the "lower hells.")

Like an extended Grand Tour with Schwartz as tour guide, *Roll the Bones* escorts the reader throughout Europe in centuries past to such noteworthy venues as Venice, London, Paris, Monte Carlo ("A Sunny Place for Shady People"), Baden-Baden, Bath, and Spa; to pre-colonial America, New York City and the Old West; to Australia, China, Korea, Hong Kong, Macau, and Japan. After a whirlwind description of emerging casino and gambling industries that have sprung up by the beginning of the 21st century in virtually every corner of the world, Mr. Schwartz brings the journey to an end in the current-day United States.

The book is rich in detail, short on generalizations, and nearly void of moralizing. Nonetheless, vestiges of all the modern debates on whether gambling should be legalized can be found herein. After scanning this history, one cannot deny the inherent popularity of the various "sporting" activities; the allure of gambling's "forbidden pleasures"; the substantial capital investments and economic stimulation that mercantile gambling has fathered; or the tax revenues and economic rents that governments or opportunistic officials (such as Voltaire) captured, legitimately or otherwise, from gambling schemes. On the other hand, one cannot ignore the price often paid in terms of lives ill-spent; the obsessive grip that gambling has commanded over its less fortunate victims, including the damage done to many households' financial stability; and the compromises of principles and ethics that have occurred in and around gambling activities over the ages.

Discussions about the origins of dice, cards, and other gambling devices comprise a significant part of various chapters, as do descriptions of many key players in the gambling world such as bookmakers, card sharks, riverboat and other professional gamblers, shrewd business people, grifters, mathematicians, and advantage players. Schwartz notes the important link between unsuccessful dice wagers by the Chevalier de Méré and the origins of modern probability theory by Pascal and Fermat; the less important invention of the sandwich, put together to satisfy the hunger pangs of the Earl of Sandwich who could not otherwise be distracted from the gambling tables to take a more traditional meal; the origins of modern casino marketing—and lobbying for legal status for casinos—exercised by François Blanc in Bad Hamburg and later in Monaco in the mid-19th century; and the links of sports gambling to "fixes" and scandals as illustrated by Arnold Rothstein and the Black Sox scandal of 1919.

All in all, this is a well-researched, well-written, and entertaining tour of the world of gambling, providing a broad—but sometimes rushed—sweep of history of this absorbing activity that has never been fully acceptable, but nevertheless has had an important presence in the lives of many individuals and societies. Like so many of the characters that have famously engaged in gambling, the activity itself has always had the reputation of being roguish, seldom respected and accepted in proper circles, but nonetheless too intriguing and visible to be ignored. And like the bastard nephew who shows up at the family wedding and demands to sit at the bridegroom's side at the reception dinner, gambling continues to push for a respected position at the table. But, as history has illustrated time and again, the activity can continue to shock and titillate from generation to generation, regardless of its legal status. This is something we should all keep in mind as we try to monitor its course for the future.

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book review

Gambling for local authorities: Licensing, planning, and regeneration

Edited by Philip Kolvin. (2007). London: The Institute of Licensing.
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"The modest objective of this book is to provide a clear explanation of the law relating to the licensing and planning control of gambling clearly and succinctly, principally as it relates to local authorities" (p. ix). This objective is admirably achieved; in the words of a well-known U.K. advertisement, it "does exactly what it says on the tin" (Ronseal Ltd.). The book comprises 28 chapters, 22 of which fall within the seven parts grouped under the heading "The Gambling Act 2005." The eighth part, "Planning and Regeneration," comprises the final six chapters. The book's clarity stems not only from its structure but from its inclusion, in each chapter, of short paragraphs summarizing points of law pertinent to that chapter. A number of helpful charts (e.g., chapters 1, 11, and 19) also contribute to the book's clarity. In addition to the specific duties set out in the Gambling Act, the book also deals with those duties that arise under the planning legislation and under the general law concerning the delegation of functions and proper decision-making.

This is not, therefore, a book that addresses questions such as why do people gamble and how ought governments regulate it, or what can and should be done about problem gambling. It is a book written largely by practising lawyers (11 of the 16 contributors) for local authorities as they are called upon to discharge their statutory duties under the Gambling Act 2005. Readers from other disciplines will find more legal detail than they need, but those chapters that set out the framework of the new regulatory regime (part 1) and the legal structure in particular of the permissible gaming-machines will assist them to recognize the complexity of gambling regulation. To write about the contribution of machine gaming (or any other gambling medium) to problem gambling, it is important to understand not just how and why people play on machines, but also the legal context within which the machines are available for play. This book provides that context (chapters 6 and 13), and has been timely, as the Gambling Act 2005 became fully operational on September 1, 2007.

The Gambling Act 2005 brings about the most important changes to the regulation of *betting*, *gaming*, and *non-profit lotteries* in Great Britain since the regime currently governing these matters was introduced in the 1960s. Readers familiar with the commercial-gambling market in Britain before 2005 will know that a principal defect was that its regulation was fragmented between a number of agencies. (In part, this reflected the market segmentation between off-track betting, casinos, and machines [chapter 7], but technology, exemplified by *Fixed Odds Betting Terminals*, has elided the notoriously difficult legal distinctions between gaming and betting, such that only a single regulator can hope to exert leverage over the entire market.) Of these agencies, the Gaming Board was the most prominent, but its remit was limited. It did not, for example, have any responsibility for betting markets. Neither did the Board enjoy the range of sanctioning powers now normally given to regulatory agencies, such as the power formally to warn, to impose financial penalties, and, in extreme cases, to prosecute. These regulatory weaknesses have been addressed in the creation of a single regulator, the Gambling Commission (chapter 2). The Commission is able to monitor the entire market both horizontally (the provision of a particular gambling medium throughout the country) and vertically (the provision of particular gambling media by individual regulatees). Its capacity to monitor compliance is complemented by extensive enforcement powers (chapters 18 and 19). Another welcome change is that for the first time in British law there are now statutory definitions of all the key terms—gambling, gaming, betting, and lottery—although, as chapter 6 helpfully points out, there remain some overlaps between them.

Readers may also be familiar with the mix of central and local controls that characterized gambling regulation under the old law, particularly as it applied to casino gaming. This mix is maintained under the new law, wherein there are three kinds of licences: operating and personal licences (chapters 9 and 10), which are issued by the Gambling Commission, and premises licences, which are issued by local authorities (chapter 11). Under the old law the licensing authority comprised licensing justices; now it comprises local authorities (chapter 4). While this book lightly touches upon the Gambling Commission's statutory duties (and the role of the Gambling Appeal Tribunal, which hears appeals of the Commission's decisions [chapter 3]), it is, as was noted, primarily addressed to local authorities' exercise of and compliance with their statutory duties. An important area that is therefore not addressed in this book is remote gambling, for the simple reason that local authorities have no duties with regard to it, their interest being only in "bricks and mortar" venues.

The Act commences with a statement of three licensing objectives that are intended to underpin its implementation. These (section 1[a]) are as follows:

- Preventing gambling from being a source of crime or disorder, being associated with crime or disorder, or being used to support crime.
- Ensuring that gambling is conducted in a fair and open way.
- Protecting children and other vulnerable persons from being harmed or exploited by gambling.

As the book observes, compliance with these objectives does not fall evenly upon the Commission and on local authorities (chapter 8C and 8D). The Commission is obliged to take them into account when discharging its statutory duty under section 22 (to permit gambling that it "thinks is reasonably consistent with the pursuit of" those objectives) and under section 23 (to publish a Statement of Principles). But they may be displaced: Even if an applicant for an operating licence met the conditions, the Commission would surely be entitled to refuse the application if it found the applicant's "suitability" wanting (section 70). By contrast, local authorities are under no overriding duty to pursue the objectives. Some provisions require them "to have regard" for the objectives, while others permit the authority to ignore them (all helpfully listed on page 98).

In a reflection of the obligation imposed on the Commission by section 23, section 349 of the Act requires a local authority to publish a three-year statement of the principles it proposes to apply when exercising its functions. And when it exercises them, it is also required to take account of the Codes of Practice that the Commission publishes concerning the manner in which facilities for gambling are provided (chapter 2). These concern a variety of matters, such as advertising (chapter 20) and the protection of children.

Chapters 11–17 deal with the licensing authorities' principal functions. These are, first, to issue premises licences to applicants holding operating (and personal) licences in respect of premises to be used for the purpose of providing facilities for gambling. There are five types of premises' licences, and in deciding whether to grant one a local authority must comply with a range of statutory duties. Some of these are straightforward; for example, a licence can be granted only in response to an application made by a person holding an operating licence (section 159[3]). More demanding is the determination (under section 158) of the cogency and relevance to the issue of a licence of the objections made to an application by "an interested party." This is someone who lives sufficiently close to the premises to be likely to (or does) have a business interest that might be affected by the premises' use. The determination of these matters is likely to be controversial (chapter 11.18 et seq). Local authorities are also required to hold hearings where representations have been made under section 161, and there are detailed rules with which they must comply.

The licensing authorities' main function, which involves the exercise of a considerable discretion, is set out in section 153, and is rightly identified (para. 11.77) as giving rise to "fundamental issues." The section provides that a licensing authority "shall aim" to permit the use of premises for gambling so far as it thinks the application meets these criteria:

- Accords with any relevant section-24 codes of practice and any relevant Commission guidelines issued under section 25.[i]
- Accords in a reasonably consistent manner with the licensing objectives.
- Accords with its own statement of principles.[ii]

Like the Gambling Commission, a local authority's exercise of its statutory duty is cast in terms of aspiration: It "shall aim" to bring about certain legal consequences. As the book observes (paras. 11.79–11.80), this does not sit happily as a statement of the nature and scope of a discretionary power of a quasi-judicial body. Chapter 11 helpfully considers in detail how a licensing authority should go about the exercise of its statutory discretion. It concludes that taken as a whole, an application that fails to meet one of the section 153 criteria is likely to, but need not inevitably fail; conversely, complete compliance does not mean the grant of a licence. Recall the language the authority "shall aim." This does not mean that the authority "shall permit" (as the Act could have said) an application that ticks all the section-153 boxes. However, the authority will, of course, need to be very careful how it states its reasons for its decision.

Licensing authorities deal, secondly, with a range of what might collectively be called *smaller scale gambling operations.* These are regulated in a variety of ways: for example, registration with the authority (lotteries: chapter 14), occasional and temporary use notices (chapter 12), and permits (small-scale gaming machines: chapter 13).

The book's final part deals with gambling, planning, and regeneration. When the Gambling Bill was in its genesis, and then in parliamentary debate, there was substantial concern about what might broadly be called gambling's environmental impact, in particular as associated with casinos. On the one hand, many critics feared that, by enabling operators to open casino premises offering a much wider range of gambling facilities than is currently the case, towns and cities would be covered by "gaming sheds" that would create a variety of social problems. On the other hand, the government (eventually) came to the view that such developments could also bring tangible economic benefits for the areas in which they were located. Three types of new casinos were approved (*small*, *large*, and *regional*; section 175[1]–[3]). An independent panel called the Casino Advisory Panel was established under section 175(4) to advise the government on their location. Following acrimonious exchanges during the 2004/5 parliamentary session, the government was forced to impose new limits as follows: one regional casino, eight small casinos, eight large casinos. Acrimony resurfaced in 2007 following the Panel's announcement that it had selected Manchester to be the location for the regional casino. The government failed to secure a vote in Parliament to implement the 17 new casinos, and in July the new Prime Minister, Gordon Brown MP, announced that the government would not proceed with the regional casino.

Nevertheless, 16 new casino locations have been identified. These casinos will be larger than almost all of the pre–2005 Act venues, and they will all be expected to yield *planning gain*. This is not a legal term, but refers to the benefits that may be associated with the grant of planning permission. Like all new or converted commercial developments, gambling premises must meet the general requirements of planning law. These are set out in chapters 23 and 24. One of the consequences of the earlier concern about *stealth casinos*, that is, the conversion of leisure premises such as a cinema or a concert hall into a casino, was the specification in April 2006 of casinos as falling outside the standard Use Class system.[iii] "Major Gambling Proposals" (the title of chapter 25) predicts that the applications for the 16 new large and small casinos will significantly test existing planning policies and may lead to their modification. These policies are both local and national in their reach, and for "town centre uses" set five tests that the local planning authority must address. A striking difference between the planning and the licensing decision is that whereas the *planning* authority is required to consider the "need" for the casino, by section 153(2) of the 2005 Act the *licensing* authority is expressly forbidden to have regard to the expected demand for the proposed facilities.[iv]

Planning gain (chapter 26) is achieved in routine cases by the use of statutory conditions that the planning authority imposes as part of the permission. The applicant's willingness to invest in development above and beyond the immediate location is not to be confused with "buying" the permission. But in terms of Gambling Act 2005 gain, as chapter 26 puts it, "if an operator is prepared to offer the moon in return for a Gambling Act casino licence, nothing forbids the licensing authority from accepting it"(para. 26.22).

The final chapter addresses more broadly what might be meant by *regeneration* and how the economic rents that flow from restrictions on casino expansion may be captured. Professor Peter Collins, the chapter's author, is well placed to speak on these matters, and offers a model by which the value of any required regeneration may be calculated, taking into account the likely increase in income once the new venue is in business. He also comments on the difficulties that the government faced in creating the conditions for the best possible test of the social impact of the new breed of casino. Chapter 25 notes the apparent similarity between this and another of the statutory tests that a planning authority must apply, namely, the impact of the proposed development. But problem gambling, which continues to be a major concern for the government and a major reason for the social-impact test, is not a matter that obviously figures in planning law. And, this chapter concludes, it is arguable whether another 16 new casinos would be sufficient to provide the evidence that the government seeks.

No doubt that question is not one that will figure in the determinations that licensing authorities will be routinely making under the Gambling Act. For these routine and frequently controversial decisions, this excellent book will be an indispensable guide.

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[i] Gambling Commission, Guidance to Licensing Authorities (2nd edition, June 2007).

[ii] See Gambling Act (Proceedings of Licensing Committees and Sub-committees) (Premises Licences and Provisional Statements) (England and Wales) Regulations 2007, SI 2007/173.

[iii] Section 166 of the Act permits a licensing authority to "resolve not to issue casino premises licences."

[iv] Section 210 of the Act provides that a licensing authority is not to have regard to the outcome of a planning application.

book review

No-limit Texas hold'em: A complete course

By Angel Largay. (2006). Toronto ON Canada: ECW Press,
ISBN: 978-1550227420. Price: $27.95 CDN, $24.95 U.S.

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The book *No-Limit Texas Hold'em* authored by Angel Largay is subtitled *A Complete Course*. This subtitle is misleading. The book does not discuss either tournament play or medium- to high-limit cash game play. It is aimed at low-stakes, no-limit cash games. I agree that such games have a strategy distinct enough to merit a full book on how to play them. I also agree that quite a bit of the knowledge presented in such a book applies to other areas of no-limit play. However, this does not excuse using a subtitle that is clearly aimed at widening the range of potential purchasers rather than describing the contents of the book.

Another aspect of the book makes it less than complete. Even though this is not mentioned anywhere in the book, it is evident that the author plays in and discusses only live games. Nowhere is Internet poker addressed, even though there is a substantial difference between live and virtual poker.

This book could be considered "complete" in the sense that it starts out talking to the poker player who does not know how to play hold'em at all. Before the big poker boom of the 21st century, someone taking up no-limit hold'em would undoubtedly have had prior experience at limit hold'em, so that he or she would certainly be able to do rudimentary things such as reading the board properly. Nowadays, enough people go directly to no-limit hold'em without knowing how to play any kind of hold'em that it is necessary and appropriate for a book aimed at the low-limit player to start out by assuming that the reader may well know zero about the game.

The information in the book about the author is meagre. It claims that Angel Largay is a "world-famous instructor at the Las Vegas Poker Boot Camp" and a "professional cash game player ", but lists few of his specific accomplishments. Since this is Mr. Largay's first poker book, and he is not well known in the poker world, one would think more would be told about his background than that he now lives in Las Vegas and has previously lived in Alaska and California.

Mr. Largay has a good command of English (though his style is a bit too breezy for my taste), and his book is well organized, so I expect some teaching background. His discussion of mathematical issues in poker is quite good, and some tables in the back appear to be both accurate and valuable, so he evidently has both math and computer skills. I do not understand why he would not give us more information on what he did before he seriously took up playing poker.

Despite the extensive discussion of poker math, Mr. Largay also puts a lot of emphasis—as he should—on people skills such as reading opponents and adopting the proper strategy for each opponent type. He presents information using a good blend of theory and illustrative hands. In these respects, I think *No-Limit Texas Hold'em* is a well-balanced book.

I am sure the bottom line on any poker book is whether the advice in it is to be trusted. Most of the advice in this book is good, but the author is no Dan Harrington or T. J. Cloutier. I found some things in it that I did not care for. Here is a sampling.

When the pot odds are not adequate for calling on a draw, you need to look at the implied odds. Mr. Largay suggests that you call when the player is a loose calling-type player, but fold if the opponent is a really tight player, because your hand is not going to get paid off. For example, he describes a hand in which the opponent is a tight player who has raised preflop on a probable big pair, you have called on a 6c-5c (which I consider a bad play when no sandwiched players have called ahead of you), and the flop comes 8s-4d-2c. Money is deep—the pot is $50 and you both have started the deal with $500—and the opponent bets the size of the pot. What do you do?

Here is what Mr. Largay says: "Because this player is very tight, if you call this flop bet and he doesn't improve on the turn, he will check. If you bet $150 on the turn, it is likely that he will fold even with AA or KK. If he won't pay you off when you make your hand, then you aren't getting the implied odds to call either". I suggest that if you are facing a player who is going to fold on the turn if you apply heat, your chances are even better than if you are facing a player who is going to pay you off when you hit. Mr. Largay does suggest a flop-raise might be right, but says, "If you call when you are getting insufficient odds, then you'll go broke".

I admit being partial to raising, but if the preconditions are as he says, a call is also fine. If the opponent will probably check-fold on the turn, as the author says, then calling with the intention of taking the pot away from him on the turn is perfectly good poker. I should also say that if you are going to fold when you get this nice flop, why did you call the preflop raise in the first place?

This is not the only place where the author—who is partial to a raise-or-fold strategy—overlooks the value of calling when you have position and a draw and a good chance to outplay the opponent later. He dismisses a straight-draw when a flush-draw is on the board. However, fighting a preflop raiser with this kind of board while holding a straight-draw is much easier when there is a flush-draw. He is more likely to pay off the straight, and you can represent the flush if it comes.

I also did not care for some of the suggested betting amounts. Here is an excerpt about how to play a big-pair preflop:

> When there is one early position limper for $5, I'll raise to about $40, which is about two times the size of the pot. An amateur who limps in early position has a hand that he will have difficulty throwing away for $35 more, particularly against a player like me who has a reputation for splashing around.

I think it unlikely that someone who limps for $5 is going to call a raise this big, regardless of who does it. The normal raise here is to $20 or $25, and all that raising a lot more is likely to do is have you win only $12 on your bread-and-butter hands. Even if the author is actually able to get, somehow, the kind of action on a huge raise that he claims he can get, this is not going to work for the reader of the book.

To sum up, I think the book is well written, well organized, and has a lot of good information. On the other hand, I do not believe the author is a top player, and some strategies in the book are dubious. Should you buy this book? The answer depends on who you are. For someone who can mentally separate the wheat from the chaff, *No-Limit Texas Hold'em* may well be a worthwhile investment, but it is not a poker book that I would unhesitatingly recommend for everyone.

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This article was not peer-reviewed.

Bob Ciaffone, the author of four poker books, finished third in the 1987 Poker World Championship event. He has been a professional poker player, writer, and teacher for most of his life. As of April 2007, his four best students had won well over two million dollars in tournament prize money.

Competing interests: None declared.

web site review

"A compilation of gambling-related resources available online," and the Alberta Gaming Research Institute, http://www.abgaminginstitute.ualberta.ca/ (last accessed May 30, 2007)

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The Alberta Gaming Research Institute (AGRI) is a joint enterprise of the Universities of Lethbridge, Calgary, and Alberta; is fueled by core support from the Ministry of Alberta Gaming; and is intended primarily "to support and promote research into gaming and gambling in the Province," but also aims to achieve international recognition for its research results and as a convener.

The AGRI Web site is primarily a catalog of study activities and research communications sponsored by or underway at AGRI. The site is designed for academically oriented researchers, bearing little of immediate value to help-seekers or clinicians looking to pinpoint services or techniques. The coverage includes AGRI's flagship annual Banff conference, an accumulating portfolio of competitively awarded research projects featuring such well-known psychological investigators as AGRI principals David Hodgins and Robert Williams, and abstracts of all gambling-related news stories in the major dailies in Edmonton, Calgary, Lethbridge, and Toronto.

Of special interest to researchers within and outside Canada are the richly hyperlinked library resources developed and maintained by AGRI librarian and information specialist Rhys Stevens. These include roughly 20 comprehensive research bibliographies on economic, sociocultural, biopsychological, and policy topics; descriptions of and connections to a global array of gambling conference proceedings, gambling journals, and other on-line catalogs and bibliographic collections in Canada; links to many other gambling research newsletters and institutes worldwide (the listing is heavily Anglophone, but that is perhaps a reasonable representation of things as they are); and a fine list of core source references on such matters as pathological gambling prevalence, other statistics, and official policy reviews.

Among the more universal products of the library's activities is a series of periodic e-mailed updates of new gambling studies, reports, events, and miscellanea under the title, "A compilation of gambling-related resources available online."[1] These emailed bulletins emerge roughly bimonthly and include listings (with hyperlinks to all of the cognate URLs) under the following headings:

- *Online Research & Reports*, which features new entries in the worldwide (albeit rich in North American) "gray literature" of final reports to and from official governmental or other agencies concerned with gambling, noted here as they enter the AGRI Gambling Literature Database, comprising "publications from government, academics, business and industry which are not controlled by commercial publishers";
- *Conferences, Events & Funding*, a prospective listing of upcoming gatherings on various continents plus (under *Funding*) active calls for research proposals;
- *News/Newsletters/Journals*, which includes press releases, significant news stories (not restricted to Alberta/Canada), calls for papers to special issues, and often a mini table of contents for new numbers of research staples such as the *Journal of Gambling Studies*, *Gaming Law Review*, and (of course) *JGI*; and
- *Miscellaneous Items of Interest* such as new books, trade publications, conference proceedings, survey databases, Web site launches, and TV shows.

Subscriptions to this nicely selected series of compilations may be entered at http://www.mymailout.com/MyMailout/Subscribe.aspx?m=2706.

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[1] Note that the "compilation" is not to be confused with AGRI's bimonthly four-page newsletter, "Gambling Research Reveals," available at http://www.abgaminginstitute.ualberta.ca/newsletter.cfm, or with Rhys Stevens's *Gaming Research Weblog—Items of interest to gambling researchers*, a weblog/feed that covers a subset of the compiled content on a seriatim basis, at http://gamingresearch.blogspot.com/.