

**Townshend, Philip**, Problem Gambling Foundation of New Zealand

- **Title:** Understanding the Flow of Money through Slot Machines: Ask Big Brother
- **Presentation Date:** Thursday, May 28, 8:30-10:00
- **Abstract:** Independent electronic monitoring (EMS) of slot machines became state wide in New Zealand (NZ) in 2007 and now provides us with an unprecedented level of information on the flow of money through machines. These data provide an opportunity for insights into both the economics and psychology of the gambler. Some astounding data has emerged from the EMS system for example on average every \$2 coin in circulation in NZ cycles through a slot machine 6 times a year and every \$20 in circulation note cycles 1.6 times a year. In this presentation the community funding model of slot machine gambling and the unique public health response to gambling issues in NZ is described and the most recent EMS data are presented. The implication of these data for Return to Player Ratios is discussed and the data are explored in the context of existing information on the geographical relationship between gambling venues and community economic deprivation data. These data suggest possibilities for identifying some of the factors that contribute to community resilience and ways of measuring the contribution of slot machine gambling to the community within the NZ structure.

**Turner, Nigel E.**, The Centre for Addiction and Mental Health, Toronto, **Denise L. Preston**, Correctional Service of Canada, **Steven McAvoy** and **Crystal Saunders**, The Centre for Addiction and Mental Health, Canada

- **Title:** The Relationship of Problem Gambling to Criminal Behavior in a Sample of Canadian Male Federal Offenders
- **Presentation Date:** Thursday, May 28, 2:00-3:30
- **Abstract:** This paper examines the prevalence of moderate and severe problem gambling in a sample of 254 incarcerated Canadian male federal offenders. The prevalence of disordered gambling was measured using the PGSI, DSM-IV-TR, and SOGS that yielded estimates of 9.4%, 6.3%, and 13.0% respectively. Problem gambling was significantly correlated with income producing offences, but not with violent offences. The majority of severe problem gamblers (65.2%) and a fifth of the moderate problem gamblers (20.0%) reported that their criminal activity was a result of their gambling (e.g., to pay off debts). Just over a third (36.7%) of the moderate problem and over a fifth (22.6%) of the non-problem gamblers reported that gambling was part of their lifestyle. Based on these findings there appears to be a need to offer problem gambling treatment services to offenders in order to help them break the cycle of gambling, debt and crime

**Turner, Nigel E.**, The Centre for Addiction and Mental Health, Toronto, **Keith D. Horton**, Wilfrid Laurier University, Canada, and **Barry Fritz**, Quinnipiac University, Connecticut

- **Title:** Does Pattern Learning Play a Role in the Development of Problem Gambling?

- **Presentation Date:** Tuesday, May 26, 2:15-3:45
- **Abstract:** This paper reports the findings of a study of pattern learning and gambling with non-problem (n=100), moderate problem gamblers (n=35), and severe problem gamblers (n=38). Two probability learning tasks modeled after gambling games and an artificial grammar task were used to explore how people learn patterns. Problem gamblers learned the patterns as well as the non-problem gamblers, but showed less persistence during the extinction phase, and made more systematic errors during the grammar testing. Together these results suggest that severe problem gamblers may develop a gambling problem because they use explicit learning strategies to figure out how to beat the game.

**Turvey, John, Brad R. Humphreys, and Brian Soebbing**, University of Alberta, Canada

- **Title:** Does International Simulcast Wagering Reduce Live Handles at Canadian Racetracks?
- **Presentation Date:** Wednesday, May 27, 4:00-5:30
- **Abstract:** Interest in horse racing, measured by attendance, pari-mutuel wagers, and racetrack 'handle', has declined for years (Thalheimer, 1995). The industry responded by harnessing technology in an effort to halt or reverse this trend, progressing from licensed off-track betting facilities to televised intertrack wagering (ITW) and advance-deposit Internet wagering (ADW). Recent proliferation of simulcast wagering in teletheatres permits simultaneous wagering on multiple international racetracks. Despite evidence from wagering patterns suggesting a preference for high purse races and numerous entries (Ray 2002; Kahane 2007), these changes have had little effect on total handle and reduced the live handle (Kahane, 2007), especially at harness tracks (Thalheimer, 1995). The decline in the racing industry has impacts beyond the track. Governments and racing authorities have acknowledged the long tradition of horse racing, and recognized its social and economic value in the US and Canada. In Alberta alone, over 8000 people in urban and rural areas are employed in horse racing and breeding. The Alberta Government supports industry growth, investing 36 million CAD in the Racing Industry Renewal Initiative in 2007 (HRA Annual Report, 2007). This paper investigates the impact of expanding wagering opportunities on Canadian tracks. Exposure to high-profile American thoroughbred racetracks presents attractive purses and fields; foreign wagering markets stand to capture increasing amounts of Canadian wagers. We examine handle data from all Canadian tracks since 2000 to explore this phenomenon. Increases in remote wagering opportunities in Canada over this period present an interesting setting for examining the relationship between live and simulcast betting.

**Umbach, Dale, and John Emert**, Ball State University, Indiana

- **Title:** Inconsistencies of Wild-Card Poker
- **Presentation Date:** Wednesday, May 27, 10:30-12:00
- **Abstract:** The game of poker is played in many varieties throughout the world. The phenomenal popularity of Texas Hold-Em has brought poker out of the

“Backroom” and into our national (international) consciousness. Virtually all poker games, however, have the basic commonality that the player forms the best five-card hand possible. It is only to these forms of poker that this talk applies. The categories of hands, *straight flush*, *four of a kind*, *full house*, etc., are ranked based on the probability of being dealt such a hand: the smaller the probability for the hand, the higher its value. This principle is central to the game of poker. It is not hard to check, for example, that  $\Pr(\textit{three of a kind}) = 0.021129$ , while  $\Pr(\textit{two pair}) = 0.047539$ . This is precisely why *three of a kind* is a more valuable hand than *two pair*. If one introduces “wild-cards” to the game, this principle suffers greatly. If even one “wild-card”, say a joker, is added to the deck, the traditional ranking of the categories of hands is not in line with their probabilities. For example, with one joker added to the deck, we have  $\Pr(\textit{three of a kind}) = 0.047838$  and  $\Pr(\textit{two pair}) = 0.0430542$ . Problems of this type are more prevalent if more “wild-cards” are introduced. Even more disconcerting is that one cannot simply reorder the categories of hands without again violating the principle.

**Vaughan Williams, Leighton**, Nottingham Trent University, United Kingdom

- Title:** Can Person-to-Person Exchange Betting Tell Us Anything about Electability?
- Presentation Date:** Tuesday, May 26, 10:45-12:15
- Abstract:** This paper examines a form of person-to-person exchange based around real-money betting on uncertain outcomes. The case study is the ‘state primary’ process during the selection of US Presidential candidates. Using an extensive data set from 2008, an examination is undertaken of the electability of candidates in the general election, as perceived by activity in the exchange, and of the extent to which this is influenced by performance in the primary elections.

**Volberg, Rachel A.**, Gemini Research, Ltd., Massachusetts

- Title:** Problem Gambling Research: What Have We Learned and What is Needed for Effective Industry Regulation?
- Presentation Date:** Thursday, May 28, 10:30-12:00
- Abstract:** Although research on problem gambling has expanded rapidly in the past twenty years, little of this work has had an impact on industry practices or on government regulation. Much of the research that has been done has focused on problem gambling prevalence which, while useful in planning for the provision of treatment services, provides a shaky foundation for the development of effective public health approaches to harm minimization and problem gambling prevention. This paper reviews the small but growing body of research that does provide a basis for effective legislative and regulatory decision-making. There is now good evidence that problem gambling can be highly transitory, that there are different and distinct trajectories into (and out of) problematic status, that adaptation to new forms of gambling can and does occur, and that changes in the availability of gaming machines and the introduction of responsible gambling features on gaming machines can affect gambling behaviour and help-seeking. While these emerging findings are

important, work is needed to improve understanding of the applicability of these studies from a regulatory perspective. The paper concludes with suggestions for improvements in the effective mobilization of research funds internationally and in the sharing of information across jurisdictions.

**Walker, Douglas M., and Peter T. Calcagno**, College of Charleston, South Carolina

- **Title:** The Casino Industry and Corruption of Public Officials
- **Presentation Date:** Wednesday, May 27, 8:30-10:00
- **Abstract:** Since the early 1990s many state governments have either legalized or have considered the legalization of commercial casinos. A primary reason for this is tight state budgets. Critics of legalized casinos often cite corruption, mob ties, and criminal behavior that may be associated with legalized casinos. Yet, the empirical evidence on these issues is limited. We test for a relationship between state level corruption convictions and casino activity. If there is a relationship, we seek to determine whether corruption is associated more with the legalization process, or the operations of casinos. The latter effect will be tested using corruption convictions and state gaming revenues. This study should provide some of the first empirical evidence on whether casinos are associated with corruption in the U.S.

**Walker, Douglas M.**, College of Charleston, South Carolina

- **Title:** Casinos and Crime: What does the Evidence Show?
- **Presentation Date:** Thursday, May 28, 4:00-5:30
- **Abstract:** A variety of studies have examined whether casinos cause crime. Yet, the evidence is mixed. This paper reviews the published literature. In addition it discusses two papers currently under review. The first (Reece 2008) is a study of crime in Indiana counties. This study corrects some of the problems from Grinols and Mustard's 2006 study, and finds evidence that conflicts with Grinols and Mustard's. Importantly, Reece accounts for casino activity as well as hotel rooms (a measure of tourism). The second new study discussed (Clark and Walker 2008) examines a nation-wide survey of 6,000 young adults. In an empirical analysis of their responses, Clark and Walker find that young adults who are more serious gamblers are also more likely to engage in criminal activity. The results of these two recent studies are set in the context of the published literature.

**Walker, Douglas M.**, College of Charleston, South Carolina

- **Title:** RIP Social Cost of Gambling Studies
- **Presentation Date:** Tuesday, May 26, 2:15-3:45
- **Abstract:** Despite two international conferences (Whistler 2000 and Banff 2006) dedicated to the social costs of gambling and their measurement, little progress has been made in the past decade in the identification and measurement of the social costs of gambling. This paper reviews the literature and advocates moving away from cost-benefit studies (may they R.I.P.), since many of "social costs" are inherently un-measurable. Rather, voters and policy-makers should be considering more basic issues like personal liberty, consumer sovereignty, and

the proper role of government in a free society. These issues/considerations seem to be going even more out of style as the U.S. appears to be moving toward socialism as the U.S. government partially nationalizes industries (financial and auto), spends record amounts of money it doesn't have, and takes other unprecedented actions that are clearly in conflict with the spirit of the U.S. Constitution, all in the name of stabilizing the economy.

**Wan, Penny Yim King**, University of Macau, SAR China

- **Title:** Attitudes Towards Secondhand Smoke at Work: Survey of Macao Casino Workers
- **Presentation Date:** Thursday, May 28, 4:00-5:30
- **Abstract:** Following conclusions from authoritative groups that secondhand smoke (SHS) is harmful to health, policy makers around the world have increasingly sought to remove SHS from workplaces through smoke-free legislation. Attentions to the issue within casino venues increase in the recent years due to the recognitions of the fact that casinos workers are frequently exposed to high levels of SHS, as smoking is a common activity amongst customers. They also work long shifts, in environments that often have little or no natural or artificial ventilation. This study investigated the knowledge, attitudes and experiences of casino workers in Macao, regarding exposure to secondhand smoke in the workplace by conducting structured face-to-face interviews with 377 local casino workers. Preliminary results indicated that majority of casino workers disliked exposure to SHS at work, recognized that SHS was harmful to health, and preferred to have a mixture of smoking and non-smoking customer areas. This study supports to the need for comprehensive smoke-free legislation around the world, covering all workplaces including casinos. In particular, it has revealed concerns about SHS among the large casino worker population in Macao and a desire for greater smoking restrictions across Macao's casinos.

**Wang, Wuyi**, Macao Polytechnic Institute, SAR China

- **Title:** Macao's Gaming System: Too Old or Too New?
- **Presentation Date:** Thursday, May 28, 8:30-10:00
- **Abstract:** What is old?  
Macao is the only jurisdiction in the world that the gaming corporations, not the locations, are licensed.
  - It is up to the administrative authority to determine how many casinos a concessionaire can own and run.
  - Casino bosses do not need to apply for a license.
  - What is New?
  - Macao's gaming industry has changed from an enterprise to a market.
  - The market is designed to be competitive.
  - A competitive market is supposed to be more productive than an enterprise.

**Wardle, Heather,** and **David Hussey,** National Centre for Social Research, United Kingdom

- **Title:** Positioning Problem Gambling: Findings from the English Adult Psychiatric Morbidity Survey 2007
- **Presentation Date:** Wednesday, May 27, 4:00-5:30
- **Abstract:** In the UK little is currently known about the presence of problem gambling and co-occurring disorders within the general community. Previous studies which have shown correlations between problem gambling and other co-occurring disorders have been largely based on clinical observations or purposive samples which have attendant problems of generalisability. In 2007, a problem gambling screen was included within the English Adult Psychiatric Morbidity Survey (APMS), a random probability survey designed to measure poor mental health and its correlates among adults in England. It collected data on a range of measures including social capital, social support, socio-economic classification as well as measuring a range of mental health disorders. The inclusion of problem gambling measures within this study provides a unique opportunity to explore these issues using a large, random probability based sample for the first time within any UK country. This paper will present key findings from AMPS to the international gambling research community for the first time and will provide information not only about the correlations between problem gambling and co-occurring disorders but will seek to position problem gambling within the range of family, social and environmental factors which may correlate with it. For example, research in Australia has found that problem gamblers tend to have lower levels of social capital and social support. Thus far, there are no comparable research findings in the UK. Headline results from AMPS are due to be published in January 2009. This paper will present key findings and secondary analysis of that data.

**Weinstock, Jeremiah,** and **Nancy M. Petry,** University of Connecticut Health Center and **David M. Ledgerwood,** Wayne State University, Michigan

- **Title:** Brief Interventions for Disordered Gambling
- **Presentation Date:** Wednesday, May 27, 10:30-12:00
- **Abstract:** Together, problem and pathological gambling is called disordered gambling and it is associated with a host of negative consequences. To date, the literature on brief interventions for disordered gambling is limited. Data from two randomized clinical trials of brief interventions for disordered gamblers will be presented. Ten-minutes of Brief Advice, 1 session of motivational enhancement therapy (MET), or 1 session of MET plus 3 sessions of cognitive-behavioral therapy (CBT) were investigated. Gambling was assessed at baseline, 6 weeks later, and 9-months later. The first study participants were recruited from the community (N=180). Relative to assessment only, brief advice was the only condition that significantly decreased gambling between baseline and Week 6, and it was associated with clinically significant reductions in gambling at Month 9. Between Week 6 and Month 9, MET plus cognitive-behavioral therapy evidenced significantly reduced gambling on 1 index compared with the control condition. The second study involved college students (N=117).

Relative to those assigned to the assessment only condition, those assigned to the MET condition showed significant decreases in a composite indicator of gambling severity and dollars wagered over time. Further, the MET condition significantly increased the odds of a clinically significant reduction in gambling and problem/pathological gambling status at the 9-month follow-up, even after controlling for baseline indices that could impact outcomes. The Brief Advice and MET+CBT conditions had benefits on some, but not all, indices of gambling. These results suggest the efficacy of brief interventions for reducing gambling among disordered gamblers.

**Weinstock, Jeremiah, and Nancy M. Petry**, University of Connecticut Health Center

- Title:** Professional and Pathological Gamblers: Similarities and Differences
- Presentation Date:** Tuesday, May 26, 4:15-5:45
- Abstract:** Approximately 1% of US adult population meets diagnostic criteria for pathological gambling. These individuals engage in a pattern of regular, heavy gambling that results in a loss of control, symptoms of dependence, and damage and disruption to their lives and the lives of their families. Meanwhile, professional gamblers, individuals whose major source of income is derived from gambling, also engage in a pattern of regular, heavy gambling supposedly without negative consequences. However, little is known about professional gamblers, their gambling behavior, consequences, and psychosocial functioning. This study investigates a sample of professional gamblers recruited from the community in comparison to a matched control sample of pathological gamblers. While data collection is ongoing and will be completed by April 2009, 22 professional gamblers and 12 matched pathological gamblers have already completed the study. The primary hypothesis is that the pathological gamblers will demonstrate poorer health, greater psychiatric symptoms, increased social and financial problems, and greater impulsivity and lifetime prevalence of substance abuse in comparison to the professional gamblers. Additional analyses will evaluate gambling specific behavior, diagnostic criteria met, cognitions, chronology, and self-efficacy in professional gamblers. This project represents an initial attempt to understand how two groups of individuals (i.e., professional and pathological gamblers) can each gamble regularly with supposedly differing outcomes, and the results of the study may ultimately lead to improvements in treatment for gambling problems.

**Weiss, Stephen M., Robert M. Demski, and George J. Backen**, Adams State College, Colorado

- Title:** Fantasy Baseball: A New Way to Gamble or Just Another Game?
- Presentation Date:** Wednesday, May 27, 4:00-5:30
- Abstract:** The controversy over whether fantasy sports should be considered a new form of gambling was investigated. Some researchers and counselors point to the possibility that fantasy sports fit at least a broad definition of gambling. For example, it is believed that many fantasy sports participants are involved in a gambling culture (Bernhard & Eade, 2005). Additionally, the Council on Compulsive Gambling of New Jersey (CCGNJ) views fantasy sports as a

“gateway” to traditional forms of gambling. CCGNJ counselors feel that participation in fantasy sports can lead a person from fantasy leagues to illegal sports gambling. The legal criteria for determining whether an activity is gambling, the predominance rule, was investigated by surveying fantasy baseball owners and participants who had never participated in fantasy sports. This rule states that an activity is gambling if outcomes are due more to chance than skill. Perceptions of skill-to-luck ratios were assessed and a content analysis of the specific types of skill and chance features involved in fantasy baseball was conducted. The results showed that fantasy baseball owners and non-owners judged outcomes to be more the result of skill than luck. The results appear to support the Unlawful Internet Gambling Enforcement Act of 2006, which does not include fantasy sports as an illegal form of gambling. Despite these initial empirical findings, there are additional questions that need to be answered before we can confidently exclude fantasy sports from gambling. A proposal for further theoretical work is offered and recommendations for future research are suggested.

**Weiss, Stephen M.**, Adams State College, Colorado and **Sherri Loubier**, Manchester Memorial Hospital, Connecticut

- **Title:** Gambling Behaviors of Former Athletes: The “Delayed Competitive Effect”
- **Presentation Date:** Wednesday, May 27, 10:30-12:00
- **Abstract:** Researchers in the field of gambling have used self-report measures in order to assess gamblers’ attitudes toward gambling. Despite their efficiency, self-report measures of attitudes often suffer self-presentation and social desirability bias when they are used to assess socially sensitive or stigmatized issues. This concern has led to a recent development of indirect, non-reactive measures of attitudes, which is based on response latency methodology, in psychology (Greenwald & Banaji 1995). These implicit measures of attitudes tend to reveal automatic, impulsive mental processes, whereas the self-report measures tap conscious, reflective processes (Strack & Deutsch 2004). Implicit measures have been recently used to assess individuals’ attitudes toward smoking, alcohol and high caloric food (for a review, see Wiers 2006). We used a set of response latency procedures to study attitudes toward gambling and explored how they can supplement self-report measures of attitudes. One hundred five university students who frequently engaged in gambling completed implicit measures of attitudes toward gambling as well as self-report measures of attitudes and gambling behaviour. Our finding indicates that implicit measures of attitudes are only moderately correlated with self-report measures. More importantly, we found that moderate-to-high risk gamblers held stronger ambivalent (i.e., positive as well as negative) attitudes toward gambling than low-risk gamblers. We discuss how implicit measures of attitudes help us investigate the automatic and impulsive aspect of gamblers’ mental processes.

**Wells, Richard**, Wells Gaming Research, **William R. Eadington**, University of Nevada, Reno, and **Derek Gossi**, Wells Gaming Research, Reno

- **Title:** Estimating the Impact of California Tribal Gaming on Demand for Casino Gaming in Nevada
- **Presentation Date:** Thursday, May 28, 10:30-12:00
- **Abstract:** Since 1990, the California tribal casino industry has grown from very small and insignificant to an industry with annual gross gaming revenues of about \$8 billion per annum. Over this same period, Nevada's gaming revenues have grown from approximately \$5 billion to around \$12 billion. This analysis examines the competitive links between California tribal gaming and the Nevada casino industry's economic performance from 1990 to 2008. A variety of methodologies are utilized to see if causality can be established between the growth and expansion of tribal casinos in California and the expansion or contraction of gaming in Nevada's major regions of Las Vegas, Reno, Lake Tahoe and Laughlin.

**Werthamer, N. Richard**, New York

- **Title:** Strategies for a Card Counter to Play Casino Blackjack: Comparative Value of Generic Basic, Counter Basic, and Count-Dependent
- **Presentation Date:** Wednesday, May 27, 8:30-10:00
- **Abstract:** At past conferences in this series, Marcus and I have independently proposed an approximate method for a blackjack card counter to play his hand. Termed Counter Basic Strategy, this method is much simpler to use than that, termed Count-Dependent, which fully adjusts the play to reflect the current true count, yet purports to realize much of its incremental value over the count-independent Generic Basic. Yet quantitating the performance of these methods relative to each other remains controversial – see the contributions of Marcus, Werthamer, Canjar and Ethier to the proceedings volume (1). Here I investigate the controversy in depth, aided by a streamlining of my previous computational procedures. I present detailed yield results for the three play strategies, with representative examples of house rules and player betting patterns. I spotlight those elements of the underlying analysis that are central to having generated the controversy, and to resolving it. Key is a dependence of optimal play on depth.

**Williams, Robert J.**, Alberta Gaming Research Institute, University of Lethbridge, Canada, and **Rachel A. Volberg**, Gemini Research Ltd., Massachusetts

- **Title:** Impact of Survey Description, Administration Format, and Exclusionary Criteria on Population Prevalence Rates of Problem Gambling
- **Presentation Date:** Friday, May 29, 10:30-12:00
- **Abstract:** The present study investigated the impact of survey administration format, survey description, and gambling behaviour thresholds on obtained population prevalence rates of problem gambling. A total of 3,028 adults were surveyed about their gambling behaviour, with half of these surveys administered face-to-face and half over the phone, and half of the surveys being described as a 'gambling survey' and half as a 'health and recreation' survey. Population prevalence rates of problem gambling using the CPGI were 133% higher in 'gambling' versus 'health and recreation' surveys and 55% higher in face-to-face administration compared to telephone administration. If people with

less than \$300 in annual gambling expenditures are not asked questions about problem gambling, then the obtained problem gambling prevalence rate is 42% lower. When all of these elements are aligned they result in markedly different problem gambling prevalence rates (4.1% versus 0.8%). The mechanisms for these effects and recommended procedures for future prevalence studies are discussed.

**Williams, Robert J., and Robert Wood**, Alberta Gaming Research Institute, University of Lethbridge, Canada

- **Title:** Policy Options for the Regulation of Internet Gambling
- **Presentation Date:** Thursday, May 28, 4:00-5:30
- **Abstract:** The first purpose of this presentation is to review the existing policies for the regulation of Internet gambling that are used around the world. These policies range from total prohibition to total legalization. In between are countries that permit certain types of online gambling, and/or restrict patronage just to jurisdictional residents, and/or restrict patronage just to non-jurisdictional residents. The second purpose of this presentation is to review the arguments for both legalization and prohibition. These include the difficulties in effectively prohibiting online gambling, the economic and player protection benefits of legalization, the inevitability of legalization, adaptation of the population to any harms that would be caused, the difficulty in ensuring that most online operators meet satisfactory player protection standards, the proportion of online gambling revenue that comes from problem gamblers, the impact of legalization on availability and increased use, and the nature of the relationship between Internet gambling and problem gambling. Some of these issues are reviewed in the light of evidence gathered from a recent online study of 12,521 gamblers conducted by the authors. In the end, it is concluded that the 'best' regulatory stance will depend somewhat on the circumstances of the individual jurisdiction. Examples are provided to illustrate this point.

**Whyte, Keith R.**, National Council on Problem Gambling, Inc., Washington D.C.

- **Title:** Warriors at Risk: Gambling and Problem Gambling in the Military
- **Presentation Date:** Friday, May 29, 8:30-10:00
- **Abstract:** Military personnel, who tend to be male, younger and prone to risk taking, are likely at higher risk for gambling problems. The United States military operates thousands of slot machines on overseas military bases. The presentation will review research on gambling and problem gambling in military and veteran populations and will discuss past and current efforts to address these issues in the face of ignorance, indifference and outright hostility at the Departments of Defense and Veterans Affairs. Objectives:
  1. Review gambling participation and problem gambling among military and veterans, including demographics, risk factors and co-occurring behavior.
  2. Discuss military gambling regulations and programs.
  3. Review history of prevention and treatment programs for military and veterans, including current efforts.

**Wong, Ken**, Hong Kong Polytechnic University, SAR China

- **Title:** Responsible Gambling Policies: Distinctive Challenges in Macau
- **Presentation Date:** May 26, 10:45-12:15
- **Abstract:** Until recently Macau residents were free from pathological gambling problems (Fong and Ozorio, 2005). Responsible gambling is a key element that casino operators must eventually work hard on to build sustainability (Lam D, 2007).

Some governments and industries have responded with responsible gambling codes of practice, typically a set of operator practices aiming to reduce harm to gamblers. This paper draws on a study into the implementation of such code by casinos in Macau. The study examined gambling providers' awareness (more specifically the casino managers), and implementation of the responsible gambling practices, and their views on its likely effectiveness. Various facilitators and impediments to implementing responsible gambling and to meeting its objectives were revealed, both in general and those distinctive to Macau.

It found that the managers and staff of gambling venues had little awareness of the responsible gambling practices, had implemented few of its provisions, and were generally sceptical about its potential effectiveness. Distinctive features of Macau's market context are identified as key reasons for this low implementation rate. This study contributes to gambling policy in Macau. Knowing the gambling operator's perspective on responsible gambling will allow policy makers to know the key success factors and the most voluntarily acceptable policies for the key stakeholders. It also provides a thorough analysis of the emergence of problem gambling and responsible gambling which are important issues to government, gambling operators and the community in Macau. This study can serve as a basis for future research on monitoring the changes in the stakeholder views on problem gambling and responsible gambling and this can be used to compare with similar studies in other markets.

**Yi, Sunghwan**, and **Vinay Kanetkar**, University of Guelph, Canada

- **Title:** Implicit Measures of Attitudes Toward Gambling
- **Presentation Date:** Wednesday, May 27, 10:30-12:00
- **Abstract:** Researchers in the field of gambling have used self-report measures in order to assess gamblers' attitudes toward gambling. Despite their efficiency, self-report measures of attitudes often suffer self-presentation and social desirability bias when they are used to assess socially sensitive or stigmatized issues. This concern has led to a recent development of indirect, non-reactive measures of attitudes, which is based on response latency methodology, in psychology (Greenwald & Banaji 1995). These implicit measures of attitudes tend to reveal automatic, impulsive mental processes, whereas the self-report measures tap conscious, reflective processes (Strack & Deutsch 2004). Implicit measures have been recently used to assess individuals' attitudes toward smoking, alcohol and high caloric food (for a review, see Wiers 2006). We used a set of response latency procedures to study attitudes toward gambling and explored how they can supplement self-report measures of attitudes. One

hundred five university students who frequently engaged in gambling completed implicit measures of attitudes toward gambling as well as self-report measures of attitudes and gambling behaviour. Our finding indicates that implicit measures of attitudes are only moderately correlated with self-report measures. More importantly, we found that moderate-to-high risk gamblers held stronger ambivalent (i.e., positive as well as negative) attitudes toward gambling than low-risk gamblers. We discuss how implicit measures of attitudes help us investigate the automatic and impulsive aspect of gamblers' mental processes.

**Yi, Sunghwan, and Vinay Kanetkar**, University of Guelph, Canada

- **Title:** Coping with Guilt and Shame after Gambling Loss
- **Presentation Date:** Wednesday, May 27, 2:00-3:30
- **Abstract:** In this study we studied how gamblers with different problem gambling tendency cope with guilt and shame after losing a significant amount of money on gambling. As with other instances of self-regulation failure, experiencing substantial gambling loss is likely to elicit aversive self-conscious emotions, specifically, guilt and shame. We hypothesized that problem gamblers experience more intense shame and guilt than low risk gamblers. Further, guilt and shame experienced after gambling loss are likely to elicit a relatively unique set of coping strategies. Specifically, we hypothesized that problem gamblers would use avoidant and defensive coping strategies more often than low risk gamblers. More importantly, based on recent psychological research on guilt and shame, we hypothesized that shame experienced after gambling loss would be dealt with greater avoidant and defensive coping strategies and less proactive coping strategies. In contrast, the opposite relation was hypothesized for guilt. Furthermore, we proposed the development of a self-report inventory of coping in order to assess gamblers' coping with aversive feelings in the event of gambling loss. 393 individuals who frequently engage in casino and/or on-line gambling activities participated in the on-line survey. Participants were eligible for the study if they had gambled away more than \$100 on a single gambling occasion within the last three months. After assessing guilt and shame experienced after gambling loss and other individual difference scales, we administered the 66 coping items specifically generated to assess coping efforts to deal with negative emotions in the gambling loss context. This dataset generally supported our hypothesis and enabled us to develop the 30-item *Coping with Gambling Loss* scale, which consists of 8 coping dimensions: seeking others' support, venting, non-disclosure, escape-avoidance, mental distortion, justification, acknowledging loss and planning.

**York, Nancy L.**, University of Nevada, Las Vegas, and **Kiyoung Lee**, Seoul National University

- **Title:** Air Quality of Nevada Casinos after Enactment of a Smoke-free Law
- **Presentation Date:** Thursday, May 28, 2:00-3:30
- **Abstract:** Purpose: To measure levels of particulate matter in casinos after enactment of Nevada's Clean Indoor Air Act (NCIAA). Methods: Samples of fine particulate matter were obtained in 16 Las Vegas casinos. Restaurant and gaming area samples were collected in eight strip and eight off-strip locations for a total of 32 venues. Fine particulate matter <2.5µm in diameter (PM<sub>2.5</sub>) was

measured discreetly for 30 minutes. Within each casino a restaurant and gaming area were tested on the same day using a battery-operated aerosol monitor. Results: Outside levels ranged from 1 – 8 PM<sub>2.5</sub> ( $M = 3.87$ ;  $SD = 2.37$ ), in restaurants values ranged from 5.0 - 101.5 PM<sub>2.5</sub> ( $M = 30.7$ ;  $SD = 22.93$ ) while gaming areas ranged from 20.0 - 73 PM<sub>2.5</sub> ( $M = 48.4$ ;  $SD = 15.89$ ). There was a significant difference in particulate matter between restaurants and gaming areas ( $t[30] = -2.54$ ,  $p = .017$ ). There was also a strong correlation between levels of restaurant particulate matter and gaming area particulate matter ( $r = .71$ ;  $p = .005$ ). No significant differences were noted between strip and off strip restaurants or gaming areas. Discussion: While no pre-law data is available for comparisons, it is important to note that air quality in all casino areas is above what the Environmental Protection Agency recommends as healthy. This information can be used to provide a source of data to policy decision makers when discussing potential alterations to the NCIAA and to provide quantitative pilot data to measure any future changes with the NCIAA.

**Young, Martin, David Lamb**, Charles Darwin University, Australia, and **Bruce Doran**, Australian National University (*being presented by Perry Morrison, Charles Darwin University, Australia*)

- **Title:** Mountains and Molehills: A Spatiotemporal Analysis of Gaming Machine Expenditure in Two Remote Australian Cities
- **Presentation Date:** Thursday, May 28, 8:30-10:00
- **Abstract:** Over the last several decades, electronic gaming machines (EGMs) otherwise known as ‘poker’ or ‘slot’ machines, have been steadily introduced into non-casino gambling venues (i.e. bars and clubs) in nearly all jurisdictions. This spatial dispersal is of immediate policy concern given the documented relationship between EGM play and gambling-related harm. However, while research has been conducted on the geography of EGM gambling in metropolitan contexts, less is known about the spatial patterns of EGM consumption in more peripheral areas. Therefore, an analysis of EGM expenditure over time was conducted in the main urban centres of Australia’s most remote and sparsely populated jurisdiction, the Northern Territory. Specifically, this analysis involved a spatial and temporal examination of EGM expenditure trends on a venue by venue basis over a five year period (2002-2007). Three general spatial patterns of EGM expenditure were identified: (i) suburban gambling complexes, (ii) city-centre gambling agglomerations, and (iii) opportunistic gambling nodes. These patterns are explained in the context of other spatial infrastructure including urban and residential development patterns, transport routes, and facilities of community congregation, all of which combine to mediate the spatial relationships between supply and demand. The sensitivity of existing harm minimisation tools, based on a generic capping of EGM numbers by venue type, may be improved by consideration of these spatial processes at the local level.

**Young, Matthew M., and Michael J. A. Wohl**, Carleton University, Canada

- **Title:** The Gambling Craving Scale: Psychometric Validation and Behavioral Outcomes
- **Presentation Date:** Wednesday, May 27, 8:30-10:00
- **Abstract:** Although craving is an important feature of problem gambling, there is a paucity of research investigating craving to gamble. A major stumbling block for craving research in gambling has been the lack of a methodologically sound, multidimensional measure of gambling-related craving. To address this need, we developed the multi-dimensional Gambling Craving Scale (GACS). In Study 1 ( $N=220$ ), a factor analysis revealed the emergence of a 9-item scale with three factors: *anticipation*, *desire*, and *relief*. Importantly, higher scores on the GACS subscales predicted greater problem gambling severity, depressive affect, as well as both higher levels of positive and lower levels of negative affect. In Study 2 ( $N= 145$ ), the factor structure of the GACS was confirmed using a community sample of gamblers. In Study 3 ( $N= 46$ ), GACS scores significantly predicted persistence at play on a virtual slot machine in the face of continued loss. The more participants craved to gamble the longer they engaged in play. Craving in the context of the progression and maintenance of problem gambling is discussed.

**Zborowska, Natalia** Vrije University Amsterdam, The Netherlands

- **Title:** Big Business in a Small State:Gibraltargambling.com
- **Presentation Date:** Friday, May 29, 10:30-12:00
- **Abstract:** Structural transformation of the world associated with a new technological paradigm based in information and communication technologies has contributed to the emergence of a global economy and network society in which relations between economy, technology, culture and politics are redefined and challenged (Castells, 1996). Gambling is no exception. Technological advances transformed not only the established ways of providing gambling but also the traditional approaches to gambling regulation. Since the launch of the first online gambling site in 1995, there has been a rapid growth in their number. In 2006 there were over 2500 sites owned by 465 different companies operating from 42 jurisdictions (Wood&Willams, 2007). However, online gambling still remains a controversial issue in many jurisdictions and the phenomenon of online gambling remains under-studied. Companies whose services reach across national borders and whose incomes amount to millions are involved into the process of legitimisation of the industry and its recognition as a part of the entertainment market. However, as argued by Levy-Faur, 2005, efficient markets do not exist outside the state and the society in which they operate, and may require efficient regulatory frameworks. Regulation can help to legitimise the industry by enhancing trust. The few European jurisdictions which have regulated online gambling play a vital role in this process, with Gibraltar being a key player. To illustrate this point, I examine the online gambling industry embedded into the broader national and European regulatory environment by focusing on its establishment in Gibraltar, and the interaction between the

industry and national actors. I also demonstrate how the industry presents itself and the strategies it adopts to influence policy makers.

**Zoric, Jelena and Marko Jaklic**, University of Ljubljana, Slovenia

- **Title:** Determinants of Demand for Gambling on Slot Machines: A Case of Slovenian Casinos
- **Presentation Date:** Wednesday, May 27, 4:00-5:30
- **Abstract:** Casino gaming has become an integral part of entertainment sector in many places across the world. Over the past years the industry has been experiencing rapid growth worldwide. The expansion of casino gaming is fuelled by the liberalization of public values concerning gambling, changes in modes of public governance and the potential of the industry to serve as a tool of economic development. Countries are increasingly liberalizing their legislation and adopting casino gaming in hope of reaping economic and developmental benefits that are usually associated with it. In many places legislation and regulation have taken place in the absence of solid knowledge of the responsiveness of the demand for casino wagering and associated revenues to location of casino facilities or to regulations designed to minimize perceived undesirable social impacts (Thalheimer & Ali, 2003). The following article examines the determinants of the demand for gambling in Slovenia which is a new EU member state with highly developed casino industry, catering mostly to visitors from neighboring countries (Italy and Austria) as well as to local residents. Monthly data on casinos over the 2002 – 2007 period are used to develop an econometric model of demand for casino-style gambling. Taking into account travel distance (i.e., accessibility) and population density a variable capturing the effect of market potential in the casino area is introduced in the model. The study can provide valuable guidelines with respect to location, size and pricing of gambling services as well as to assess the effectiveness of gambling and taxing policies in Slovenia.