

June 2010

ISSUE 6/10

In this issue:

- Comment: Looking Back: Perspectives on changes in research on gambling disorders 1
- Australian Productivity Commission publishes final gambling report 2
- Study investigates why low-income people buy lottery tickets 8
- US Internet gambling ban goes into effect 9
- EU court deals setback to online betting sites 10
- Parkinson's medication and compulsive behaviours: a strong link 11
- Parkinson's drug caused gambling addiction, Australian court hears 11
- University study finds 80 percent of poker players using drugs to enhance performance 12
- Study confirms link between income-generating crime and gaming expenditure 12
- Gambling addiction can be inherited equally by men and women, twins study reveals 14
- Camelot awarded European responsible gaming certification 15
- The number of games played can affect disordered gambling 16
- Forthcoming conferences 17
- Briefer Briefings 18

COMMENT

LOOKING BACK: PERSPECTIVES ON CHANGES IN THE FIELD OF RESEARCH ON GAMBLING DISORDERS

*by Donald W. Black, Adam S. Goodie, Harold Wynne and Anneke Goudriaan
Issues & Insights, June 2010*

The recently proposed changes to the definition of Pathological Gambling in the next edition of the DSM prompted us to think about the dizzying pace of change within the field over the past 30 years. In this month's *Issues & Insights*, four researchers were asked to reflect on the progress of the field by answering the question, "What has been the most significant change in how scientists look at disordered gambling over the past 30 years?"

Donald W. Black, M.D., Professor of Psychiatry, University of Iowa College of Medicine

The most significant change was the inclusion of pathological gambling (PG) in the Diagnostic and Statistical Manual of Mental Disorders, Third Edition in 1980. While disordered gambling has been around since antiquity, it had not been considered a formal disorder that psychiatrists and other mental health professionals could identify and treat. This set off a paradigm shift away from disordered gambling being considered strictly a social and behavioural phenomenon, to that of it being a neuropsychiatric disorder. Clinicians and researchers now had operational criteria that allowed them to identify homogeneous groups of subjects. This has led to an explosion in the amount of research in PG, bringing with it new ways to conceptualize its pathophysiology, genetics and treatment. Once considered a problem that could only be addressed through a 12-step program, cognitive behavioural therapy was soon applied, followed by medication treatment studies. All these advances have transformed the way PG is thought of by the general public, mental health professionals and researchers.

Adam S. Goodie, Ph.D., Associate Professor and Undergraduate Coordinator, Department of Psychology, University of Georgia

There has been an upsurge in the breadth, depth and maturity of the ways that scientists confront disordered gambling. Thirty years ago, the field was marked by a preponderance of prevalence studies and relatively raw, subjective clinical observations, which revealed a priority simply on establishing that disordered gambling was serious and widespread. (Prevalence studies are an essential piece of the puzzle, but sometimes it seemed the field did little more than count up numbers of people with gambling problems.) Today, research covers all the issues that characterize a serious disorder, and is conducted by individuals as adept with modern research methods as they are with clinical practice. Clinical research is enriched and informed by basic research in fields of social and cognitive psychology, neuroscience, behavioral genetics and others. More than any single research finding, the

maturing of the research culture has accelerated our progress in understanding and treating!

Harold Wynne, Ph.D., President, Wynne Resources

The "psycho-bio-social" perspective is frequently cited as the best way to understand behaviour associated with disordered gambling. The order of this term is illustrative of the evolution of research in the field; that is, 30 years ago psychologists started to examine this disorder by looking inside the individual gambler. In the past five to ten years, neurobiologists and geneticists focused on physiological evidence for answers. More recently, attention has been given to the social milieu wherein the disordered gambler lives day-to-day: the family, peer group, work place, cultural group and community. As gambling is a social activity, this latter focus on behaviour-influencing factors external to the individual is a welcome and significant contribution to understanding disordered gambling.

Anneke Goudriaan, Ph.D., Senior Researcher, Amsterdam Institute for Addiction Research, Academic Medical Center, University of Amsterdam

As I have been in gambling research for almost ten years now, my perspective relates to this period. I think that the field of gambling research has advanced in several ways: both in the depth and quality of studies, and in broadening research directions. There is now much more attention to pathological gambling and comparing it with other disorders. For example, the efficacy of successful treatment strategies for substance dependence is now being investigated in pathological gambling. Behavioural treatments that have been effective for substance dependence, such as contingency management (i.e., using rewards to encourage positive change), are being studied, and we now know that pharmacological treatments such as nalmefene (a drug used to blunt cravings for alcohol) can be effective for treating pathological gambling. Compared to ten years ago, there is greater insight into the neurobiology of pathological gambling. We now know that near-wins elicit similar reward areas in the brain as actual wins, and that diminished neurocognitive functions influence relapse negatively. I hope that we will be able to implement this new knowledge in developing new interventions and improving treatment strategies.

Issues & Insights is a monthly online column exploring the latest research, recent news and other timely topics in the field of gambling disorders and addictions. It is published by the Institute for Research on Gambling Disorders, a programme of the National Centre for Responsible Gaming.

AUSTRALIAN PRODUCTIVITY COMMISSION PUBLISHES FINAL GAMBLING REPORT

Some of the regulations and other measures introduced over the past decade to reduce harm to gamblers have been helpful, but some have had little effect, and some have imposed unnecessary burdens on the industry, concludes the Australian Productivity Commission's final report into gambling.

The inquiry report, which was released on 23 June, says that many submissions highlighted the poor state of the evidence used to justify policy decisions. There are continuing uncertainties about which gambling policies can effectively reduce harm. This is, in part, testimony to insufficient policy-focused research over the past decade and, in part, to the inherent difficulties in genuinely testing the effectiveness of social policies.

The key points in the report are as follows –

- The rapid growth following liberalisation of gambling in the 1990s has given way to more 'mature' industry growth.
 - Total recorded expenditure (losses) in Australia reached just over \$19 billion in 2008-09, or an average of \$1500 per adult who gambled.
- While precision is impossible, various state surveys suggest that the number of Australians categorised as 'problem gamblers' ranges around 115 000, with people categorised as at 'moderate risk' ranging around 280 000.
- It is common to report prevalence as a proportion of the adult population, but this can be misleading for policy purposes, given that most people do not gamble regularly or on gambling forms that present significant difficulties.
- The risks of problem gambling are low for people who only play lotteries and scratchies, but rise steeply with the frequency of gambling on table games, wagering and, especially, gaming machines.
- Most policy interest centres on people playing regularly on the 'pokies'. Around 600 000 Australians (4% of the adult population) play at least weekly.
 - While survey results vary, around 15% of these regular players (95 000) are 'problem gamblers'. And their share of total spending on machines is estimated to range around 40%.
- The significant social cost of problem gambling – estimated to be at least \$4.7 billion a year – means that even policy measures with modest efficacy in reducing harm will often be worthwhile.
- A more coherent and effective policy approach is needed, with targeted policies that can effectively address the high rate of problems experienced by those playing gaming machines regularly.
- Recreational gamblers typically play at low intensity. But if machines are played at high intensity, it is easy to lose \$1500 or more in an hour.
 - The amount of cash that players can feed into machines at any one time should be limited to \$20 (currently up to \$10 000).
 - There are strong grounds to lower the bet limit to around \$1 per 'button push', instead of the current \$5-10. Accounting for adjustment costs and technology, this can be fully

implemented within six years.

- Shutdown periods for gaming in hotels and clubs are too brief and mostly occur at the wrong times. They should commence earlier and be of longer duration.
- There should be a progressive move over the next six years to full 'pre-commitment' systems that allow players to set binding limits on their losses.
 - Under a full system, there would be 'safe' default settings, with players able to choose other limits (including no limit).
 - In the interim, a partial system with non-binding limits would still yield benefits, and provide lessons for implementing full pre-commitment.
- Better warnings and other information in venues would help. But school-based information programmes could be having perverse effects and should not be extended without review.
- Relocating ATMs away from gaming floors and imposing a \$250 daily cash withdrawal limit in gaming venues would help some gamblers. But the net benefits of removing ATMs entirely from venues are uncertain.
- Effective harm minimisation measures for gaming machines will inevitably reduce industry revenue, since problem gamblers lose so much. However, this would not occur overnight and the reductions may be offset by other market developments.
- Problem gambling counselling services have worked well overall. But there is a need for enhanced training and better service coordination.
- Online gaming by Australians appears to have grown rapidly despite the illegality of domestic supply. Gamblers seeking the benefits it offers are exposed to additional risks and harms from offshore sites that could be avoided under carefully regulated domestic provision.
 - Liberalising the domestic supply of online poker card games, accompanied by appropriate harm minimisation measures, would test whether managed liberalisation should be extended to all online gaming forms.
- Governments have improved their policy-making and regulations with respect to gambling, but significant governance flaws remain in most jurisdictions, including insufficient transparency, regulatory independence and coordination.
 - There is a particular need to improve arrangements for national research.

In its report, the Commission places particular emphasis on electronic gaming machines or EGMs, since:

- these account for around three quarters of instances of severe problem gambling
- most gamblers, even the average recreational gambler, have faulty beliefs about how they work
- they have certain specific characteristics that can cause difficulties for some gamblers — such as the ability to play multiple games rapidly in succession and to ramp up stakes from the tiny (1 cent per bet) to the large (\$10 bets every few seconds in some jurisdictions)

Gambling is a largely technologically-based entertainment industry, with the prospects of substantial future changes in the type of, and delivery mechanisms for, gambling services. For that reason, in addition to making recommendations for policy changes over the next few years, the report also considers the appropriate longer-run policy settings made possible by emerging technologies and the transition to these.

Risks should be assessed for people who are exposed to risky gambling forms

From a public policy perspective, it is important to assess the degree to which the harms people experience are associated with gambling behaviours (such as playing frequency and duration) and environmental risk factors (such as venue conduct and the gambling form). This helps determine the appropriate target for regulation. Accordingly, assessments should be focused on:

- the specific products that are most related to harm, rather than the broad and safer class into which these products fall (for instance, accidents in ultra-light aircraft rather than aircraft generally). Considering the risks of problem gambling associated with the consumption of all forms of gambling, including benign forms like lotteries, conceals the elevated risks associated with particular gambling forms
- those who regularly engage in a risky activity or use a risky product, and not for the broad group of people who never or only occasionally use them (for example, the health risks for people who often eat unhealthy foods, rather those who infrequently do so).

Reflecting this, most gambling policy interest needs to centre on people playing regularly on riskier forms of gambling. For these people, the risks and problems loom large.

A focus on electronic gaming machines — where most harms arise

In particular, the risks associated with playing gaming machines are higher than other gambling forms.

- They account for the biggest single slice of overall gambling expenditure in Australia — 62% of the total, compared with 15% for wagering and 7% for table games. They are probably also one of the most important sources of enjoyment for gamblers.
- The risks of problem gambling increase significantly with the frequency of playing EGMs. The Commission estimates that among those who play weekly or more on gaming machines, around 15% are problem gamblers with an additional 15% at 'moderate risk'.
- They account for around 75%–80% of 'problem gamblers' and are found to pose significant

- problems for consumers in general.
- They are widely accessible throughout the community in all jurisdictions except Western Australia (which has fewer problem gamblers as a result).
- Regular gaming machine players (those playing at least once a week) are estimated to spend on average around \$7000–8000 per annum, a sizeable share of household incomes, and a key source of harm to some.
- There are vulnerabilities, extending beyond problem gamblers, arising from widespread misunderstandings about how gaming machines actually work. For instance, the evidence shows that many people believe they can recover losses by continuing to play ('chasing losses'), and that machines run 'hot' or 'cold' (with over 50% of gaming machine players believing this). The consequence of these faulty cognitions is that people make expenditure decisions based on significant underestimation of the price they are paying for the good. People often have faulty beliefs, but most of these beliefs do not have the adverse consequences that can arise here.
- The conditioning effects of random and intermittent payouts, combined with the capacity for rapid repetition of games — some hundreds per hour — can encourage sustained gambling.

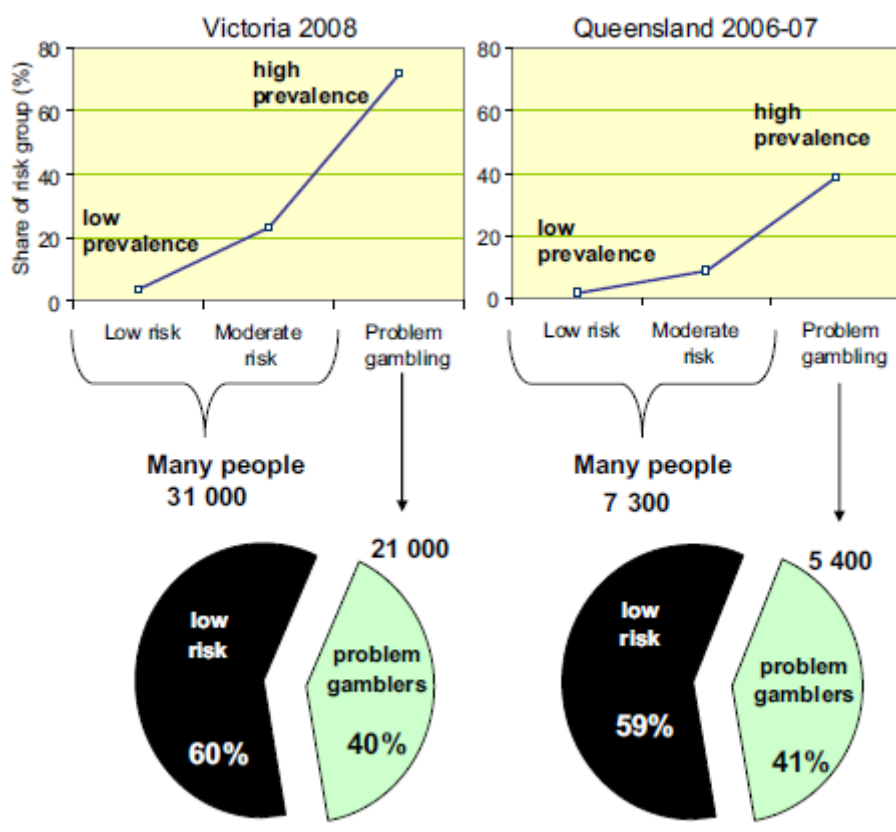
A decade of policy action — with mixed outcomes

Gambling has always been one of the most regulated industries in Australia. Governments act as suppliers and tax collectors. They fund and organise help services for gamblers experiencing problems. Above all, they are active as regulators, and have put in place a vast array of laws and rules about when and where people can gamble, the nature of gambling forms and their modes of delivery, which businesses can supply gambling, and the behaviour and integrity of these suppliers.

In the decade following the Commission's last inquiry into gambling, state and territory governments introduced additional layers of regulations and policies. These have principally been aimed at reducing the harms from gambling that emerged following a rapid increase in the accessibility of gambling in the 1990s.

Some of the initiatives have been effective. Help services for problem gamblers are well funded and often successful in resolving people's difficulties (though there is still room for improvement). Some jurisdictions have developed effective warnings and there are other promising prospective policies, such as precommitment in Victoria.

Most people experiencing harms are not problem gamblers, but problem gamblers are much more likely to experience harms



Nevertheless, the current regulatory environment –

- has questionable effectiveness in reducing harm (see box below)
- involves a multiplicity of variations across jurisdictions, many of which do not appear justified
- has imposed unnecessary burdens on venues and gaming machine manufacturers
- involves arrangements that stifle competition and innovation in some parts of the industry, to the cost of consumers.

The gambling industry has emphasised the role of personal responsibility, rather than further regulation, as a major basis for reducing the harm from gambling. The Commission accepts the important role of self-responsibility. Many of the recommendations for amended regulation aim to provide consumers with a greater capacity for exercising self-responsibility. This applies to pre-commitment, better information and cash-input limits — all of which leave intact consumer sovereignty.

Policy measures often lack 'bite'

Governments have introduced many measures to address the harms associated with gambling machines, but the effectiveness of many of these is questionable. This includes:

- short periods of machine shutdowns. These typically occur in the early hours of the morning. They allow premises to be cleaned and maintained, but produce few obvious harm minimisation benefits.
- lowering the maximum bet limit from \$10 to \$5. If played at the fastest allowed rate, that means that the value of bets laid per hour will have fallen from \$12 000 to \$6000 (and expected losses down to \$600 from \$1200 an hour, which remains very high). Some jurisdictions have maintained the limit at \$10.
- reducing the value of notes that gamblers can insert at any one time into a machine from \$100 to \$50 — but retaining the capacity to insert note after note
- reduced cash input levels, such as from \$10 000 to \$1000. In this case, a player could still insert twenty \$50 notes consecutively into the machine. (Again, some jurisdictions have retained the \$10 000 limit.)
- ATM withdrawal limits of \$200 per transaction — but problem gamblers can go back time after time, subject to the normal arrangements they have with their banks
- mandatory clocks on machine displays, so people do not lose track of time. But most people have watches and they typically concentrate on the game.

These kinds of changes, while having little benefit for problem gamblers, can impose large implementation costs on venues, especially when they are introduced in an uncoordinated way and require retrofitting to gaming machines. Machines are secure devices for which changes have to be carefully supervised. In addition, gaming machine manufacturers have to configure machines in different jurisdictions differently.

The need for regulation and other policy measures has not waned, but such measures need to be part of an effective and coherent package — one that recognises that the technologies for the delivery of gambling services are changing rapidly.

Even harm minimisation measures with modest efficacy may produce worthwhile net benefits so long as they do not inadvertently generate excessive costs for industry or gamblers generally.

What about the evidence?

Many participants in this inquiry have highlighted the poor state of the evidence used to justify policy decisions. There are continuing uncertainties about which gambling policies can effectively reduce harm. This is, in part, testimony to insufficient policy-focused research over the past decade and, in part, to the inherent difficulties in genuinely testing the effectiveness of social policies.

Evidence is essential to good public policy. However, an excessively high standard of proof about what would reduce consumer detriment from gambling would cause policy paralysis in an area where there are demonstrably large community costs from inaction. Policy needs to take account not only of the costs of mistakenly introducing ineffective policies, but also the costs of failing to act when a policy option may in fact be effective. There are good precedents for precautionary policy action in areas involving people's safety.

A justifiable criticism of gambling policy in the 1990s was that, despite international evidence about the risks of highly accessible gaming, governments did not apply a precautionary, evidence-based approach to justify the extensive liberalisation of gambling that ensued.

What needs to be done?

The problems experienced by gamblers are as much a consequence of the technology of the games, their accessibility and the nature and conduct of venues, as they are a consequence of the traits of the gamblers themselves. This suggests that addressing the difficulties faced by gamblers should draw from the insights of consumer policy and public health policy, not from medical perspectives alone.

Thus, gambling policy needs to act on multiple levels to —

- change the particular aspects of the environment (relating to venues, technology and accessibility) that lead to problems for gamblers vulnerable to harm
- change the broader aspects of that environment that can lead to adverse outcomes for gambling consumers generally, such as ensuring probity, good information about the product being consumed, fair industry practices and removing barriers to competition
- help gamblers who have problems (and their families) through counselling and

professional services.

Progress has been made in each of these areas. The Commission's recommendations therefore largely involve either the re-calibration of existing government policies or the wider adoption of effective policies that some jurisdictions have already implemented.

Changing gaming machines

Changes to gaming machines (and the networks linking them) provide the most promising avenue for harm minimisation. A whole range of factors — the technology, people's personal vulnerabilities, systemic misunderstandings about how machines work, and the incapacity to accurately log how much has been spent — collectively reduce the capacity for informed and rational choice when playing gaming machines. The challenge is to address these problems while preserving as much of the pleasurable aspects of playing as possible.

➤ *Lower cash input rates and more disclosure*

Most people play on gaming machines infrequently, for relatively short periods of time and with low intensity. For them, the average cost — between \$30 and \$40 an hour — is commensurate with many other entertainments. However, it is possible to play most gaming machines at much greater intensity than this — up to expected losses (they could be larger in practice) of around \$1200 per hour if they are played at a very fast rate. The Commission has evidence of gaming machine players losing tens of thousands of dollars over a few months.

Given the risks posed by high intensity play and the capacity of many (even recreational) gamblers to 'zone out' and lose control, the Commission recommends that players should be limited to putting in \$20 until the credits in the machine fall below that amount. (That compares to a limit of \$10 000 in some jurisdictions.)

There is also a strong rationale for giving players more information about the cost of playing, since many do not understand the implications of player rates of return. The Commission has recommended price disclosure based on 'cost per hour' and loss rates. This would initially be implemented as static signs attached to the existing machines. But new machines should incorporate the ability to continuously inform players on-screen about their expected hourly losses, based on their playing styles ('real-time' price disclosure).

➤ *A lower bet limit?*

The Commission also considers that there are strong grounds to reduce the maximum intensity of play per button push well below the current \$5 and \$10 regulated limits. A limit of \$1 would strongly target problem gamblers, with little disturbance for others, and its widespread adoption would be feasible by 2016.

➤ *Pre-commitment allows player control and (realistic) self-responsibility*

The most targeted and potentially effective measure is to give people the capacity to control the behaviour of their future selves — to pre-commit — since lack of control, impulsiveness and periodic regret are commonplace among regular gaming machine gamblers (and other players too).

Pre-commitment takes many forms. Existing trials have focused on arrangements in which players can play machines without any player identification or, if they wish, use their loyalty cards to set spending and time limits. These have the advantage that player resistance to adoption is low and security of the cards can be limited. However, the Achilles heel of these systems is that gamblers who have exceeded self-imposed limits can remove their card, still play and break their commitment. In effect, such a partial pre-commitment scheme helps people make 'resolutions' rather than binding pre-commitments. That said, the evidence from the trials is that they can still be helpful for people in controlling their spending. Repeated circumvention of their own commitments may also help people to realise that they have genuine control difficulties.

Prima facie, a 'full' pre-commitment system that was binding would be more effective. The essential element of such a system would be the capacity for gamblers to set a spending limit that, when exceeded, no longer enabled them to play (or only to play at a significantly reduced level). This is consistent with consumer sovereignty, since each gambler has a choice about their own appropriate limits. Gamblers' privacy would be ensured with no one permitted to 'track' their play without their consent. In other words, the Commission's model of precommitment ensures that the gambler is in charge, not some 'big brother'.

The Commission has developed a set of standards for such a system of precommitment, including that it would —

- allow gamblers to set binding limits that would apply to all gaming machines and venues. Otherwise, they would be able to subvert their own intentions
- involve a 'safe' default limit, with the scope for people to set alternative limits (including no limit)
- still give occasional players the opportunity to spend small amounts without being part of

the pre-commitment system.

Realistically, most state and territory governments could not quickly implement a genuinely binding pre-commitment system (though there would be greater scope to do this in states with more advanced monitoring systems). Full-scale implementation and advanced interfaces with the gambler would also require all machines to have card readers (or other player identification devices) and software upgrades – a costly measure if required to be done quickly.

Accordingly, the Commission recommends a staged approach to the introduction of a full precommitment system.

Changes to gambling venues

While venues will typically wish to act ethically, they have muted incentives to address the problems faced by their customers, as this could mean significantly lower profits. Accordingly, a key policy goal is to provide better incentives for venues to deal with the risks posed by the venue environment and the behaviours of staff.

Complaint mechanisms and consumer redress as incentive mechanisms

Consumers (and venue staff) have limited and poorly marketed access to procedures for making complaints about alleged adverse behaviours and breaches of codes of practice by venue management. Existing complaint processes through peak industry bodies raise perceived conflicts of interest, and may deter complaints by some.

For these reasons, the Commission recommends an easier and more visible mechanism by which consumers and venue staff could make complaints related to gambling to the regulator in each state and territory, with the potential for regulatory action (and penalties) if breaches have occurred.

The Commission also considers that Australian governments should prohibit inappropriate inducements for all gambling forms. (Some jurisdictions already have measures in place.)

Limited and contingent regulation of automatic teller machines (ATMs)

People experiencing problems with their gambling tend to make repeat visits to ATMs and make large withdrawals, whereas recreational gamblers tend to withdraw smaller amounts less frequently. Strong regulatory responses are afoot, including a forthcoming ban on ATMs inside gaming venues in Victoria.

It is uncertain how effective such a ban will be. On the one hand, problem gamblers may adapt by bringing more cash to venues, making cash withdrawals at ATMs outside the venue. A ban might even have perverse effects if it allows people to use credit (as they can at ATMs outside venues) or makes the process of cash removal more anonymous. On the other hand, restricting ATM access will create a longer break in play that may discourage some problem gamblers from continuing (relieving some financial stresses) – and it might assist people at lower risk from progression to higher risk levels. Problem gamblers themselves often say that it would help them.

Given concerns about the costs of a ban, the risks of unintended impacts and the fact that gamblers may be able to circumvent it, the Commission considers other jurisdictions should wait for the results of an evaluation of the policy in Victoria. Nevertheless, the Commission proposes that cash withdrawals from ATM facilities in gaming venues should be limited to \$250 a day, except for casinos. This should act as a targeted measure against impulsive, excessive spending, be less costly to implement and entail little inconvenience for most patrons of clubs and hotels.

Prizes

Notwithstanding the long-run inevitability of losses for regular gaming machine gamblers, some gamblers will occasionally win big prizes and these people will disproportionately be problem gamblers, given their spending rates. If paid out in cash, those gamblers run the risk of losing the lot by playing on under the faulty belief that they are on a winning streak.

The Commission proposes that prizes over \$300 be quarantined in a 'bank' in gaming machines, and be paid by cheque or direct credit transfer at the completion of the gambling session. This would overcome some of the perverse impacts of existing cheque payment requirements based on so-called 'winnings'. Few recreational players would be inconvenienced by this as they rarely win amounts of \$300 or more.

Information and education

The Commission has reservations about the benefits of school-based gambling education, which has been strongly advocated by the gambling industry and has been finding a place in state and territory curriculums. Educational programs have good 'face validity' as ways of overcoming some of the systemic misconceptions people have about gambling and making them aware of the risks. However, similar education programs in alcohol, tobacco and responsible motor vehicle use, have revealed a genuine risk of perverse outcomes, with programs sometimes encouraging the very behaviours they were intended to avert. Given those risks, governments should not extend school-based

programs without further careful assessment of those in place.

A cohesive, forward-looking approach

In summary, the Commission is proposing a comprehensive, coordinated and carefully sequenced package of reforms to gambling regulation. The table below gives a timeline for the recommended changes.

Date	Measure
2010	<ul style="list-style-type: none"> • implement cash/credit input limits in Queensland <ul style="list-style-type: none"> – build this feature into new machines in other jurisdictions for activation by 2016 • commence broad development of standards and design features <ul style="list-style-type: none"> – fast-track standards needed for dynamic notice of actual cost of play, internal bank for wins over \$300, dynamic warnings of potentially harmful play, capability to operate at \$1 bet limit and partial precommitment – each jurisdiction to decide which communications protocols they will use for pre-commitment and remotely changing EGM parameters • commence design of prototype full pre-commitment system for future trial
2011	<ul style="list-style-type: none"> • new EGMs to have: <ul style="list-style-type: none"> – dynamic notice of actual cost of play (activated immediately) – capability for internal bank for wins over \$300 (not activated) • implement simple warnings on EGMs using compatible monitoring systems
2012	<ul style="list-style-type: none"> • new EGMs to have: <ul style="list-style-type: none"> – capability for dynamic warnings of potentially harmful play (not activated) – capability to operate at \$1 bet limit (not activated) – consistency with agreed central monitoring protocols
2013	<ul style="list-style-type: none"> • implement partial pre-commitment in jurisdictions with compatible monitoring systems, with limited exemptions • trial of full pre-commitment system
2014	<ul style="list-style-type: none"> • activate: <ul style="list-style-type: none"> – internal bank for wins over \$300 for all machines supporting this feature – dynamic warnings of potentially harmful play for EGMs supporting this feature
2016	<ul style="list-style-type: none"> • upgraded monitoring systems to be operational in all jurisdictions • full pre-commitment to be operational in all jurisdictions, subject to trial outcomes, and with limited exemptions • all EGMs to be capable of facilitating pre-commitment and remote adjustment, excepting exemptions for small venues • excepting exemptions for small venues, all EGMs to: <ul style="list-style-type: none"> – provide dynamic notice of actual cost of play – provide dynamic warnings of potentially harmful play – have an internal bank for wins over \$300 – operate at a \$1 bet limit • all jurisdictions to impose cash/credit input limits
2018	<ul style="list-style-type: none"> • all exemptions for small venues end
2020	<ul style="list-style-type: none"> • assess effectiveness of all harm minimisation measures to see if they should be modified or removed

The full report may be accessed at - <http://www.pc.gov.au/projects/inquiry/gambling-2009/report>

In its “initial response” to the Productivity Commission report, the Australian government said it supported the document’s key reform directions. It said it supportee the use of pre-commitment technology to tackle problem gambling and was committed to working with State and Territory Governments, and industry, in implementing this technology.

However, the government does not agree with the recommendation that the Interactive Gambling Act of 2001 should be amended to allow for a liberalisation of online gambling, starting with allowing the provision of online poker games to Australians: “The existing rules will continue to apply.”

It also accepts that “further work can be done to improve harm-minimisation measures for electronic gaming machines”.

In its statement, the government said it would recommend to State and Territory Premiers and Chief Ministers the establishment of a new high-level Council of Australian Governments (COAG) Select Council of Ministers on Gambling Reform to progress a national approach to minimise the harm caused by problem gambling.

STUDY INVESTIGATES WHY LOW-INCOME PEOPLE BUY LOTTERY TICKETS

The vast majority of lottery consumers in the United States are low-income households, who spend on average 9% of their income on this form of gambling. 20% of Americans are frequent lottery players, spending about \$60 billion a year. The spending is also starkly regressive, since a household with income under \$13 000 spends, on average, \$645 a year on lottery tickets, or about 9% of all income.

A new study by Emily Haisley, Romel Mostafa and George Loewenstein explored some of the reasons why low-income people spend so much money on a product that only returns fifty three cents on the dollar.

In the study, published in the *Journal of Behavioral Decision Making*, participants who were made to feel subjectively poor bought nearly twice as many lottery tickets as a comparison group that was made to feel subjectively more affluent. The findings point to poverty's central role in people's decisions to buy lottery tickets.

"Some poor people see playing the lottery as their best opportunity for improving their financial situations, albeit wrongly so," said Haisley, of the Department of Organizational Behavior and Theory at Carnegie Mellon's Tepper School of Business. "The hope of getting out of poverty encourages people to continue to buy tickets, even though their chances of stumbling upon a life-changing windfall are nearly impossibly slim and buying lottery tickets in fact exacerbates the very poverty that purchasers are hoping to escape."

The study neatly illuminates the sad positive feedback loop of lotteries. The games naturally appeal to poor people, which causes them to spend disproportionate amounts of their income on lotteries, which helps keep them poor, which keeps them buying tickets.

In two experiments conducted with low-income participants, the researchers examined how implicit comparisons with other income classes increase low-income individuals' desire to play the lottery. In the first experiment, the researchers influenced participants' perceptions of their relative wealth — or lack thereof — by having them complete a survey on their opinions of the city of Pittsburgh that included an item on annual income. The group made to feel poor was asked to provide its income on a scale that began at "less than \$100 000" and went upward from there in \$100 000 increments, ensuring that most respondents would be in the lowest income category. The group made to feel subjectively wealthier was asked to report income on a scale that began with "less than \$10 000" and increased in \$10 000 increments, leading most respondents to be in a middle or upper tier.

Participants were paid \$5 for completing the survey and given the opportunity to buy as many as five lottery tickets. The experimental group purchased an average of 1.27 lottery tickets, compared with 0.67 tickets bought by the members of the control group.

Thus, participants were more likely to purchase lottery tickets when they were primed to perceive that their own income was low relative to an implicit standard.

The second experiment found that indirectly reminding participants that, while different income groups face unequal outcomes in education, jobs and housing, everyone has equal chances of winning the lottery induced an increase in the number of lottery tickets purchased. The group given this reminder purchased 1.31 tickets, compared with 0.54 for the group not given such a reminder.

In other words, participants purchased more tickets when they considered situations in which rich people or poor people receive advantages, implicitly highlighting the fact that everyone has an equal chance of winning the lottery.

In the study, the researchers note that lotteries set off a vicious cycle that not only exploits low-income individuals' desires to escape poverty but also directly prevents them from improving upon their financial situations. They recommend that state lottery administrators explore strategies that balance the economic burdens faced by low-income households with the need to maintain important funding streams for state governments.

"State lotteries are popular revenue sources that are unlikely to go away anytime soon," said Loewenstein, the Herbert A. Simon professor of economics and psychology at Carnegie Mellon. "However, it is possible to implement measures that can actually benefit low-income lottery players and lead to fairer outcomes." Loewenstein noted that one such potential method for addressing income inequality, which has shown promise in other countries, is tying lottery tickets to savings accounts.

US INTERNET GAMBLING BAN GOES INTO EFFECT

After four years of stalling, the Unlawful Internet Gambling Enforcement Act (UIGEA) regulations went into effect 1 June. The law will work to block thousands of international gambling operations from preying on U.S. citizens and make it easier for the Department of Justice (DOJ) to prosecute illegal operations.

Rep. Bob Goodlatte, R-Va., said the new law will have an impact almost immediately: "This is going to be a new tool for both federal and state law enforcement officials to crack down on those who are engaged in taking bets from people in the United States at these unregulated, illegal offshore sites."

Under the law, banks must stop payment to any foreign online gambling operation not licensed in the United States. Opponents of UIGEA claim that will be too difficult, but Chad Hills, gambling analyst for *CitizenLink*, said it will be as easy as making a list. "There's nothing ambiguous about having to prove you are licensed in the U.S. All banks already have systems in place to stop payment to illegal or dangerous entities — this will simply lengthen that list," he said.

Some members of Congress, including Rep. Barney Frank (D-Massachusetts), have been dragging their feet hoping to get lawmakers to legalize online gambling. Frank has introduced a bill with a goal of

decriminalizing the industry and gleaning federal tax revenues.

John Kindt, professor of business and legal policy at the University of Illinois, said they ignore the social costs associated with gambling and addiction: "Gambling on the Internet destabilizes economies, it destabilizes financial systems, it would make all of our economic problems worse. This would put the worst form of gambling at every school desk, at every work desk and in every living room."

A poll from Fairleigh Dickinson University shows that 67% of respondents want Internet gambling to remain illegal. Other surveys also show most people opposed to gambling in their own communities.

"If Americans don't want a single casino in their own town," Hills said, "they certainly don't want several thousand online casinos piped into their homes."

EU COURT DEALS SETBACK TO ONLINE BETTING SITES

Europe's highest court has ruled that EU member states are allowed to ban online betting sites from operating in order to help combat fraud and protect consumers. On 3 June, the European Court of Justice handed down its judgement on a challenge by British online bookmakers against Dutch law which has a licensing system that allows the Netherlands to restrict access to the gambling market.

"A member state can prohibit the operation of games of chance on the Internet. Prohibition may, on account of the specific features associated with the provision of games of chance on the Internet, be regarded as justified by the objective of combating fraud and crime," the court in Luxembourg ruled.

Two British firms, Ladbrokes and Betfair, challenged the Dutch ban, arguing in separate cases that they were properly licensed in a fellow EU nation and that European law upholds the right of companies to cross borders and carry out business in other European Union countries. Ladbrokes said its UK licence was subject to "very strict legislation for the prevention of fraud and of addiction to games of chance", and the Dutch ban on its internet services to Dutch gamblers amounted to an unnecessary 'duplication of controls and safeguards'.

While the case concerned the Netherlands, the ruling covers the whole of Europe.

Several EU countries, including France, have started opening up their gaming sector under pressure from Brussels.

The industry, in the form of the European Gaming and Betting Association (EGBA), said the law was running behind technological advances. "The Internet raises new questions and challenges that cannot be resolved through the judicial process," said EGBA secretary-general Sigrid Ligne. "We are confident that reforms of the gambling laws will take place in the Netherlands, as they already do throughout the EU."

In arriving at its ruling, the court cited "the objectives of consumer protection and the prevention of both fraud and incitement to squander money on gambling, as well as the need to preserve public order."

In the absence of EU-level harmonisation of the online gaming industry, it was up to national authorities to decide on measures to protect their consumers, the judges said. "A member state is therefore entitled to take the view that the mere fact that an operator such as the Ladbrokes companies lawfully offer services in that sector via the internet in another member state is not a sufficient assurance that national consumers will be protected," said the judgement.

The court said that a policy of "controlled expansion" of the gambling sector may be consistent with "the objective of drawing players away from clandestine betting and gaming - and as such, activities which are prohibited - to activities which are authorised and regulated."

In a statement, Tjeerd Veenstra, a director of Dutch national licence holder De Lotto, welcomed the ruling: "Ongoing attempts by the commercial gambling lobby to undermine the restrictive Dutch policy have at last been called to a halt by the European Court. The principles of the free market are subordinate to overriding principles of public policy aimed at preventing addiction and fraud."

Ladbrokes said the court had "highlighted the inconsistencies in Dutch gaming law. The Ladbrokes and Betfair cases have clearly demonstrated the fragility of the entire Dutch legal framework in relation to gambling," said John O'Reilly, managing director of Ladbrokes eGaming. "Today's ruling confirms the need for its replacement with a system that incorporates strong regulation and licensing, but also introduces competition for the benefit of consumers."

The Netherlands Supreme Court and the Netherlands Council of State had referred the cases to the European Court of Justice, seeking guidance on whether Dutch gambling rules were in keeping with the aim of consumer protection.

PARKINSON'S MEDICATION AND COMPULSIVE BEHAVIOURS: A STRONG LINK

Medications that help ease the challenging motor symptoms of Parkinson's disease seem to make it harder for some patients to halt certain behaviours that can be rewarding or pleasurable, such as gambling, eating and sexual stimulation.

While physicians have known about the link between Parkinson's medication and compulsive gambling since about 2005, little was known about how many patients are affected this way, whether the compulsive behaviour went beyond gambling for some, and whether this is clearly a medication-induced problem.

According to a study published in the May 2020 issue of *Archives of Neurology*, approximately 13.6% of Parkinson's disease patients taking levodopa or one of the dopamine-agonist medications widely used for the movement disorder show clear signs of some impulse-control disorder. That rate was between 2 and 3.3 times higher among Parkinson's patients being treated with these medications than among patients who did not take them. About a quarter of those patients suffered from more than one type of compulsive behaviour.

Compulsive buying was the most common manifestation of such impulse-control problems, affecting 5.9% of all medicated patients; 5% experienced problem or pathological gambling; 4.3% engaged in binge eating behaviours; and 3.5% engaged in compulsive sexual behaviour.

Compulsive buying and binge eating were more common among women patients than among men; compulsive sexual behaviour afflicted more men than women. The researchers also found some evidence that genetic inheritance might make some patients more vulnerable to these side effects of Parkinson's disease medicine: Patients were far more likely to develop compulsive buying, eating or gambling behaviours if they had a first-degree relative with a known gambling problem.

Finally, the study, which involved 3 090 Parkinson's disease patients, found that those taking a combination of levodopa and one of the other dopamine-agonist medications (including pramipexole and ropinirole) were most likely to develop an impulse-control disorder; those on a dopamine agonist without levodopa were slightly less likely to develop such behavioural problems; and those on levodopa alone were about half as likely as the first two groups to develop impulse-control problems.

Researchers are gleaning insights into why and how some people become addicted to substances or behaviours from the experiences of Parkinson's patients.

PARKINSON'S DRUG CAUSED GAMBLING ADDICTION, AUSTRALIAN COURT HEARS

More than 100 people who allegedly became addicted to gambling and pornography after taking a prescription drug used to treat tremors associated with Parkinson's disease are suing two drug companies in a class action in the Australian Federal Court.

The group includes people who sustained losses of hundreds of thousands of dollars and were involved in family breakdowns as a result of compulsive gambling allegedly linked to drugs they took between 1997 and last year. Most of the claimants developed gambling addictions but a few exhibited compulsive sexual behaviour such as looking at pornography on the internet.

They are suing Pfizer Australia, over its drug Cabaser and Aspen Pharmacare, which marketed and distributed the drug Permax in Australia.

Parkinson's disease is a degenerative neurological disorder that causes a deficiency of dopamine, a chemical neurotransmitter required for smooth, controlled movements. Cabaser and Permax are in a class of drugs known as "dopamine agonists" which mimic the effects of dopamine in the brain. The chemical is also known to produce a "rush", and scientists believe it can cause risk-taking behaviour and addictions.

A study published in the *Archives of Neurology* last month found that dopamine agonist treatment for Parkinson's disease was associated with a rise in impulse control disorders such as pathological gambling, compulsive shopping and binge-eating (see above). In a test case in July 2008, a jury in Minnesota awarded \$US8.2 million to a man who became a compulsive gambler after using Mirapex (made by Boehringer Ingelheim) to treat his Parkinson's disease. Other lawsuits are being considered in Canada, Britain and France.

Lawyers in the Australian class action say in their writ filed with the Federal Court that Pfizer Australia and Aspen Pharmacare Australia had breached a duty of care by failing to research possible side effects of their drugs, or by failing to heed research into side effects. The writ claims the companies engaged in misleading conduct by neglecting to provide adequate warnings of increased risk of compulsive disorders.

The Sydney Morning Herald
3 June, 2010

UNIVERSITY STUDY FINDS 80 PERCENT OF POKER PLAYERS USING DRUGS TO ENHANCE PERFORMANCE

80 percent of poker players around the world reported using drugs and other substances to enhance their performance, according to a recent study by researchers at the Nova Southeastern University's College of Pharmacy.

Poker players are using drugs such as marijuana, cocaine, amphetamines, Valium, and other prescription medications, as well as substances including caffeine, energy drinks and guarana to get an edge over their opponents.

The study involved interviews with 198 professional, semi-pro, amateur and recreational players from the U.S. and around the world about their use of cognitive and performance-enhancing drugs, as well as dietary supplements and other substances, to improve performance while playing poker. Researchers also asked how the drugs were acquired and the motivation for using them.

The NSU researchers initially interviewed players in Las Vegas during the World Series of Poker and then surveyed players online from across the globe, including North America, Europe, and Asia, with the majority of respondents coming from the USA and Canada.

Among the players (most of them men in their mid-20s), 28% said they took at least one prescription medication to improve their performance. Of those who took a cognitive and performance-enhancing medication, 73% said it was to help them focus or concentrate better, while the rest used these products to calm their nerves, stay awake, and improve memory. The most popular medication was amphetamines or dextroamphetamines, followed by benzodiazepines (tranquilizers), hydrocodone (a painkiller), and methylphenidate (usually used to treat attention deficit disorders).

As to how they got the medications, 38% obtained them from a physician, 26% were given the drugs by players, 26% bought drugs from players and 10% purchased them online.

Prescription drugs weren't the only substances the players relied on - 71% used caffeine, 51% drank energy drinks, 34% smoked marijuana and 30% used alcohol. In addition, 46% took a dietary supplement such as vitamin B-12 or guarana.

"The use these substances could allow poker players to stay awake longer, as well as focus and concentrate better, which would be a competitive advantage," said Professor Kevin Clauson of the College of Pharmacy, who was the principal investigator in the study. "Stamina is important for any poker player because tournament poker and cash games can go on for many hours."

Using these substances can be harmful for poker players, Clauson said. Depending on the type of substance, he pointed out; there will likely be short-term and long-term side effects.

The results suggest that the use of substances to improve poker performance is widespread, especially at higher stakes, Clauson said. "Most people we surveyed are using some kind of a boost in order to play one of the most popular games in the world."

STUDY CONFIRMS LINK BETWEEN INCOME-GENERATING CRIME AND GAMING EXPENDITURE.

A report compiled by researchers at the University of South Australia on behalf of Australia's Victoria state government, has provided strong evidence of a significant link between gaming expenditure and crime - particularly income-generating crime such as theft, fraud and forgery.

Relationship between Gambling Expenditure and Crime

To date, the literature has found no firm consensus over the extent of the relationship between gambling and criminal activity. Gambling and criminal behaviour can be linked either negatively (an increase in gambling expenditure may positively influence the economy by creating jobs, increasing income and adding entertainment options and have a positive, indirect influence on the economy (and hence decrease the need to resort to crime)), or positively (increased gambling expenditure may hinder economic development and decrease job opportunities, increase dissatisfaction and increase the potential for crime, or new gambling opportunities may attract tourists to the area who otherwise would not have come and they may commit crimes (or become victims of crimes), or lead to the advent of problem gamblers who commit crimes (primarily income-generating crime) in order to fund their gambling habit).

The relationship between crime and gambling is a complex one, and while there is mixed evidence, past literature is at least suggestive of a causal link. However, gambling is just one of many factors that have been identified as influencing crime rates. Other influences include: income levels, age, ethnicity, alcohol and other drug consumption, the percentage of males in the population, unemployment rates, regional factors, single parent families, non-English speaking population, probability of arrest (or police presence) and education. This study attempted to control for these other variables in order to

determine whether EGM expenditure can be an independent predictor of crime rates.

The underlying hypothesis examined in this study is that higher expenditure on gaming machines in a local area leads to an increase in crime in that area. This is based on the belief that problem gamblers tend to gamble in areas close to their home or workplace and that criminal behaviour as a result of problem gambling is based on opportunity rather than being planned, and is thus more likely to occur in the same local area as the gambling took place. As the crimes linked to problem gambling tend to be income-generating crimes (to fund the gambling habit), it is expected that the crimes most influenced by gambling will be those of theft, fraud, break and enter, forgery, false pretences, larceny and robbery. These crimes are referred to in this paper as income-generating crimes. All other crimes not associated with income-generation are referred to as non-income-generating crimes, and it is hypothesised that gaming expenditure should be less strongly related to such crimes.

Methodology

This study used statistical local areas (SLAs) as its level of area analysis. There were 210 SLAs in Victoria in 2006, with 79 of these in Melbourne. The researchers obtained gaming data by venue from 1992 to 2007, and offence data from the Victoria Police from 1993-94 to 2006-07 (data was provided for 27 major categories of crime, which were classified into income- and non-income-generating crime). When combined with census data, there were three separate years which were available to model the relationship between gaming and crime: 1996, 2001 and 2006.

Findings

In summary, the results reveal that:

- Gaming expenditure per capita is **significantly positively associated** with nearly every type of crime in all years of the analysis. The strongest relationships (in terms of the size of significant coefficients) were found respectively with total crimes, followed by income-generating crimes (mainly property income-generating crimes), and then non-income-generating crimes (mainly property and other non-income-generating crimes);
- Drug offences are **significantly positively related** to nearly every type of crime in all years, although the relationship is significantly stronger with income-generating crimes (primarily driven by property income-generating crime) than non-income generating crime;
- Liquor licences per capita are **significantly positively related** to most types of crimes in 1996 and 2001; however the relationship changes in 2006 to a negatively significant one negative weak one for most types of crimes;
- The ABS disadvantage index (where an area becomes less disadvantaged as the index increases) generally was **significantly positively associated** with income-generating crimes, but was negatively associated with non-income generating crimes;
- Contrary to expectations, the percentage of the population that is male was **significantly negatively related** to non-income-generating property crimes in all years. There was generally no significant relationship detected with income-generating crimes;
- The proportion of teenagers in the population was found to be **negatively and significantly related** to income-generating crimes (mainly person and property income-generating crimes) in 2006, person and other income-generating crimes in 2001, and income-generating crimes in 1996. It was found to be positively associated with other non-income-generating crime in 2001 and non-income-generating crime in 1996;
- The percentage of the population aged 70 and over is **negatively and significantly associated** with person and property non-income crimes in 2006, and property non-income crimes in 1996. It is weakly positively related to person and other income-generating crimes in 1996;
- The ABS index of remoteness (the higher the index, the more remote) is **positive and generally significant** for a range of non-income-generating crimes in all three years, but remoteness appears to have had little impact on income-generating crimes, with the exception of 1996 where it had a negative and significant impact; and
- SLA size is **significantly negatively related** to a range of income-generating crimes in all three years, and is also significantly negatively related to non-income-generating and total crime in 2001 and 2006

Discussion and Conclusion

This is the third study undertaken by members of this research team to have found a positive, significant relationship between gaming expenditure and crime in Australia. The current Victorian study is more sophisticated and thorough in its methodology and is larger than the previous two studies, in the sense that it has more units of observation and its analysis spans three separate years.

As predicted, the relationship between gaming and income-generating crime was stronger than the relationship between gaming and non-income-generating crime. This was the case for all three years in Victoria. It seems that the relationship between crime and gaming expenditure has lessened somewhat from 1996 to 2006. Reasons for this are unclear, though the smoking ban and other policy initiatives may have played a part. Comparing Victorian results with the gaming and crime relationships found in Tasmania and South Australia (these comparisons should however be treated with some care given the different methodologies and variables used), it does seem that the positive relationship between crime and gaming expenditure in Victoria is stronger overall. This may be because of Victoria's network of gaming machines and venues. For this supposition to be confirmed, additional analysis needs to be undertaken by using the same methodology and same variables in each state, or by running one analysis across all states combined for a national analysis. Other key influences on crime generally included drug offences, the number of alcohol licences in an area and the level of urbanisation.

The most important influence on crime (and in particular, income-generating crime) was drug offences. This variable had to be instrumented due to its endogeneity status in many models (in terms of those who live in areas with high crimes being more likely to commit drug offences). Interestingly, without drug offences in the models, gaming expenditure was much more likely to be endogenous. With drug offences, it was only endogenous a couple of times in some income-generating crime models. Spatial dependence (spatial dependence is present when crimes in neighbouring areas impact on crimes in the unit areas in question because of social interaction effects) occurred in some of our estimated crime models. This indicates that in some models across some years, criminals were not making their decisions independently, but their decisions were influenced by their environment, family, neighbours and friends.

Generally, the study's results were consistent with theoretical expectations, and confirmed the positive link between income-generating crime (in particular, property-related income-generating crime) and gaming expenditure.

The full report may be accessed at -

http://www.justice.vic.gov.au/wps/wcm/connect/1a64778042c5ff2198ccf961032178a1/Gaming_expenditure_and_crime.pdf?MOD=AJPERES

GAMBLING ADDICTION CAN BE INHERITED EQUALLY BY MEN AND WOMEN, TWINS STUDY REVEALS

A study of Australian twins has found that genes play a central role in determining whether individuals develop a gambling problem, and can be passed on to both sons and daughters alike. The study, published in the latest issue of the *Archives of General Psychiatry*, concludes that genes rule at least 50% of a person's propensity to gamble irrespective of sex. Genes have been linked earlier to gambling but this is the first time women are also said to inherit the trait.

Previous research has shown that problem gambling runs in families, with one study reporting that 8% of the first-degree relatives of people with gambling disorders had a history of similar problems, compared with 2% of relatives of unaffected individuals, according to background information provided in the report.

Women represent nearly half of all individuals in treatment for pathological gambling (PG), but relatively little is known about the causes of PG among women or potential sex differences in the causes of PG. The objective of this study was (1) to investigate the role of genetic and environmental risk factors in the development of disordered gambling (DG) among women and (2) to determine the extent to which the genetic and environmental risk of DG among women differs quantitatively or qualitatively from the risk of DG among men. (Disordered gambling refers to the full continuum of gambling-related problems that includes PG disorder.)

By questioning and comparing identical twins (who have the same genetic makeup) and fraternal twins (who have shared genes like any other siblings), the researchers from the University of Missouri-Columbia and the Queensland Institute of Medical Research, were able to tease out the different impacts of genetic and environmental factors on addiction. The research involved 4 764 individuals from 2 889 twin pairs aged between 32 and 43 years. 57% were women.

The team asked more than 2 700 women and 2 000 men from the Australian Twin Registry questions about their gambling, and also questioned their friends. Disordered gambling was defined based on lifetime DSM-IV PG symptom counts. About 2.2% met the criteria for pathological gambling (3.4% of men and 1.2% of women), and 12.5% had experienced one or more symptoms of pathological gambling (18.2% of men and 8.3% of women).

"Previous research in men showed that gambling addiction can run in the family. This study extends those finding to include women, establishing for the first time that genes are as important in the etiology of disordered gambling in women as they are in men"

The findings showed that if one twin had a gambling problem, an identical twin was more likely to develop one than a fraternal twin. "This study represents a major step forward in that it establishes for the first time that genes are as important in the etiology of disordered gambling in women as they are in men, and that the susceptibility genes contributing to variation in liability for DG are likely to

overlap considerably in men and women.”

The findings showed that almost all study participants gambled to some degree; about half had gambled at least once a month and about one-third had gambled at least once a week. However, men were twice as likely as women to be gambling addicts (1% women compared to 3% men gambling addicts). While the researchers found that shared genes play a role, the report says more research is needed to find the extent of social and environmental influence on gambling behaviour.

While genes were estimated to contribute 49.2% to differences between people in terms of gambling disorders, “there was no evidence for shared environmental influences contributing to variation in disordered gambling liability. The researchers found no evidence of gender differences in the causes of problem gambling.

The study concludes that gambling addiction might occur when a person is “exposed to a problem gambling role model and inherits problem gambling susceptibility genes.” Slutske says that there is probably no specific “gambling gene” as such and says that “like alcoholism, problem gambling is a complex disorder...The answer will be in a collection of genes, maybe ten or 100, we don't know how many, but each gene will increase the risk slightly for developing those problems.”

“In addition to similar relative contributions of genetic vs. environmental factors to variation in liability for disordered gambling, the results suggest that the susceptibility genes contributing to variation in liability for disordered gambling may also overlap considerably in men and women,” the report says.

The study authors concluded that “the discovery of the specific genes and environments involved in the development of disordered gambling remains an important direction for future research.”

A related discussion paper was published in March by the Bonn-based Institute for the Study of Labour.

Authored by Anh T. Le, Paul Miller, Wendy Slutske and Nicholas Martin, the study (*Are Attitudes towards Economic Risk Heritable? Analyses Using the Australian Twin Study of Gambling*) employs multiple regression models and a large sample of twins, to assess heritability in attitudes towards economic risk, and the extent to which this heritability differs between males and females. Consistent with Cesarini, Dawes, Johannesson, Lichtenstein and Wallace¹, it is found that attitudes towards risk are moderately heritable, with about 20% of the variation in these attitudes across individuals being linked to genetic differences. This value is less than one-half the estimates reported by Zyphur, Narayanan, Arvey and Alexander². While females are more risk averse than males, there is no evidence that heritability in attitudes towards risk differs between males and females. Even though heritability is shown to be important to economic risk taking, the analyses suggest that multivariate studies of the determinants of attitudes towards risk which do not take heritability into consideration still provide reliable estimates of the partial effects of other key variables, such as gender and educational attainment.

The discussion paper is accessible at -

<http://www.responsiblegambling.org/articles/TWINS%20STUDY.pdf>

CAMELOT AWARDED EUROPEAN RESPONSIBLE GAMING CERTIFICATION

Camelot chief executive Dianne Thompson has called on all lotteries to commit to responsible gaming and adhere to the highest standards of responsible play after the UK National Lottery operator was recognised for its responsible gaming standards by the European Lotteries Association (EL).

The certification recognises Camelot’s responsible gaming programme, which is aimed at preventing excessive and underage play. The certification was carried out by independent assessor Deloitte.

“I’m delighted that Camelot has achieved certification by the European Lotteries Association,” said Dianne Thompson, Camelot’s chief executive and chair of the EL Responsible Gaming Commission since 2005. “As the operator of the UK National Lottery, we exceed our already stringent regulatory requirements in setting and maintaining the highest standards of responsible play in the UK. In my position as Chair of the Responsible Gaming Committee, I would like to encourage other lotteries to do the same.

“At Camelot, sustainability is at the heart of our business. We work hard to ensure that National Lottery sales continue to grow in a socially responsible and sustainable way, so that even more money is raised for good causes.”

¹ Cesarini, David, Dawes, Christopher J., Johannesson, Magnus, Lichtenstein, Paul and Wallace, Björn, (2009). Genetic Variation in Preferences for Giving and Risk Taking, *The Quarterly Journal of Economics*, Vol. 124, No. 2

² Zhong, Songfa, Chew, Soo Hong, Set, Eric, Zhang, Junsen, Xue, Hong, Sham, Pak C., Ebstein, Richard P. and Israel, Salomon, (2009). The Heritability of Attitude Toward Economic Risk, *Twin Research and Human Genetics*, Vol. 12, No. 1

Thompson said that the UK National Lottery was the sixth largest lottery in the world in terms of sales, but ranked just 64th in the world in terms of per capita spend. "On average, our players spend just £3 per week, which highlights the success of our strategy to encourage many people to play but to spend relatively little," she said.

The EL's Responsible Gaming Certification Framework was ratified by 60 out of 62 lottery operators last year and assesses performance in areas such as research, employee training, sales force programmes, game design, remote gaming channels, advertising and marketing, player education, stakeholder engagement and reporting.

Camelot employs numerous player protection measures to ensure customers play National Lottery games responsibly both in-store and online. The company utilises its Game Design Protocol and GAM-GaRD tools to assess potential problems posed by new games, and continues to see results from its Operation Child test-purchasing initiative that promotes retailer vigilance against selling National Lottery products to underage customers.

Camelot is one of only 14 operators to have been awarded the accolade to date.

THE NUMBER OF GAMES PLAYED CAN AFFECT DISORDERED GAMBLING

This month's edition of *The WAGER* explores data from the 2007 British Gambling Prevalence Survey suggesting that how many different games a gambler plays (gambling involvement) may be a better predictor of disordered gambling than which games are played. This notion contradicts the conventional wisdom that specific gambling activities, such as Internet gambling, are inherently more addictive than others.

Recent research suggests that the relationship between gambling and disordered gambling is more complicated than playing specific types of games. Using a United States youth sample, research suggests that gambling involvement is a better predictor of disordered gambling than participation in any particular game.³ This phenomenon was further explored by examining the association between disordered gambling and gambling involvement within the 2007 British Gambling Prevalence Survey.⁴

LaPlante et al. conducted secondary data analyses of the British Gambling Prevalence Survey (BGPS) using weighted data of 8 968 observations characteristic of the general population. They defined the following variables –

- Disordered gambling (i.e., endorsing more than three DSM-IV pathological gambling symptoms in the past year).
- Gambling involvement (i.e., the number of types of gambling for which an individual reported being involved during the past year).

The authors conducted a series of logistic regressions using participation in each gambling type to predict past year disordered gambling. Consistent with Welte et al's. analytic strategy, these logistic regressions were conducted first without controlling for involvement and then added involvement as a control. The table below lists the corresponding odds ratios.

Odd ratios for predicting disordered gambling from type of game with and without controlling for involvement

	Odds ratios not controlled for involvement	Odds ratios controlled for involvement
Spread betting	21.84	0.70
Virtual gaming machines	24.01	4.26
Internet	9.58	1.53
Betting on dogs	9.39	1.95
Casino table games	8.15	0.79
Other sports betting	6.60	0.77
Fruit/slot machines	5.75	1.19
Other betting	7.24	2.93
Football pools	4.56	0.44
Bingo	4.92	1.76
Private betting	3.36	0.36
Scratch cards	3.91	1.09
Betting on horses	2.77	0.46
Other lottery	3.00	0.85
National lottery	1.85	1.04

The results show that when not controlling for involvement, participation in nearly every gambling type was statistically significant and positively associated with disordered gambling.

³ Welte, J., Barnes, G., Tidwell, M., & Hoffman, J. (2009). The association of form of gambling with problem gambling among American youth. *Psychology of Addictive Behaviors*, 23(1)

⁴ LaPlante, D. A., Nelson, S. E., LaBrie, R. A., & Shaffer, H. J. (2009). The relationships between disordered gambling, type of gambling, and gambling involvement in the British Gambling Prevalence Survey 2007. *European Journal of Public Health*, epub ahead of print.

When the authors controlled for gambling involvement, the association between participation in a particular gambling type and disordered gambling weakened for all types, and for 13 of 14 types, this association was no longer meaningful. Gambling via virtual gaming machines (e.g., virtual roulette, virtual bingo, virtual keno) was the only gambling type that remained significantly and positively associated with disordered gambling.

One limitation of this research is that the authors used only one measure of gambling involvement (i.e., the number of types of gambling for which an individual reported being involved during the past year). More research is necessary to examine other - and multiple - measures of involvement to more accurately refine the meaning of gambling involvement.

- The BGPS involved interviews with 9 003 residents, randomly selected from households in England, Scotland and Wales. The response rate was 52%. The BGPS assessed various gambling-related and demographic measures, including past-year gambling participation for 15 gambling types (e.g., lottery, online gambling, etc.) and past-year DSM-IV pathological gambling criteria.

The WAGER, Vol. 15(5)
16 June, 2010

FORTHCOMING CONFERENCES

- 28 – 30 July 2010, Kansas City, Texas, USA
Midwest Conference on Problem Gambling and Substance Abuse
http://www.888betsoff.org/links/midwest_conference.shtm
- 14 – 17 September 2010, Vienna, Austria
8th European Conference on Gambling Studies and Policy Issues

The conference will be preceded by two workshops: the first, presented by Judge Mark Farrell of the State of New York's gambling treatment court, will be on the subject *Merging Compulsive Gambling Treatment and the Criminal Justice System*. In the workshop Judge Farrell will discuss factors surrounding the original planning, implementation and operation of the gambling treatment court and will discuss the factors affecting identification, processing and effective therapeutic intervention with compulsive gamblers within the criminal justice environment and how these principles can be applied to criminal justice settings in Europe.

The second workshop, with the title *Symptomatic Causal Behavioural Treatments for Pathological Gambling*, will be presented by Professor Iver Hand and Florentine Larbig of the Behavioural Therapy Unit's gambling project. As yet, there is no internationally agreed upon "evidence-based" treatment for problem and pathological gambling. Nevertheless, in many countries "addiction", cognitive behavioural psychodynamic, pharmacological and "eclectic" treatments are applied. The diagnosis of problem gambling does not comprise a homogeneous group of patients. Larbig will present the content and her personal experience with the implication of a symptom-centred, manualised CBT for pathological gambling by Nancy M. Petry. Iver Hand will present content and results of his Hamburg "Systematic – Strategic BT" approach.

- 4 – 5 October 2010, Halifax, Nova Scotia
Nova Scotia Gaming Corporation's Responsible Gambling Conference
http://www.888betsoff.org/links/midwest_conference.shtm
- 1 – 3 December 2010, Jupiters, Queensland
20th Annual Conference of the Australian National Association for Gambling Studies

BRITISH GAMBLING PREVALENCE SURVEY FIELD WORK COMPLETE

The fieldwork for the 2010 British Gambling Prevalence Survey (BGPS), involving a sample of more than 7 500 respondents, has been completed.

This is the third nationally representative survey of participation in gambling and the prevalence of problem gambling in Great Britain. It builds on the two previous gambling prevalence surveys published in 2000 and 2007.

The BGPS 2010 collects a wide range of gambling related data to inform policy development. In particular it:

- measures the prevalence of participation in all forms of commercial and private gambling
- estimates the prevalence of problem gambling
- investigates factors associated with gambling and explores contextual elements, such as attitudes to gambling and what motivates people to gamble
- where appropriate provides comparisons between pre- and post-implementation of the Gambling Act of 2005
- identifies a population of gamblers who could be invited to participate in future research

The findings of the BGPS will be used by the UK Gambling Commission to help develop policy for the regulation of gambling and to advise the Secretary of State on gambling issues. It will also provide information on gambling to the industry, problem gambling charities and other key stakeholders.

The BGPS is conducted by the National Centre for Social Research, in collaboration with gambling experts Dr Rachel Volberg, Professor Mark Griffiths and Professor Jim Orford.

The peer-reviewed BGPS report will be published in February 2011.

ASIAN REGULATORS NEED TO PAY MORE HEED TO RESPONSIBLE GAMING

Frank Fahrenkopf, the president and chief executive of the American Gaming Association, has scolded Asian gaming regulators for not paying enough attention to "responsible gaming".

"In our view," said Fahrenkopf, "Asia has not paid enough attention to what we call responsible gaming." He credited the success of the Macau casino industry as "probably the reason why there is no much interest throughout Asia."

However, he warned, "the jurisdiction has a duty to do whatever it can to help the people who can't gamble responsibly. Pretty much around the world, about one percent of the population will have trouble adjusting to gaming."

He called that one percent "pathological gamblers," and noted that they "will lose all their money." With families involved, Fahrenkopf said, "they may commit a crime, and that presents problems."

According to the Macau Daily Times, which reported on the interview, Fahrenkopf made his remarks to a talk show during the 2010 Global Gaming Expo Asia (G2EAsia).

Gaming Today
14 June, 2010

YOUTUBE OPENS UP TO GAMBLING ADVERTISERS IN EUROPE

Google is continuing to relax its policies regarding gambling advertising with licensed operators now able to promote their online gaming services via the popular video-sharing website YouTube.com.

The site, which Google acquired in 2006 for \$1.65 billion, had previously banned all gambling-related advertising. The change in policy follows Google's lifting of a self-imposed blanket ban on gambling advertising in October 2008, which enabled UK and European licensed operators to target consumers in Great Britain via Google AdWords.

This policy has now been extended to YouTube, with advertisers subject to the same approval process as with AdWords.

YouTube gambling advertising will be served to users of the site aged 18 and over and is open to all gaming operators licensed in Great Britain, France, Italy and Spain. YouTube gambling ads may only be targeted to consumers in these four permitted locations.

The site boasts over 300 million users, of which approximately 70% are over the age of eighteen.