

THE SOCIETY FOR THE STUDY OF GAMBLING
NEWSLETTER

Autumn 1998, Number 32

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THE SOCIETY FOR THE STUDY OF GAMBLING

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The membership of the Society is drawn from a wide circle of people who have an interest in various aspects of gambling. They range from social workers and psychiatrists who deal with 'compulsive gamblers' to members of the commercial gambling industry. It is a condition of the Society that there should be freedom of opinion and practice among its members, so that the Society does not take any particular stance in relation to gambling.

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The Society holds regular meetings twice a year in London. The next meeting will be in November 1997.

For further details please write to the Honorary Treasurer.

Please note that students and others not in receipt of earnings may attend the Society's meetings without having to pay the meeting fee. Applications to waive the fee should be made to the Treasurer.

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EDITORIAL

Christopher R. Hill

The **Tote's** chief executive, John Heaton, gave an up-beat talk to the Society in May 1998. He looked cheerful, but was not at that stage able to discuss the end-of-year figures. They are indeed encouraging: profit for the year to 31 March 1998 was a record £17,859m, (39% up) before the Tote's contribution to racing and the employee profit scheme. Tote Direct, thanks to Ladbroke, was available in 4,500 betting shops, and provided 12.3% of turnover. Turnover was up 24% to £397m. All this should render the Tote a progressively more attractive investment if/when it is privatised, though of course privatisation will not necessarily be good for horse racing, to which the Tote's profits are at present dedicated.

The Chancellor announced in the House of Commons on 11 June that the possibility of a "broader partnership" between Tote and private sector was to be examined and on 14 July the Home Secretary announced at the Tote's AGM the terms of reference of a working group of Treasury and Home Office officials, to be chaired by the Tote's chairman, Peter Jones.

David Lipsey, the first Tote director to be recruited by advertisement, has close Labour contacts and hopes to help his colleagues to understand government policy. He had to close his Tote Credit account and took the opportunity to say that the Tote's service was better than that offered by other bookmakers. (Other directors appointed at the same time were Nigel Kent-Lemon and Robert Miller.)

The Tote's new Trifecta bet (first three horses in the right order) has proved more popular with punters than the bookmakers' equivalent. After long pondering of a super-bet the Tote has come up with a bonus of £1m if any £1 bet is the sole winner of the Trifecta, starting at the September 1998 Ayr Gold Cup. As Richard Evans pointed out in *The Times* (16 September 1998), many Trifecta bets are in multiples of 10p or 20p, so if the new bet catches on it will lead people to bet more, or at least in larger units. If the £1m prize is won, the staff in the shop which sold the winning ticket will share £100,000, which should encourage shops to sign up for Tote Direct if they have not already done so.

The **National Association of Bookmakers** (NAB) took the Horserace Betting Levy Board to court over new pitch rules, but lost. Sir John Sparrow left office as the chairman of the Levy Board with his faith intact that no suitable alternative to the Levy would be found in the foreseeable future. He has been succeeded by Robert Hughes, lately chief executive of Kirklees local authority in West Yorkshire.

Ladbroke has sold its spread betting operation to IG Index, perhaps because of lack of experience and expertise in this specialised type of betting. The company's betting profit for the six months to 30 June 1998 was 55% up at over £66m, or 14% if the Coral shops and those sold to the Tote are stripped out.

Stanley Leisure's pre-tax profit, helped by the World Cup, for the 53 weeks to 3 May 1998 was a record £23.9m (£19.4m in 1997). About 90% of turnover and £17.7 profit (up 37%) comes from the 564 betting shops, with a net profit margin up 0.8% to 4.4%. Stanley intends to increase its race sponsorship. The company is still achieving a week-on-week increase in slot machine turnover. Casino profit was £11m on £46m turnover. It is thought that because of their size and location Stanley's casinos are set to benefit most (compared with other casinos) from the new fruit machine regulations.

Stanley, as well as the Tote, and probably others, is in the market for the 833 former Coral shops, now that, after very lengthy deliberation, Ladbroke has been told by Peter Mandelson (former Minister for the Dome, now Secretary of State for Trade and Industry) that they must be sold on. According to *Sunday Business* (27 September 1998) Peter George, chief executive of Ladbroke, is angry and believes he has been stitched up. Ladbroke had said that it would be able to sell the shops on for more than the £363m originally paid, and had offered to sell 167 of them to the Tote (in addition to the 133 already conditionally sold to the Tote) if that would mean that it would be allowed to keep the others.

A new numbers game, The Global Draw, was introduced at the Betting Shop Show in September 1998.

Jim Cremin (*Racing Post*, 118 September 1998) reports that in **Ireland** Paddy Power has stolen a march on other betting shops by showing live Irish racing in his 108 shops. It is thought that SIS may in consequence give routine coverage of Irish racing, instead of only showing it occasionally, as at present.

Cremin says that in Ireland, unlike England, it is legal to advertise tax-free betting. William Hill has advertised its Isle of Man operation, as has the Irish Vincent Caldwell's subsidiary, Offshore Betting Ltd. The third offshore bookmaker on the island is the German Sportswetten. Compared with Gibraltar bookmakers, who take 1% of turnover, those in the Isle of Man take only 0.3%. UK firms offshore have undertaken not to open accounts for British residents, but there is no problem if you can quote an Irish address and a mobile telephone number.

According to the *Daily Telegraph* of 31 July 1998 Britain's first tax-free betting service was about to be launched on the Internet from Alderney. Customs and Excise said they would monitor the website, but Mark Blandford, the company's owner, said his operations were no concern of Customs and Excise, because it was not a UK company.

On 9 June the *Racing Post* reported that its website was offering the UK's first on-line betting service. BETonline was "a complete one-stop betting shop on the customer's personal computer." It offers a reduced tax rate of 7.5%. Ladbroke plans to follow suit within a few months. Interbet, based in Oxford, is also offering tax-free betting, and claims a customer base of 4000.

Racing has continued in its usual turmoil. Some events were almost farcical, e.g. the unmasking of the amateur jockey Angel Jacobs (Fallen Angel and Wrong Angel on Horseback in the headlines) who turned out to be a professional, and not surprisingly had lifted a number of amateur races. The row between owners and jockeys over whether the

latter should carry advertisements on their breeches has also been more than usually absorbing.

Sheikh Mohammed, who recently dispensed with two directors of Darley Stud Management at Newmarket, had been thought to be economising. However, at the Houghton sales on 1 October 1998 he paid a European record three million guineas, conducting the bidding himself, for a yearling colt by Nureyev.

The new chairman of the **British Horseracing Board**, (BHB) Peter Savill, is trying to push the pendulum a little away from subservience to bookmakers' interests, in order to persuade them to pay more for racing's product. He has engaged in the controversy in what Greg Wood called "...a refreshing rough-house fashion which owes more to the days of Lloyd George than those of Labour's spin doctors, ..has engaged his detractors among the big bookies in bitter verbal warfare...". The row relates to the BHB's much-debated new financial plan, which looks for increased contributions from bookmakers. At the same time Savill is developing racing's contacts with government in order to push the plan.

A section of Coopers and Lybrand, the BHB's (now former) auditors, presumably prevented by Chinese walls from knowing that the BHB was a client, produced a report for the Betting Office Licensees' Association (BOLA) slamming the plan. Savill in turn attacked BOLA's report as 'amateurish' and BOLA as "Biggest Operator of Little Accuracy." Marcus Annytage recorded his joy at "hearing a racing administrator, unlike so many before him, prepared to stand up to the bookmakers..". (*Daily Telegraph*, 12 June 1998).

Savill is said (by Charlie Brooks, *Evening Standard*, 30 September 1998) to be cutting his string of horses in training to below twenty. In 1996 he had over fifty. He has moved his stallion, Celtic Swing, to France, having sent him to Newmarket for the benefit of British breeders. But only 31 mares visited him in 1997.

Christopher Spence, the new Senior Steward of the Jockey Club told Howard Wright (*Racing Post*, 1 July 1998) that "...it was time to move towards the theme we had at the Jockey Club in the days of Christopher Haines-the price for the product from the bookmaker. The return that racing gets is derisory. To that extent the BHB financial plan is absolutely correct." This phrase, "the price for the product", is only just coming back into circulation and is naturally unpopular with the bookmakers. Nor is its return welcomed by the Levy Board, because it might imply some diminution of the Board's role.

The Jockey Club is cracking down on illegal gambling at racecourses, which weakens the on-course market. Tom Kelly said BOLA was delighted: "We have always said that illegal gambling is still at a significant level of between ten and 15 per cent of turnover." BOLA also fears that the planned expansion of the racing Channel, supplied by SIS to pubs and clubs for £100 per month, will encourage illegal betting.

Barney Curley, the trainer, has revealed in his autobiography that he engages in large-scale illegal betting because "... the so-called Big Three... won't lay a reasonable size of bet ... That's why I now bet, almost exclusively, underground." A Jockey Club spokeswoman said that illegal betting was not in itself a breach of the Rules, but Customs and Excise are interested. (*Racing Post*, 1 October 1998).

Dr Mark Neal, of the University of Reading's Department of Sociology, has completed three years' study of betting shops and their inmates. His main conclusion was unsurprising, that the vast majority of punters lose money over time, but he went on to point out that "betting shops enhance social cohesion and a sense of community... act as comfortable 'drop-in' centres for pensioners, the unemployed and the homeless ... In a way they've taken on the tradition of the churches-except they're much more fun." Howard Wright gave Or Neal and his findings a serious write-up in the *Racing Post* of 11 August 1998, but Paul Haigh rubbished them in the same newspaper on 13 August.

George Howarth, "Minister for Betting", addressed the World **Greyhound** Racing Conference in London. He praised the British greyhound "industry" and urged bookmakers who do not contribute to the voluntary levy to do so. Geoffrey Thomas, president of the WGRF and chief executive of the British Greyhound Racing Board, announced a world-wide charter of greyhounds' rights. Six greyhounds at Walthamstow, Crayford and Swindon have been renamed to include Metelitsa in their names in a sponsorship deal with Moscow's Metelitsa casino.

Pronto has run into difficulty, no doubt to the delight of its enemies in government and the industry. It might survive opposition from vested interests, but had difficulties with its technology. According to *Private Eye* (2 October 1998), Inter Lotto and its backer (through MMK UK, Inter Lotto's software and hardware supplier), Elliott Bemerd, are fighting over the wreckage. Bemerd is best known for his Chelsfield property group. Greene King, brewer and pubs group, is suing for over £300,000 in guaranteed commissions, and BT is hoping to recover £250,000 from MMK. Yet Pronto has raised £825,000 for charity, of which over £800,000 has been distributed. (*Financial Times*, 8 September 1998).

Casinos. A Home Office Consultation Document in August announced plans to relax controls on casinos' advertising and membership. Under the proposals jackpot machines in casinos would rise from six to ten. Advertising will be allowed in national newspapers, but not on television, cinema or radio. The gaming Board is nervous that the reduced membership formalities may encourage "junket" gambling. (Groups of people visiting clubs together, for the purpose of gambling. Can any reader explain what is bad about group enjoyment?).

Following a surge in its shares on take-over rumours, Capital Corporation has disclosed that more than one potential buyer of Crockfords, has approached it. Last year it escaped a take-over by London Clubs, thanks to Margaret Beckett, then Secretary of State for Trade and Industry. The latest rumour (*Sunday Times*, 11 October 1998) is that Ladbroke hopes to buy Capital, keep Crockford's and The Colony and sell the Cromwell Mint to **Stakis**, whose 22 casinos have made record profits of £6.6m, up 77%. Ladbroke is said to have offered to sell Maxim's to Aidan Barclay (see below).

London Clubs has dropped Newmarket and Goodwood from its race sponsorship, but retains Cheltenham, Aintree and Ascot. A major reason is the increase in taxation of casinos. Profits for the year to 29 March 1998 declined from £35.2m to £27.1 m, and the year's dividend from 8.25p to 6.925p. It has sold its casino in Cannes, but is continuing to expand overseas, with projects in Las Vegas and Johannesburg, and many more being investigated.

Ted Binion, former owner of the Horseshoe Casino in Las Vegas, died in September 1998 of an overdose of heroin and sedatives. According to *The Times* (2 October 1998) the police have unanswered questions about his death. In February he had caused 24 tons of silver to be buried under the main street of Pahrump, Nevada.

The Times reported on 17 September 1998 that British croupiers were risking their lives at the Oasis, a casino newly opened on land controlled by Yassir Arafat's Palestinian Authority in Jericho. It is heavily fortified against Muslim threats, and has been described by Hamas as "Satan's casino, a casino of scum and betrayal, degenerates and lawlessness. In it they will drink the blood of the fallen, which has not yet died, and dance to the sounds of the moaning of the injured and imprisoned."

Following the move by the old Ritz Casino to St James's Street, Aidan Barclay, son of David Barclay (one of the Barclay brothers who own the Ritz) applied for a new licence at the Ritz. The application was turned down by South Westminster gaming committee, but allowed on appeal to the Southwark Crown Court. The company has attracted Andrew Lowe, managing director of Ladbrokes casino interests since 1994, as its new chief executive.

Lady Littler has retired as chairman of the **Gaming Board** and has been succeeded by Peter Dean. As always, the Board's annual report (to 31 March 1998) is an invaluable source of statistics.

Slot machines. There have been a number of disposals and acquisitions. For example, Bass sold its BLMS amusement machine service company to a venture capital group, having sold its machine manufacturer, Barcrest, in March. Experts say that such disposals are to be expected in a mature market, but are attractive to venture capitalists because they provide healthy cash flow and require low capital investment.

Kunick, the amusement machine manufacturer, delivered a profits warning, blaming the World Cup, (but compare Stanley Leisure, part of whose increase in profit was put down to a "continued increase in machine revenue"). Kunick also expected fewer than usual sales in advance of the new regulations which came into force on 1 October. These allow a raised jackpot of £1,000, in bingo halls £500, and the maximum payout on AWP's goes from £10 to £15.

The National Lottery. *The Times* (22 August 1998) carried a harrowing report of a woman who ran a branch of the Samaritans, used £35,000 of its money on the Lottery, won £10 and was jailed for 18 months. Her counsel said that scratchcards had been the main problem.

The Broadcasting Standards Committee has rebuked the BBC over its controversial show, the National Lottery Big Ticket. The ruling said that the show glamorised gambling and promoted the sale of scratchcards.

GamCare is to co-ordinate the first national survey of British gambling habits.

Peter Collins

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Abstract *This article begins by asking the general question, why have a regulated gambling industry rather than either prohibiting gambling altogether or treating it like other industries and leaving it to market forces. Several conventional answers are rejected and it is suggested instead that all regulated gambling should offer jurisdictions the opportunity of eliminating illegal gambling and raising voluntary taxes to fund public interest causes in a reasonably harmless way. Some of the particular circumstances relevant to implementing such policy in South Africa are described before it is suggested that the success of gambling policy in South Africa, as elsewhere, will be best monitored by tracking from which of four possible sources new gambling expenditure comes: other gambling; increased tourism revenues; other pleasure/leisure spending; household necessities.*

It is easy to find plausible arguments derived from political theory for banning gambling. On any "parentalist" theory of the state which holds that the State has a duty to promote the interests (as opposed to simply protecting the rights) of its citizens, a case can be made for banning an activity which can be plausibly characterised as economically malignant, personally dangerous, socially disruptive, morally degrading and self-evidently stupid. If gambling is like the hedonistic use of heroin, surely we should ban it?

It is equally easy to find plausible arguments derived from political theory for a policy of pure *laissez-faire* which leaves it up to individuals to decide whether, when, how and how much they wish to gamble and to supply gambling services. On any libertarian theory of the state which says that individuals must be free to decide for themselves how to conduct their lives, provided only that they do not inflict unjustifiable harm on, or curtail the legitimate freedom of, other people, there should clearly be a free market for gambling in which willing buyers can engage in free transactions with willing sellers. Gambling, on this account, is an activity which supplies pleasure to consumers, profits to suppliers and involves no harm to anyone which is not self-chosen. If gambling is like alcohol, the law should protect minors and perhaps ensure some minimum of quality control, but otherwise people should be left to do as they please, however deplorable we may think the pleasures they choose.

It is quite easy to see what is most profoundly at issue between these two types of theory. It is the question of whether government should or should not treat individuals as if they were the best judges of their own interests, even when they are not.

What is very difficult to justify in theory and to implement in practice is a policy of partial prohibition and partial permission, which falls between these two clear alternatives and wishes to restrict and regulate how much and what kind of gambling services may be supplied for profit, by whom and under what circumstances. Any argument for partial restriction has to deal with the question: "why not either total restriction or no restriction at all?"

The usual arguments advanced are very unconvincing. It is said (for example, by the British Government) that we need regulation to ensure honesty and an absence of crime in the conduct of the gambling industry; to protect consumers; and to discourage socially damaging excess. But (leaving aside the fact that the gambling industry has an enormous interest in being both unusually honest and extremely diligent in keeping crime away from the areas where it operates) we are perfectly happy to leave it to the combination of markets and the ordinary prescriptions of the law to ensure freedom from crime and dishonesty in the restaurant business, in the property business, in the second-hand car business, in banking or in the insurance industry (itself a form of gambling, incidentally). Nor do we take special legal measures to "protect the vulnerable" with respect to excessive (and anti-social and personally harmful) engagements in eating, copulating, working, exercising, watching television or sunbathing. So what's so special about gambling?

The truth is that there is only one possibly good reason in political theory for regulating the gambling industry. This starts from the premise that, as a matter of fact, it can provide an opportunity for collecting abnormal taxes which are paid voluntarily. If taxes collected from gamblers can be used in the public interest, then there is a case for both maximising the public's share from the profits of gambling and for ensuring that these additional revenues are spent by properly constituted public authorities.

Even with this limited version of the case for regulating gambling there are theoretical problems relating to considerations of equity, liberty and utility. However, in the real world of politics, where the public acceptability of forms of taxation can no more be ignored than can the tendency of politicians to squander the proceeds unless held rigorously to account, there will often be a good case for an unusually high consumption tax on gambling, whose proceeds are targeted at specific public interest projects. On this view, regulating gambling makes sense if the object is to benefit not the consumers of gambling products - since competition is what best serves consumers - but the public as a whole or some deserving section of it. In this way regulation and restriction can become means whereby the public can share the profits of the industry and the industry itself becomes at least a tacit partnership between government and the private sector. According to this kind of reasoning, lotteries are the most benign form of gambling from a public interest point of view, especially since lotteries are also the least addictive form of gambling.

Public policy with respect to gambling in South Africa, after an unsurprising initial period of unrealistic expectations about both the quanta and the kinds of benefit which legalising gambling can deliver, as well as of exaggerated fears about the costs in terms of fostering crime, is now settling down to the business of formulating and implementing policy which will:

- Harness market forces for the elimination of illegal gambling
- Capture the oligopolistic profits created by restricting entry into the industry to fund publicly desirable projects identified by licensing authorities
- Ensure that the net effect of legalised gambling is redistribution not from poor to rich but from the at least adequately well-off to the very poor. (This is the Rawlsian principle of advantaging the least advantaged.)
- Make provision for minimising the social damage associated with excessive and addictive gambling

There are, however, a number of particular considerations which have to be taken into account in formulating good gambling policy in South Africa.

First, as a developing country, South Africa has a large number of very poor people, high unemployment rates and virtually no social security. This makes it much easier than in developed countries to make the argument that people's enthusiasm for gambling should be harnessed to swell state coffers. This is especially so to the extent that the gambling industry, by financing non-gambling tourism infrastructure, can contribute to employment, employability and enterprise opportunities, particularly for black people. (This is what "empowerment" in South Africa ought to mean if it is not simply to be code for buying political credibility by enriching a small number of already rich and powerful black people.)

Secondly, however, the existence of a large number of poor people (usually with very large numbers of dependants) makes the risks of "problem" gambling much more acute than in developed countries. Poor people only have to gamble a very little for it to be "excessive" and for the consequences of the excess to harm the vital interests of large numbers of people, including many children.

The best solution would in theory be to have a national lottery available to cater for the desire of the poor to sustain "sudden wealth" fantasies through gambling, while making access to the much more addictive and expensive entertainment gaming provided by slot machines difficult for the poor. To some extent this is the direction in which gambling policy in South Africa is moving. However, it is not as simple as that since very obviously it would be wrong (and racist) to make the argument that poor, black people in South Africa cannot be trusted to enjoy themselves responsibly. Moreover, black communities, in both town and country, are appallingly ill-served by recreational facilities of the kind which gambling revenues might be used to subsidise.

Another factor which is of importance for gambling policy in South Africa needs only to be mentioned here. This is that South Africa is pretty much going to be introducing all forms of gambling at once and throughout the country. This means that South Africa is going to reach saturation point for gambling very quickly, a fact which should be making would-be suppliers of gambling services more cautious than on the whole they seem to be. More importantly, it means that regulators, if they are to protect the public benefits which gambling policy is designed to secure, will have to be very judicious in ensuring that the different forms of gambling can successfully cohabit; and that places a very large responsibility on the National Gaming Board, on Provincial Gaming Boards and on the national Department of Trade and Industry, which has overall responsibility for the industry.

Finally it needs to be mentioned that gaming policy in South Africa falls under the concurrent jurisdiction of national and provincial governments and what this means in practice is not as clear as one might wish. The Provinces decide how much gambling and of what sort, within parameters set by national government. They decide on the public objectives which they want gambling to promote and the criteria to be applied in awarding licences. However, there is to be "uniformity of norms and standards" guaranteed by the National Gaming Board, on which the nine Provinces are all represented, together with representatives from central government.

Inevitably (and rightly) provinces are jealous of their autonomy. On the other hand they all have a strong interest in collaborating in respect of both policy and procedure. In particular it is vital that licences be awarded according to criteria which are clearly in the public interest as publicly articulated by public authorities. The assessment of competing applications against these criteria needs to be fair, objective and unequivocally defensible in public after the awards have been made. In pursuit of these goals, provinces would be wise to be seeking to develop a common, collective authority rather than each doing their own thing in a spirit of unwholesome emulation.

All these considerations suggest a fairly simple way of assessing the success or otherwise of good public policy in respect of gambling. This is to follow the money.

The money spent on gambling must come from somewhere. The trick for public policy is to ensure as far as possible that it comes from where you want it to come from and goes where you want it to go. The money may be conveniently categorised for this purpose as coming from one of four sources.

First, the money may come from other gambling. From the point of view of public policy, whether this is desirable or not depends on whether the new form of gambling creates fewer social problems or generates more funds for desirable public interest projects than that which it displaces. Clearly, if the money spent on (taxed) legal gambling is not now being spent on (untaxed) illegal gambling, that is a public good.

Second, the money may come from additional tourism spending (international or inter-provincial) or by keeping gambling spend from leaving the local jurisdiction. This may happen because tourists come into a jurisdiction to gamble, but that is rare and is expected to be a negligible factor in South Africa. Or it may happen because gambling subsidises nongambling tourism infrastructure which then increases tourism revenues. This latter kind of benefit to the jurisdictions is what all Provincial governments in South Africa are hoping to secure.

These are the only two ways in which gambling spend can benefit a jurisdiction directly. The other two sources from which expenditure on gambling may come are, respectively, at best neutral and positively harmful from a public interest point of view. Thus, in the third case, the bulk of the money being spent on gambling comes from local people who are diverting it from expenditure on other leisure activities, on luxuries, or on charitable donations. Though clearly not socially or economically neutral, such a development in spending habits should probably be regarded as something that government should not intervene to alter.

In the fourth case, the switch in expenditure to gambling is positively harmful. This is where the money for gambling is coming from budgets for household necessities. It is useful to make this the definition of what constitutes problem gambling and the extent of the problem can then be measured in terms of the proportion of this budget which is being deployed to pay for gambling.

It is, of course, not clear exactly what follows for public policy if it turns out, as it could in South Africa, that there is a large increase in the amount of problem gambling thus defined. Uncontentiously, the industry will be required to contribute to the cost of such (limited) preventative and treatment strategies as are available. Less obviously, it will be vital that, when this downside actually emerges, public authorities are able to point to quite specific and unambiguous public benefits which gambling profits have been used to fund.

South Africa has been fortunate to be in a position to learn from experience in the rest of the world and consequently has a chance of developing a gambling industry which does rather more good than harm. If it does so, this will have important benefits for its international reputation as a place where one can do honest, predictable and profitable business. If it fails to do so, this will be a consequence of inadequate leadership when it comes to implementing good policy.

IT COULD BE YOU

Midweek Draws and the Demand for Lottery Tickets

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Abstract. *This paper assesses the impact of the introduction of a second weekly draw to the UK National Lottery game. The focus is on the impact on total sales and therefore on the amount of revenue generated for good causes and on the overall stability of the game. In particular we consider the importance of rollovers in the success of lottery games, the possibility of players intertemporally substituting their expenditure across draws and the role of habit/ addiction among players of lotto games. We conclude that the introduction of the mid-week draw has been a successfully implemented policy by the lottery operators, Camelot.*

Introduction

Many countries have lotteries that raise considerable amounts of revenue. In many cases these are state-owned monopolies, where the revenue in excess of costs is used as tax (sometimes hypothecated) revenue; in other cases lotteries are regulated with tax (and other deductions) being a contractually specified proportion of revenue. The largest examples of lotteries are to be found in Spain, Australia, Ireland, Canada, the UK (the National Lottery), and in many US states.

The UK National Lottery (the NL) is the most recent of these, having been introduced in November 1994. Sales have been increasing steadily since its launch and were £5.6 billion for the 1997/98 financial year. When the NL was launched in November 1994 there was a single weekly (Saturday evening) draw, but since 5 February 1997 there has also been midweek (Wednesday evening) draw. This means that players now have the opportunity to play twice a week, as the mid-week draw is a replica of the Saturday draw. Prior to the introduction of the mid-week draw sales were running at approximately £69 million in a normal week. Since the Wednesday draw, total weekly sales have been approximately £89 million: £60 million from the Saturday draw and £29 million from the Wednesday draw. Figures 1 and 2 show the sales per draw and per week since the lottery's launch.

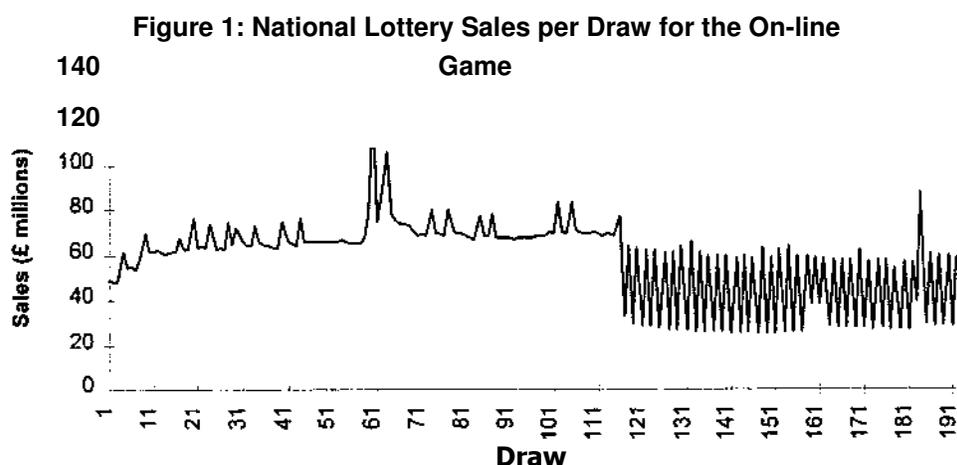
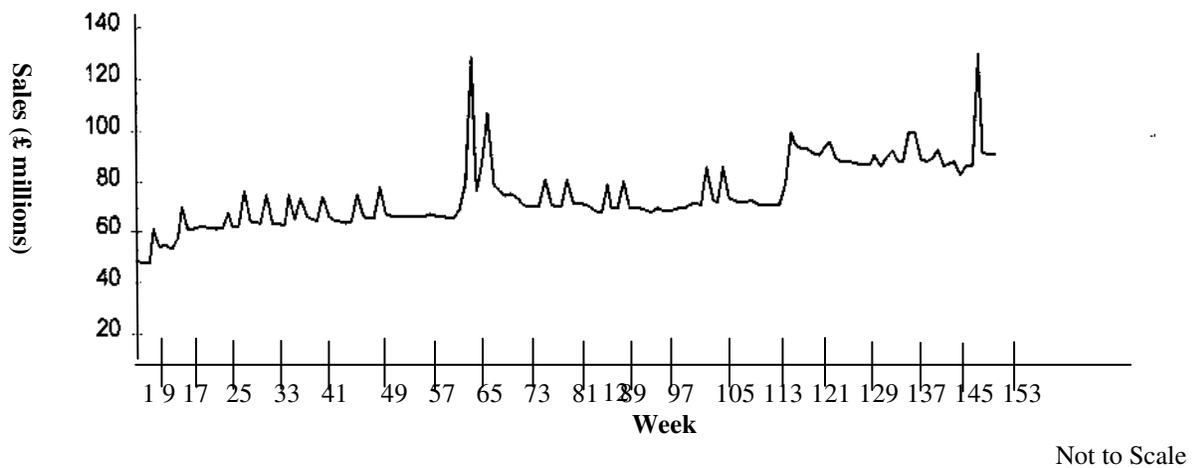


Figure 2: UK National Lottery Sales per Week for the On-line Game



The discussion that follows will focus on the impact that the availability of the mid-week draw has had on the game and we will try to assess if it was a successful policy to introduce a second draw. In particular we consider the importance of rollovers in the success of lotteries, the possibility of players intertemporally substituting their expenditure across draws and the role of habit/addiction among the players of lotto games. First, however, we will introduce a simple model of the demand for lottery tickets.

The Demand for NL Tickets.

The usual way to model the demand for a good is to assess its sensitivity to the price of the good by seeing how sales vary with price. However in the case of lottery tickets the nominal price of a ticket does not vary across draws, yet the demand for tickets does. Demand is observed to rise in rollover draws and this is because rollovers mean the lottery is a "better bet" since a rollover increases the amount returned as prizes in that particular draw. The "expected value" of a ticket is how much an individual ticket would be expected to win on average. In regular draws this is approximately 45p, since approximately 55% of revenue is retained by the operator for costs, tax, etc. But the expected value is higher in rollover draws relative to normal draws because of the additional prize money. It is therefore possible to infer "price" variation through changes in the expected value of holding a ticket as a result of the presence of rollovers. This implicit price is one minus the expected return to holding a ticket for a given draw.

The determination of the expected value of holding a lottery ticket was first demonstrated in Sprowls (1970) and has subsequently been used in Scoggins (1995), Clotfelter and Cook (1993), Gulley and Scott (1993) Lim (1995) and Farrell et al. (1996). For the moment we only consider the case where individuals choose their numbers randomly and the lottery is one where there is just a single prize pool¹. The jackpot is the revenue from sales discounted by the take-out rate plus any rollover from the previous draw. Thus, if N is sales revenue (typically lottery tickets cost one unit of currency- in the UK a ticket costs £1 so N is also the number of tickets sold), R is the amount rolled over from the previous draw (which will be zero if the previous jackpot was won), and r is the proportion of the sales revenue that is NOT used as prize money (r is known as the take out rate), then the jackpot is given by,

$$(1) J = (1 - \tau)N + R.$$

The probability of this jackpot being won can be determined from the design of the game. Lotteries are characterised by the number of numbers (balls) available to be drawn (n), (usually without replacement) and the number required to win (m). The probability of any one ticket matching the balls drawn, say π is given by $n! / m!(n-m)!$ ² - so in a 6/49 game it follows that π is one in 13,984 million. Thus the probability that the jackpot will rollover (i.e. not be won by at least one of the N tickets sold), P , is $(1 - \pi)$ multiplied by itself N times over and the expected value of the prize money per ticket sold is then,

$$(2) V = (1 - P) \frac{J}{N},$$

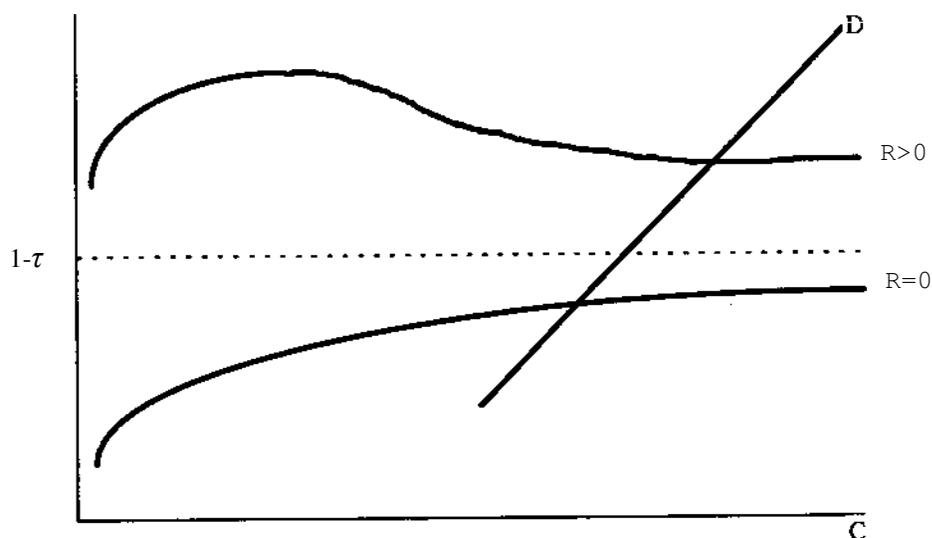
where the term in brackets is the probability that the jackpot will be won if N tickets are sold and the second term is the amount on average that each randomly drawn ticket expects to win if the jackpot is won. This equation tells us how, given the design of the game, the value of a ticket purchased varies with the number of tickets sold.

It is straightforward (see Lim (1995) and Farrell et al (1996)) to show that V is higher: the higher is the size of the rollover R , the smaller is the take out rate τ , and when $R = 0$ the higher is N but successive increases in N have successively smaller effects on V . When a rollover occurs the effect of sales on the expected value is more complex and the possibilities are illustrated in figure 3 together with the case where $R = 0$. $V()$ always asymptotes towards $(1 - \pi)$, but for $R > 0$ it asymptotes from above and at a slower rate than for $R = 0$ when it is faster and from below. For $R > 0$ the relationship may attain a maximum for some finite level of sales. These curves are the result of two opposing effects: the more players who play the lottery the greater the prize, so the expected return increases; however, the more players the greater the probability of having to share the prize if you win, which has a decreasing effect on the expected return.

¹ The assumption that there is a single prize pool (for the jackpot) is harmless providing the smaller prize pools do not roll over- which is both extremely unlikely in theory, and unheard of in practice. Cook and Clotfelter (1993) pp. 636-7 speculate that the theoretical structure of the game is unchanged if individuals pick their numbers non-randomly (they call this conscious selection). Farrell et al (1996) consider this more complex conscious-selection case and prove that the most important theoretical properties of the game are indeed unaffected by this generalisation. The presence of fixed prizes, as opposed to prize pools which operate on a *pari-mutuel* basis, undermine some of the properties but the empirical results in Farrell et al suggest that this is unlikely to be important.

² Note that ! denotes the factorial operator, for example $6! = 6 \times 5 \times 4 \times 3 \times 2 \times 1 = 720$.

Figure 3: The Relationship between Sales and the Expected Return



Notice that V is always higher in rollover draws than in regular draws, irrespective of the level of sales³. Thus, it is impossible to arbitrage away the differences in V between rollover and normal draws, no matter what the variation in sales. This implies that there will always be some exogenous variation in V arising from the random incidence of rollovers. It is, indeed, possible in theory for the expected value to exceed unity, the cost of a ticket, so the net expected return becomes positive. However this is unlikely since it would require a low level of sales in a draw with a large jackpot accumulated from previous rollovers. Given that we can calculate the expected value of a ticket for each draw and we know the level of sales for each draw it is possible to estimate the demand curve for tickets based on the model that demand is a function of the expected value of holding a ticket for a given draw. Superimposing this aggregate demand function D into figure 3 shows how a rollover shifts the inverse supply function and induces a movement along the demand curve.

Thus, rollovers can be used to identify the price elasticity of demand for lottery tickets. The price elasticity of demand for tickets tells us how the demand for tickets changes as the expected value of holding a ticket changes and therefore is important for assessing the impact of changes in the design of the game upon the level of play. However care needs to be exercised. Changes in the expected return that are induced through rollovers represent only temporary changes in the price of a ticket and it is unclear if consumers would react in the same way to permanent changes in the price such as a change in the tax rate. If the variation in sales across normal and rollover draws is a result of intertemporal substitution by players, then this price elasticity cannot be used to assess the impact of design changes. This issue will be discussed in more detail in the following section.

³ For a finite N , since all curves asymptote to $1 - \tau$ as $N \rightarrow \infty$.

Intertemporal substitution and "addiction".

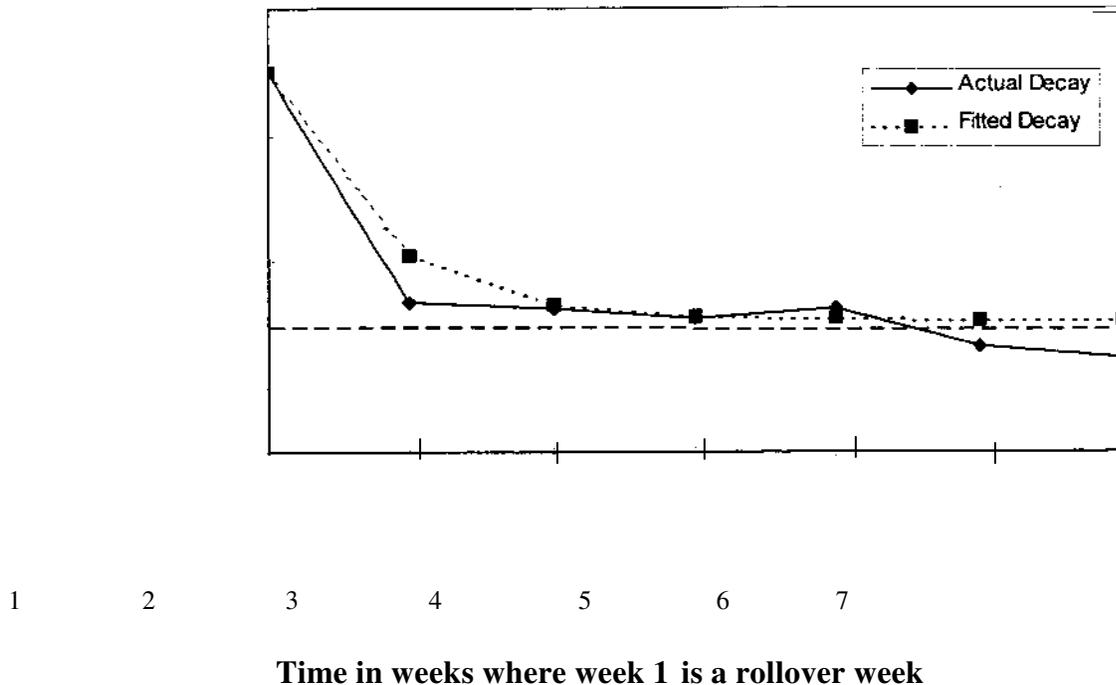
We have presented a very simple model where sales depend only on rollover size. In practice we might expect there to be more complex behaviour at work. For example, there are two reasons why we might expect sales to exhibit some intertemporal interdependence (that is, for sales in one draw to be correlated with sales in the next draw). The first is that players may become addicted and the second is that players may intertemporally substitute their expenditure strategically across draws, to take advantage of differences in the expected return to holding a ticket arising due to the presence of rollovers.

If there is a significant level of addiction among lottery players then increasing the frequency of draws should increase total sales, as addicted players will now feel the need to play twice a week rather than just once. The term 'addiction' here is used in the sense that, like heroin addicts or opera fiends, the more individuals are exposed to the commodity the more exposure they want in the future. This type of behaviour has been shown in empirical studies of cigarette and heroin consumption (see, Becker and Murphy (1988) and Becker, Grossman and Murphy (1994)). In this addiction model individuals find that their tastes change with their consumption - higher consumption implies a greater future taste for consumption. If players are addicted in this manner then sales for draw t should be a function of sales in draw $t-1$ (and sales in draw $t-1$ are a function of sales in draw $t-2$ etc.).

The existence of this addictive effect implies that rollovers have a double dividend - they cause sales to rise above their pre-rollover level and this rise in sales induces a slow return to the pre-rollover level so there are additional sales in subsequent weeks. This addictive kick is known in the industry as the "halo" effect. Farrell, Morgenroth and Walker (1997) show that the halo decays within 4-5 draws, by which point sales have returned to the post-rollover level. However a close succession of rollovers would have the effect of causing sales to ratchet upwards. Figure 4 below shows the mean actual decay from the observed rollovers, together with the fitted decay from an addiction model where past participation is used as a determinant of current consumption, like that used by Becker Grossman and Murphy (1994). We can see that on average a rollover increases the sales by 20% and the following draws sales are also 3-5% higher than the draw prior to the rollover. Moreover, sales remain slightly above their pre rollover level for approximately 4 draws after the rollover.

The presence of addicted players suggests that the introduction of a mid-week draw will be beneficial in terms of raising total sales and therefore increasing the flow of revenue to good causes. Moreover, the common structure in the two draws means that the habitual nature of play can be exploited. Players who feel a sense of ownership to a particular set of numbers will feel the need to purchase in both draws. Individuals may feel that they cannot miss the opportunity to use their lucky numbers. Indeed, to miss a draw runs the risk that someone else may be lucky with one's own set of numbers. Thus there is a great deal of sense in simply replicating the Saturday game on Wednesdays.

Figure 4: Post Rollover Sales Behaviour



However the second intertemporal interdependence, intertemporal substitution, suggests that a mid-week draw may be detrimental to the game. Given that the expected return is higher in rollover draws than in normal draws we might expect there to be some intertemporal substitution across draws. That is, if rollovers are frequent events, then players may anticipate their happening and rather than play every draw (and perhaps a little more intensely when a rollover does occur) they may choose to wait for a rollover to occur and so play only when the "return" is highest. This appears to be a feature of some US lotteries where the base level of sales is quite low. This type of intertemporal substitution can make the game dynamically very unstable. The substitution of play away from normal draws to rollover draws will lead to lower sales for normal weeks, which further increases the probability of a rollover, which gives further reason to wait for a rollover to occur, etc. Thus introducing features to the game design that encourage significant intertemporal substitution is something to be avoided. The

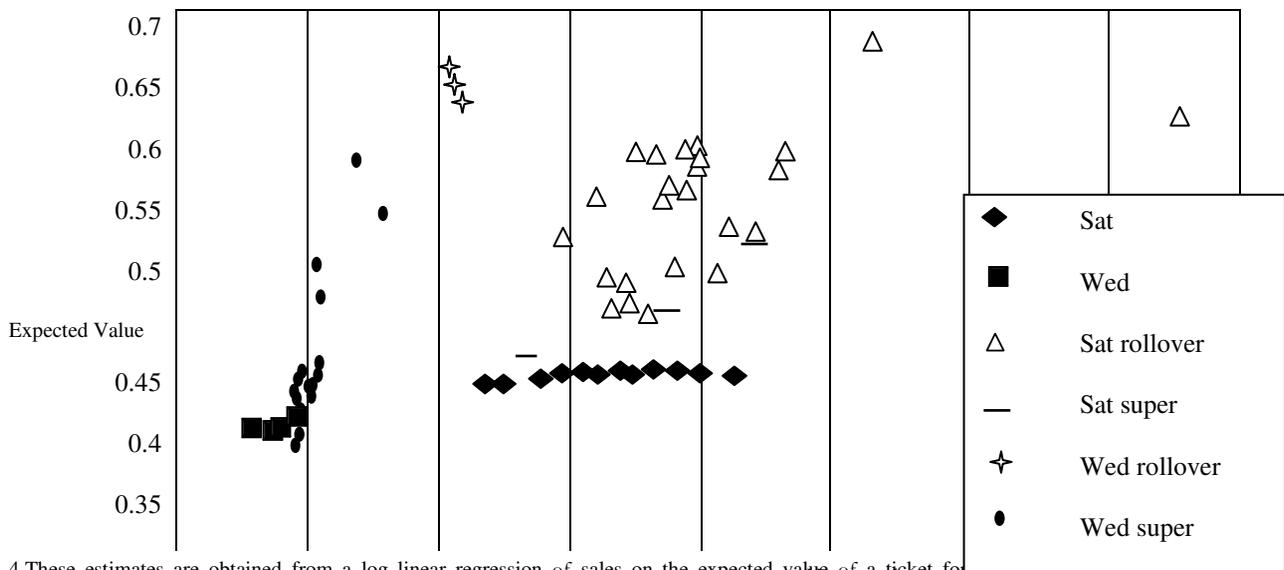
One rationale for the introduction of the Wednesday draw was that sales on a Saturday were very high and there was a danger of very few rollovers occurring. This would be detrimental to the game because rollovers are essential for stimulating addiction. According to our estimates, in the absence of rollovers sales would have a negative trend. Players would quickly tire of the game (in the absence of addiction). In the light of such "lottery fatigue" it is important to maintain a reasonable frequency of rollovers.

The introduction of the mid-week draw has resulted in a shift of some of the Saturday draw's demand across to the Wednesday draw (as well as generating additional demand). This has increased the probability of a rollover on the Saturday draw and, given that the mid-week draw is less popular with players it also has a high probability of rolling over into the Saturday draw's jackpot prize pool. Thus, introducing a mid-week draw is an effective means of increasing the frequency of rollovers and therefore preventing lottery fatigue. More rollovers will also cause more ratchet effects. The only potential problem is that the Wednesday draw is

a better substitute for the Saturday draw than next Saturday's draw and this may encourage greater intertemporal substitution in lottery ticket purchases.

Given that sales on Wednesdays are lower than on Saturdays, the expected return in a normal draw will be lower for Wednesdays than Saturdays. Moreover, in rollover draws, given that any rollovers from Wednesday draws into Saturday draws will be smaller than any rollovers from Saturday draws into Wednesday draws, the expected return in a Wednesday rollover will be higher than in a Saturday rollover. Figure 5 plots the expected value of a ticket against the level of sales for the different types of draws.

Figure 5: Sales Against Expected Value for the National Lottery On-line Game -by type of draw.

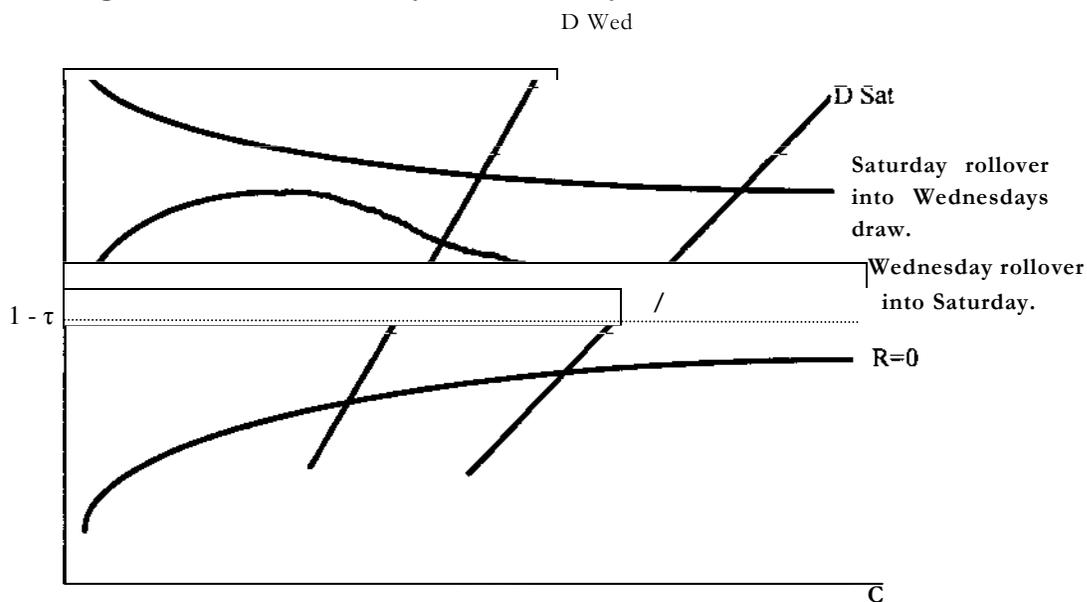


4. These estimates are obtained from a log linear regression of sales on the expected value of a ticket for Wednesday draws and Saturday draws. The draws used covered the period from the launch of the lottery until December 1997.

0.3								
	0	20	40	60	80	100	120	140

The price elasticity of demand for tickets can be estimated through changes in demand resulting from exogenous variation in the expected value of holding a ticket generated through the random occurrence of rollovers. For the Saturday draw the price elasticity is estimated to be 0.83 with a standard error of (0.07) and for the Wednesday draw it is estimated to be 0.73 with a standard error of (0.06)⁴. The size of the standard errors means that the two estimates

Figure 6: The Wednesday and Saturday Draw Demand Curves.



This lack of response from players for mid-week rollover draws makes them a much better bet than Saturday rollover draws. On Saturday rollovers the increase in the expected value generated by the rollover is in part competed away by the increase in the number of players. Moreover the size of the rollover is relatively small, since it comes from the previous Wednesday's not-won prize pool and Wednesday sales are low relative to Saturday sales. The average expected return for a Saturday draw is 0.45 and this rises to 0.59 in a rollover draw. Wednesday rollovers, however, have a larger impact on the expected value of a ticket because the size of the rollover is large (as it comes from the previous Saturday's draw) and sales are less responsive to the rollover due to the lower popularity of the mid-week draw. The expected value of a ticket for a Wednesday draw is around 0.43 (due to the lower jackpot because of low sales) and rises to around 0.65 in a rollover.

If players were engaging in intertemporal substitution then we would expect to see them delaying participation until a Wednesday rollover occurs. If sufficient players behaved in this way then the higher expected value should be competed away by the higher sales for these draws. The data suggest that this is not the case: demand appears to be no more responsive to changes in the expected value of a ticket for mid-week draws, implying that players are not intertemporally substituting their lottery ticket purchases. There is clearly a benefit to be gained from delaying expenditure until rollover draws, especially mid-week rollover draws, but UK players do not appear to be exploiting this potential gain. Whilst the expected return will always be higher in rollover draws than in normal draws, we would not expect there to be differences in the expected value of a ticket between Wednesday and Saturday rollovers.. Any such price differentials ought to be arbitrated away by the intertemporal behaviour by players.

Conclusion

The introduction of the mid-week draw has been a successfully implemented policy by the lottery operators, Camelot. By replicating the existing draw it has been possible to fully maintain the habitual/addictive behaviour among players and so increase the flow of funds to good causes. Moreover, the policy will maintain a reasonable frequency of rollovers within the game and will therefore secure future revenues, in as far as rollovers are essential for stimulating interest in the game and preventing lottery fatigue.

The danger, however, of introducing a mid-week draw is that it is a better substitute for Saturday's draw than is next Saturday's, because it is closer (temporally speaking) and this may encourage intertemporal substitution of play among participants. If players do not purchase today in the expectation that the next draw might be a rollover, then sales in normal weeks will fall, further increasing rollover expectations and leading to a dynamically unstable sales path. However our analysis suggests that there is no evidence that UK lottery players are engaging in intertemporal substitution. Sizeable expected value differentials exist between Wednesday and Saturday rollover draws that are not being arbitrated away. In this respect the introduction of the mid-week draw has been a successful policy.

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YOUNG GAMBLERS I

Gambling and Problem Gambling among Young People in England and Wales

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Abstract. *As many as five percent of young people in England and Wales may have a problem with gambling. This information became evident through a recent independent study commissioned by the Office of the National Lottery. The research involved the largest and most comprehensive survey of young people and gambling ever undertaken in this country. Nearly 10,000 young people between the ages of 12 and 15 were surveyed during June and July 1997. The sample was drawn from 114 schools in England and Wales and is considered to be nationally representative of these regions. Of particular interest to the sponsors of the project is the finding that, despite efforts in this direction, there has been no reduction in illegal National Lottery sales since the last survey in 1996. As a result, the Acting Director General of OFLOT, John Stoker, has announced his determination "to make 1998 the year in which a significant impact is made on this issue, reducing substantially the prevalence of illegal sales to under 16s". A summary of the study's findings and recommendations is presented below.*

SUMMARY OF MAJOR FINDINGS AND IMPLICATIONS

This independent study was commissioned by the Office of the National Lottery. It was designed and executed by Dr. Sue Fisher, Director of the Centre for Research into the Social Impact of Gambling, at the University of Plymouth. Data was collected under the direction of Mark Wardman at the Social Research Institute at Market and Opinion Research International Ltd. (MORI). The sample of 9,774 12-15 year olds was drawn from 114 schools in England and Wales and may be considered as being nationally representative of these regions.

Summary of Findings

Lifetime gambling

- Young people in England and Wales commonly gamble for money between themselves on the outcome of a game, or the toss of a coin, and the majority have taken part in some form of commercial gambling. Fruit machines are by far the most popular form of commercial gambling among young people, followed by National Lottery scratchcards and the National Lottery Draw:
 - 75% of the 9,774 young people surveyed had gambled on fruit machines, 47% had gambled on National Lottery scratchcards and 40% had gambled on the National Lottery Draw.
 - 16% had spent £5 or more on fruit machines and 2% had spent £5 or more on National Lottery scratchcards in one day.

Past week expenditure by young people on fruit machines

- The young people surveyed were more likely to have spent their own money on fruit machines and to have spent relatively large amounts of money on them than on any other commercial gambling form:
 - 19% of the 9,774 young people surveyed had spent their own money on fruit machines and 46% of these had spent £2 or more on them, during the week prior to the survey.

Past week expenditure by young people on the National Lottery

- 13% of the 9,774 young people surveyed had spent their own money on the National Lottery in the week prior to the survey as follows:
 - 5% had spent their money on the National Lottery Draw
 - 4% had spent their money on National Lottery scratchcards
 - 4% had spent their money on both games.
- 23% of the young people who had spent their own money on the National Lottery Draw and 28% of those who had spent it on National Lottery scratchcards during the week prior to the survey, had spent £2 or more.

Past week expenditure by young people on the National Lottery: distinguishing between legal and illegal transactions

- While the proportion of young people who had spent their own money on the National Lottery during the previous week had declined from 15% in 1996 to 13%, this decline is entirely due to a fall in legal transactions (where the money is handed over in the shop by an adult on behalf of a child). The proportion of underage purchases remains the same,
 - Almost half of the children who had spent their money on the National Lottery during the week prior to the survey reported underage purchases (6.5% of the 9,774 young people surveyed).
- The children were much more likely to have made underage purchases of scratchcards than of National **Lottery** Draw tickets:
 - 64% of the 740 children who had spent their money on scratchcards in the past week made underage purchases, compared with 46% of the 950 children who had spent their money on Draw tickets.
- Most of the underage purchases were made by the respondents themselves, although some children got a friend under the age of 16 years to buy the tickets for them. Most of the legal purchases were made by a parent on behalf of their child. Parents were more likely to have handed over money in the shop for Draw tickets (43%) than for scratchcards (25%).

- The young people who made underage purchases were more likely than the other children to be male, to be in School Year 10 (aged 14-15 years) and to have spending money of more than £5 in the same week that the Lottery purchases were made:
 - 14% of the 14 -15 year old boys surveyed made underage purchases during the week prior to the survey.

Underage purchases of National Lottery products from different retail outlets

- But the survey finds that retailers are challenging young people about underage Lottery purchases and that nearly half of underage attempts to buy National Lottery products are unsuccessful:
 - the general success rate for attempted underage purchases was 56%.
- The children were more successful in some types of retail outlets than others:
 - the success rate for attempted underage purchases in large supermarkets was lower than the average at 45%
 - the success rate for underage purchases in newsagents was higher than the average at 67%.

Expenditure on fruit machines in different retail outlets

- A clue as to the present structure of the market for adolescent fruit machine gambling is given by the children who had spent their own money on them in the past week (19% of the 9,774 young people surveyed). More of these young people had played fruit machines in pubs (44%) than in any other venue. Second in popularity were seaside amusement arcades (35%), followed by inland amusement arcades (32%). The sum of these figures is more than 100% because many of the past-week players had played in more than one type of venue.
- There were some highly significant differences between the children who lived in seaside locations and the children who lived further inland. The seaside children who had spent money on fruit machines in the previous week were more likely than the inland children to have spent some in seaside arcades (47% compared with 28%) and less likely to have spent some in sports centres (14% compared with 21 %).

Problem gambling in young people

Defining Problem Gambling

- A small minority of people gamble in a way which compromises, disrupts or damages family, personal, or recreational pursuits. These people are called 'problem gamblers' (Lesieur & Rosenthal, 1991). It can be seen from this definition that the term 'problem gambling' describes a range of behaviour. This range of behaviour may be viewed as a continuum with the less severe cases at one end and the most severe cases at the other.

A Problem Gambling Screen

- As the above definition suggests, problem gambling is a complex phenomenon, and not simply a matter of excessive expenditure on gambling. A problem gambling 'screen' is an index of behaviours and psychological states, known to be correlated with problem gambling, which is used to classify people as problem gamblers in a given population. This information is then correlated with demographic and other relevant data to provide detailed information for decision makers. The problem gambling screen used in this study is DSM-IV-J-R. (A detailed technical report on the development and psychometric properties of the screen is provided in Appendix 1 of the full report.) -

The prevalence of problem gambling in young people aged between 12 and 15 years in England and Wales

- 5% (549) of the 9,774 young people surveyed scored as problem gamblers:
 - 62% of the 549 young people identified as problem gamblers had a problem with fruit machines only (3% of the young people surveyed)
 - 17% of the 549 had a problem with National Lottery scratchcards only (1% of the young people surveyed)
 - 21% of the 549 had a problem with *both* fruit machines and National Lottery scratchcards (1% of the young people surveyed).
- The prevalence of problem gambling among the youth who lived in or near the seaside is significantly higher than that found among those living further inland: 7% compared with 5%. (The children who live in or near seaside towns account for 25% of the total sample).

The characteristics of young problem gamblers

- The most significant differences between the problem gamblers and the other children were gender and disposable income.
 - 64% of the 549 young people identified as problem gamblers were male compared with 51% of the other children
 - 65% of the 549 had a disposable income of £5 or more a week compared with 54% of the other children.

Past week gambling: problem gamblers compared with other players

- The problem gamblers were more than twice as likely as the other players to have spent their own money on all of the major gambling forms examined:
 - 68% of the 549 young people identified as problem gamblers had spent their money on fruit machines in the past week.

- 46% of the 549 had spent their money on the National Lottery Draw in the past week.
- 36% of the 549 had spent their money on National Lottery scratchcards in the past week.
- 50% of the 549 young people identified as problem gamblers had spent their money on other commercial scratchcards in the past week.
- As with adult problem gamblers, young problem gamblers tend to play several different games:
 - 41% of the 549 young people identified as problem gamblers had spent their money on three or more gambling games during the past week.

The social costs of gambling and problem gambling in young people

A minority of children had been involved in undesirable behaviours as a result of their gambling. The following statistics relate to the young people who had spent their money on fruit machines or National Lottery scratchcards in the past year (about half of the sample, N=4,959):

- 9% had spent more than £10 on gambling in one day.
- 4% had truanted to gamble.
- 15% had spent their school fare or dinner money on gambling.
- 12% had stolen from their families to fund their gambling.
- 7% had stolen from outside of the family to fund their gambling.
- 10% had sold their possessions to fund their gambling.
- 14% had lied about the extent of their gambling
- 5% had fallen out with their family more than once or twice because of their gambling.
- As expected the incidence of these sorts of behaviour in the problem gamblers was much higher. Moreover, young problem gamblers commonly overspend, truant from school, fall out with their families, steal and lie about their gambling. It is this combination of behaviours which causes such extreme distress to the young problem gambler and his or her family and friends. The following examples of undesirable behaviours by the problem gamblers in this survey are best considered cumulatively.

of the 549 young people identified as problem gamblers

- 29% had spent more than £10 on gambling in one day.
- 50% had spent their school fare or dinner money gambling.
- 43% had stolen from their families to fund their gambling.
- 27% had stolen from outside of the family to fund their gambling.
- 35% had sold their possessions to fund their gambling.
- 60% had lied to their families about their gambling.
- 28% had fallen out with their family more than once or twice because of their gambling.

Problem gambling and other potentially addictive behaviours

- The literature on adolescent gambling shows that problem gambling is commonly associated with other potentially addictive behaviours. This survey found that the problem gamblers in the sample were much more likely than the other children to have smoked cigarettes, drunk alcohol and taken illegal drugs in the past week than the other children. Indeed, not only were the problem gamblers much more likely to have indulged in these behaviours, they were also at least twice as likely to have indulged in them frequently (on at least three days in the past week). For comparative purposes, the past week play of the problem gamblers on fruit machines and National Lottery scratchcards is also shown: -

in the past week

- 47% of the 549 young people identified as problem gamblers had smoked cigarettes, compared with 22% of the other children
- 73% of the 549 had taken alcohol, compared with 46% of the other children.
- 28% had taken illegal drugs, compared with 9% of the other children.
- 75% had played fruit machines, compared with 27% of the other children (these figures include those whose play was financed by someone else).
- 51% had played National Lottery scratchcards, compared with 16% of the other children (these figures include those whose play was financed by someone else).
- Many of the young people reported that they had 'felt bad about the amount' that they used cigarettes, alcohol, drugs and/or played National Lottery scratchcards and fruit machines (in the past year). It is interesting in the context of this study that, looking at the sample as a whole, concern by young people about their own fruit machine gambling behaviour ranks second only to concern about their consumption of alcohol.

- 23% of the 9,774 young people surveyed had felt bad about the amount of alcohol they consumed.
- 22% of the 9,774 had felt bad about the amount they had played fruit machines.
 - 19% of the 9,774 had felt bad about the amount of cigarettes they had smoked.
 - 12% of the 9,774 had felt bad about the amount they had played National Lottery scratchcards.
- 8% of the 9,774 had felt bad about the amount of illegal drugs they had used.
- Not surprisingly, given their greater participation as a group, the problem gamblers were much more likely to have felt bad about the extent of their involvement in all of these activities. Above all, the problem gamblers had felt bad about the amount they played fruit machines:
 - 58% of the 549 young people identified as problem gamblers had felt bad about the amount they had played fruit machines.
 - 41% of the 549 had felt bad about the amount of alcohol they consumed.
 - 37% of the 549 had felt bad about the amount of cigarettes they had smoked.
 - 35% of the 549 had felt bad about the amount they had played National Lottery scratchcards.
 - 21% of the 549 had felt bad about the amount of illegal drugs they had used.

Problem gambling and parental gambling and attitudes

- Research shows that children who gamble are more likely than other children to come from home backgrounds where at least one parent is a regular gambler. Moreover, retrospective studies have shown that adults who are problem gamblers are significantly more likely than other people to have started gambling in childhood or adolescence and to have a parent/step-parent who is/was a problem gambler.
 - The parents of the children identified as problem gamblers were at least twice as likely to have gambled on each of nine different commercial gambling games than the parents of the other children, with the exception of the National Lottery Draw, where the difference was not as great, but still statistically significant.
 - The 549 young people identified as problem gamblers were more than three times as likely as the other children to report thinking that their parents gambled too much: 15% compared with 4%.

- The study also finds that parental attitudes to children's gambling are acted out in the gambling behaviour of their children. The children were asked how they thought their parents felt about someone of their age spending money on the National Lottery Draw, National Lottery scratchcards and fruit machines. This question revealed an important misunderstanding in adult perception as to the relative safety of the different gambling games. According to their children, more parents approved, or did not mind, if their children played fruit machines than the National Lottery products. This demonstrates a certain lack of awareness by the general population as to what constitutes 'hard' and 'soft' gambling. Slot machines are known by scholars of gambling to be one of the most addictive games available.
- The problem gamblers were much more likely than the other children to report that their parents approved, or did not mind, if young people their age spent money on fruit machines or National Lottery products:
 - 69% of the 549 young people identified as problem gamblers reported that their parents approved, or did not mind, someone of their age spending money on fruit machines, compared with 49% of the other children.
 - 58% of the 549 reported that their parents approved, or did not mind, someone their age spending money on the National Lottery scratchcards, compared with 26% of the other children.
 - 55% of the 549 reported that their parents approved, or did not mind, someone their age spending money on the National Lottery Draw, compared with 34% of the other children.

Playing companions

- Looking at the sample as a whole, more of the children reported that they played the National Lottery Draw and National Lottery scratchcards with their parents than with anyone else. However, fruit machine gambling appears to be firmly established as a peer group activity and more young people played with their friends with than anyone else.
- Problem gamblers were at least twice as likely to play the National Lottery Draw, National Lottery scratchcards and fruit machines with their friends, or alone, than were the other children.

The popularity of National Lottery television programmes and promotions

- The National Lottery is promoted by the midweek and weekend National Lottery Live programmes, during which the midweek and Saturday Draw winners are revealed, and by direct promotions shown in the commercial breaks between television programmes. Since the National Lottery Live programmes are broadcast before the 'nine o'clock watershed' and combine popular celebrities, top bands and general glitz and glamour, it is probably safe to say that they are appealing to young people.

- The majority of the children surveyed reported watching the National Lottery Live television shows on Saturdays (84%) and on Wednesdays (62%).

Implications and Research Directions

As a result of the introduction of new forms of gambling, including the National Lottery, and the deregulation of other commercial forms, there has been a significant increase in the supply of commercial gambling in Great Britain. This study finds that commercial gambling games, particularly fruit machines and the National Lottery, are attractive to young people and that a significant minority circumvent the existing 16 year legal and voluntary minimum age restrictions to play them.

Controlling one's response to gambling requires certain life skills which are likely to be underdeveloped in children and young people. Consequently, previous research in other countries shows that the prevalence of problem gambling is higher in young people than in the general adult population. This study estimates that about 5% of the youth of England and Wales gambles in a way that is problematic for themselves, their families and society in general. Based on the findings of this study, the author suggests the following themes for consideration by policymakers and future researchers in the field of youth gambling:

- Institution of the appropriate regulatory controls for gambling by young people similar to those applied to the consumption of alcohol, including:
 - Having statutory age limits for commercial gambling and strictly enforcing them to reduce availability to children.
 - Making the gambling industry (whoever oversees and operates the games) more accountable in efforts to discourage access to gambling by children.
- The development of awareness in adult society about
 - what constitutes hard and soft gambling
 - the susceptibility of children to problem gambling
 - the relationship between parental gambling behaviour and gambling in their children
- A review of the existing treatment centres and support groups for young problem gamblers with a view to assessing adequacy of provision.
- The establishment of screening procedures for problem gambling in centres dealing with other addictions in young people.

- More qualitative research among young problem gamblers and their families with a view to providing information for treatment professionals and counsellors including:
 - the impact of child problem gambling on the family
 - key factors influencing child problem gambling
 - the gambling careers of young problem gamblers
 - more qualitative research into promotions for gambling services and the messages they convey to young people.
- The routine monitoring of the prevalence of gambling and problem gambling in youth at appropriate intervals.
- The level of concern by young people about how much their parents are gambling warrants research into the prevalence of gambling and problem gambling in the adult population.

YOUNG GAMBLERS II

Adolescent gambling : Still a cause for concern

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Abstract. *This article reports the main findings of two studies examining adolescent gambling on scratchcards and the National Lottery on-line game. The results of these studies have been published formally in academic journals (Journal of Adolescence and Journal of Community and Applied Social Psychology). Details of the full reports are available from the authors.*

Study 1

Officially anyone under the age of 16 years old is not allowed to play the National Lottery or instant scratchcards, but initial press reports suggest that that this is not the reality. For instance, Moran (1995) reported that 61% of a sample of 187 school children had successfully purchased lottery tickets. A survey by the children's charity Children's Express found that children aged 12 to 15 years old were able to buy lottery tickets on two thirds of occasions (MacDonald, 1995), and a similar study by *The Sunday Mirror* reported that three quarters of the children in their survey aged 11 to 15 years old did so similarly (Garner, 1995). Adolescent gambling may also be stimulated via television coverage. For instance, the Independent Television Commission (1995) reported that The National Lottery Live television programme was the second most popular television programme for 10 to 15 year olds with 38% watching.

There has been an increase in concern over the issue, and a growing awareness that these activities may be widespread among young people, and that the effects may be far reaching. For some young people these may include problem gambling, and involvement in criminal acts in order to finance these activities. For many more the influence, while appearing less severe, may be resulting in a significant change in their attitudes toward gambling. The first study set out to examine the acquisition, development and maintenance of National Lottery and instant scratchcard gambling among adolescents. Other factors (e.g. adolescents' attitudes toward gambling, levels of problem gambling) were also examined.

Time and money spent playing

The total sample consisted of 1195 adolescents aged 11 to 15 years old (550 male, 641 female, 4 unspecified; mean age = 13.3 years). Large numbers of adolescents had played the National Lottery (48%) or instant scratchcards (30%). Most of the adolescents played the lottery only occasionally (64%) although 16% played most weeks and 14% played every week. With regard to scratchcards, most played once a month (44%), 27% played a few times a month, 12% played once a week, 13% a few times a week and 4% every day. There were no significant gender differences in frequency of play on either of these activities. A significant number of the participants illegally bought their own National

Lottery tickets (17%) or scratchcards (26%). There were no significant gender differences in illegal buying. The average amount that adolescents spent per week was £1.53 on the National Lottery and £1.40 on scratchcards. There were no gender differences in amounts of money spent.

Links with parental gambling

There was a strong correlation between parental and child participation on both the National Lottery ($r = 0.26567$, $p < 0.0005$) and scratchcards ($r = 0.37838$, $p < 0.0005$). Furthermore, of the participants who took part in these activities most had their lottery tickets/scratch cards bought for them by their parents (National Lottery 71% ; scratchcards 57%).

Attitudes Toward National Lottery/scratchcard gambling

A large majority of the adolescents in this study reported that they thought gambling was a bad idea (72%). However, there was a significant gender difference, with more male participants reporting that they were in favour of gambling compared to females (males 40%; females 18%). There was no gender difference when they were asked about their views on the acceptability of the National Lottery and scratchcards. The majority of the participants thought that the National Lottery (76%) and scratchcards (57%) were a good idea. Of the participants who said that gambling was a bad idea almost half (49%) suggested that the National Lottery was a good idea, and 33% suggested that scratchcards were a good idea. Again, there were no significant gender differences.

Problem gambling

Levels of problem gambling were examined using the American Psychiatric Association addiction scale DSM-IV-J (Fisher 1993). On the basis of answering "yes" to four or more questions on the scale, it was found that 6% of players might be problem gamblers on the National Lottery (26 male, 11 female). For scratchcards the level was also 6% of players (18 male, 7 female). Aside from these possible problem gamblers, many more participants answered "yes" to less than four questions on the scale (see Table 1). For instance, "Do you often find yourself thinking about the National Lottery/scratchcards at odd times of the day/and or planning the next time you will play?" produced a comparatively high number of positive responses in reference to the National Lottery (32%) and scratchcards (16%). This was also true of the question "After spending money on the National Lottery/scratchcards do you play again to try and win your money back (more than half the time)?" which produced comparatively high numbers of "yes" responses (National Lottery, 35%; scratchcards, 29%). Again there were significant gender differences in response to these questions with more males than females answering "yes". Furthermore, a large proportion of the participants answered that they were worried about how much they spent on the National Lottery and scratchcards (both 17%).

Discussion of Study 1

This study suggests that large numbers of adolescents in the UK are taking part in the National Lottery and/or playing on instant scratchcards. This appears to be true of both male and female adolescents, who reported approximately equal levels of play on both these activities. Whilst a significant number of adolescents appear to be buying their own National

Lottery tickets and scratchcards illegally, a more worrying aspect may be the number of parents who are buying them for their children. Studies of other forms of gambling have shown strong links between parental and child gambling, and have indicated that the earlier children begin to gamble the more likely they are to become problem gamblers in the future (Ide-Smith and Lea, 1988; Fisher, 1993; Winters, Stinchfield & Fulkerson, 1993; Griffiths 1995).

Parents' willingness to buy National Lottery tickets and scratchcards perhaps reflects their perceptions of these activities as non-gambling events. It is hard to imagine parents placing bets on horses on behalf of their children, as horse racing is clearly perceived to be a *bona fide* form of gambling. However, this does not appear to be the case for the National Lottery or scratchcards, which appear to have been legitimised as socially acceptable to large sections of society. This acceptability appears to be due to a number of factors. For instance, the National Lottery and scratchcards are sanctioned by government, allowed to advertise widely, and are available in a variety of public places such as Post Offices, supermarkets, petrol stations and newsagents. Furthermore the National Lottery has a twice weekly prime time television show *The National Lottery Live* incorporating well known celebrities and pop bands who, in effect, endorse the National Lottery product. *The National Lottery Live* may in particular appeal to adolescents because of the 'pop groups' which appear on the programme (e.g. The Spice Girls, Boyzone,) who are hugely popular with those under sixteen years of age.

The effects on adolescents may be considerable: not only are they exposed to these products in a variety of public places, they also observe their parents taking part, and parents to a large extent encourage them by buying them National Lottery tickets or scratchcards. It should perhaps be noted at this point that the major weakness in this study is that all the data were self-report. For instance, all the parental gambling data relies on third-party assessment (i.e. the children's self-report). This of course may or may not be valid and the data should be treated with some caution.

It is clear that most adolescents have control over their gambling behaviour. Although there were no significant gender differences in participation in these activities, problem gambling was found to be a predominantly male phenomenon. The finding that problem gambling occurred on both the National Lottery and scratchcards was quite surprising as Griffiths (1997) has speculated that the National Lottery in its present form (i.e. a bi-weekly draw) was unlikely to be problematic due to the low event frequency (i.e. only twice a week to be rewarded). However, anecdotal evidence from our focus group research suggests that some adolescents are getting a "buzz" or a "high" when they successfully buy lottery tickets illegally. If the act of buying the ticket itself is physiologically and psychologically rewarding then it is not hard to see why some adolescents may develop gambling problems on the National Lottery.

The full implications of the National Lottery and scratchcards on our society have yet to be determined. However the evidence from this study and previous studies of adolescent gambling (see Griffiths, 1995 for an overview) indicate that the National Lottery and scratchcards could contribute to a dramatic increase in problem gambling in the UK. For many more adolescents, their views towards gambling may be radically altered. The Government sanctioning of these activities, the high level of advertising, links to "good

causes" and The National Lottery Live television programme may all play a significant role in this process.

Ideally future research should take the form of longitudinal studies to investigate the long term effects of adolescent National Lottery and scratchcard gambling. Although such research is both time consuming and expensive and the results would not be available for many years when problems may have already developed, the long-term outcomes may override the short-term social impact.

Study 2

There has been an increasing amount of research examining the links between adult problem gambling and other forms of addictive behaviour. An early study by Custer and Custer (1978) found that 8% of Gamblers Anonymous members were alcoholic and that a further 2% were addicted to other drugs. Since this study, evidence for co-existing dependencies with pathological gambling have appeared with regularity in both males (e.g., Ramirez, McCormick, Russo & Taber, 1984; Linden, Pope & Jonas, 1986; Ciarrocchi & Richardson, 1989) and females (e.g., Lesieur, 1988).

There have also been a few studies examining the co-existence of pathological gambling and alcohol/drug addictions using substance abusing populations (e.g. Lesieur, Blame and Zoppa, 1986; Lesieur and Heineman, 1988; Griffiths, 1994). More recently, there has been further research highlighting the existence of cross addictions both in clinical surveys (e.g., Ciarrocchi, Kirschner & Fallik, 1991) and clinical case studies (e.g. Blume, 1994). Since nearly all the research to date in this area has been done on adult samples in the US, the following study was undertaken to examine the relationship between these "new" forms of gambling and other behaviours such as drinking alcohol, tobacco smoking and drug use amongst adolescents.

Gambling behaviour

Data was gathered from a total of 4625 adolescents (aged 11 to 16) from five English secondary schools via the administration of a questionnaire. Overall, 24.1% of the sample (including 541 adolescents who were legally entitled to gamble) said they gambled on either the National Lottery or bought scratchcards once a week or more. There was a significant gender difference with males gambling more than females (27.7% males and 20.4% females; $X^2 = 32.4$, $p < 0.001$). Underage gambling on the National Lottery was more popular amongst adolescents than scratchcard gambling (20.8% gambling on the National Lottery, 10.3% gambling on scratchcards; $X^2 = 69.6$, $p < 0.001$).

Adolescent gambling and other potentially addictive behaviours

Gamblers in the sample were found to use cigarettes, alcohol and illegal drugs at a significantly higher level than non-gamblers. Overall, 22.9% of gamblers reported they smoked cigarettes as opposed to 17.9% of non-gamblers ($X^2 = 13.3$, $p < 0.001$); 72% of gamblers drank alcohol regularly as opposed to 58.2% of non-gamblers ($X^2 = 66.0$, $p < 0.001$); 21.2% of gamblers took illegal drugs as opposed to 13.4% of non-gamblers ($X^2 = 38.4$, $p < 0.001$). Adolescent gamblers' propensity towards psychoactive substances increased

with age. Results showed that 33% of 11-year old gamblers said they took some form of psychoactive substance weekly. This rose to 52.5% of 12-year old gamblers, 75% of 13-and 14-year old gamblers and 86.4% of 15-year old gamblers.

Adolescent gambling and "alcopops"

In the light of the introduction of "alcopops" at approximately the same time as the introduction of the National Lottery and scratchcards, further analysis was carried out to see if there were any links. Results showed that adolescents who said their favourite alcoholic drinks were alcopops were more likely to gamble than those who preferred other types of alcohol. Regular adolescent gamblers were more likely to drink alcopops (43.2%) than either spirits (21.3%) or non-spirits such as beer, lager and wine (35.5%). This finding was significant ($X^2 = 18.8, p < 0.001$). Very young adolescent gamblers were far more likely to drink alcopops with 70.6% of 11-year old male gamblers and 87.5% of 11-year old female gamblers reporting that they drunk them.

Adolescent gambling and other undesirable behaviours

Not only did there appear to be a relationship between adolescent gambling and other potentially addictive behaviours, but, on the basis of self-report, gamblers were significantly more likely than non-gamblers to have had contact with the police (32.6% of gamblers, 19.9% of non-gamblers; $X^2 = 74.9, p < 0.001$), to have been suspended from school (17.2% of gamblers, 9.2% of non-gamblers; $X^2 = 53.7, p < 0.001$) and to believe they had failed at school (22% of gamblers, 13.8% of non-gamblers; $X^2 = 41.0, p < 0.001$). Again, these patterns were particularly marked in the very young gamblers. For instance, 27.7% of 11-year old gamblers had had contact with the police as opposed to 11.4% of non-gamblers ($X^2 = 15.9, p < 0.001$), 9.7% of 11-year old gamblers had been suspended from school as opposed to 2.4% of non-gamblers ($X^2 = 10.6, p < 0.01$) and 18.5% of 11-year old gamblers believed they had done badly at school as opposed to only 8.4% of non-gamblers ($X^2 = 8.2, p < 0.01$).

Discussion of Study 2

This study suggests that large numbers of adolescents (albeit a significant minority) are reporting illegally gambling on the National Lottery and/or on instant scratchcards with males gambling significantly more than females. This echoes most of the previous research into adolescent gambling (Griffiths, 1995). The research also indicated that if an adolescent is involved in one illegal behaviour (i.e. gambling), as they get older they are increasingly more likely to be involved with other illegal behaviours (i.e., drinking alcohol and taking illicit drugs). The gamblers in this particular study may not have had a problem with their gambling at all (as no measure of problem gambling was taken) but it does indicate that being a gambler means there is a significantly greater likelihood of engaging in other "deviant" behaviours. Links between these cluster of behaviours may also arise from either their illegality and/or social meaning, e.g., acts of rebellion against authority figures, rites of passage, a source of social identity (Griffiths, 1995).

It is also worth noting the fact that a sizeable proportion of adolescents aged 11- and 12-years old were gambling. This is a major cause for concern, particularly because there is a consistent research finding that the earlier children begin to gamble, the more likely they are to become problem gamblers in the future (e.g., Fisher, 1993; Griffiths 1995; 1997). Thus, the full implications of the National Lottery and scratchcards on adolescent society, and their relationship between other "undesirable" behaviours have yet to be fully determined.

Table 1

Percentages of Players Showing Diagnostic Criteria of DSM-IV-J

DSM-IV-J Criterion	% lottery			% scratchcard		
	male	female	total	male	female	total
Think about lottery/scratchcards at odd times/planning next time	36	25	32*	18	13	16
Need to spend more on lottery/scratchcards	13	5	10**	15	7	12
Restless/tense when trying to cut down/stop playing	10	6	9*	7	6	7
Play to escape problems	10	5	9*	10	2	6**
Chase losses	40	26	35***	30	28	29
Lie to family and friends	6	3	5	7	4	6
Spend school dinner/bus money on lottery/scratchcards	7	5	6	8	5	6
Stole money from family for lottery/scratchcards	4	2	3	4	4	4
Stole from outside family/shoplifted	4	1	3*	8	2	5*
Argue with family/friends over lottery/scratchcards playing	3	4	4	7	4	6
Missed school (5 times or more) to play lottery/scratchcards	3	2	3	6	2	4
Sought help for money worry because of lottery/scratchcards	2	1	2	3	2	2

* = 0.05 ** = 0.005 *** = 0.0005 significance level of gender differences

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THE ILLUSION OF THE ILLUSION OF CONTROL

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Abstract. *The Illusion of Control is one of many theories put forward in an attempt to explain continued gambling. Gambling activities by their very nature are belief revision tasks, a characteristic which highlights the need for a link between the Illusion of Control and Belief Revision (information integration) literature's and the gambling literature itself.*

Four Illusion of Control tasks are presented which integrate these two fields of study. Hogarth and Einhorn's predictions for conditions under which the Illusion of Control (IoC) develops are tested within a gambling type task. Previous research has demonstrated equivocally the existence of primacy and recency effects. This paper suggests that the beliefadjustment model proposed by Hogarth and Einhorn (1992), although partially supported, needs to be modified to include further specific conditions under which the IoC arises. Specific reference is made to both the measures used to assess the IoC, and the frequency at which these measurements are taken.

The current studies elicit both short and longer-term confidence measurements from subjects, either throughout (Step-by-Step) or once at the end only (End-of-Sequence). When an EoS response mode is employed, primacy effects do indeed obtain, but only with respect to longer-term confidence. When a SbS response mode is employed primacy effects are indeed lost with both measures; however recency effects are not obtained, as would be predicted under the belief-adjustment model. Other IoC measures taken outside of the belief revision component replicate previous findings in that the early win experience leads subjects to over-remember past success rates. Some interesting sex differences arise, suggesting that males and females do not react in identical ways to the experience of wins and losses.

Does experiencing a high proportion of wins in the early stages of a task necessarily lead to an Illusion of Control over the task? Or is the effect dependent upon specific task characteristics and specific testing conditions?

Background

In games involving only skill, the outcome is dependent upon the action taken by the person involved. Hence in these situations it is valid for people to attribute their successes and failures to their own performance. When the outcome is response-independent, as in games of chance, people often wrongly attribute the successes to themselves. Likewise, in games of skill, people often attribute their failures to external factors such as bad luck or fate.

What Langer (1975) showed was that in bringing characteristics of skill games, such as competition, choice, involvement and familiarity, into games where the outcomes are based solely on chance, without these characteristics objectively influencing the outcome, participants saw the games as more controllable, and had therefore developed an 'Illusion of Control' (IoC). She defined this as an: *expectancy of a personal success probability inappropriately higher than the objective probability would warrant.* Langer and Roth (1975)

demonstrated that the sequence of outcomes, with either early or late wins, could also influence the induction of the IoC.

The Paradigm

They asked participants to predict the outcome of 30 tosses of a coin, but they controlled whether or not the participant predicted correctly or not on each trial. They therefore had three conditions across which participants won and lost in different orders. Participants either won predominantly early (Early Win) or late in the sequence (Late Win) or their wins were distributed in a random fashion throughout the task.

All participants won at a chance rate, such that they all had 15 correct predictions. At the end of these trials participants were asked questions to assess whether the task was perceived as chance or skill-determined. A primacy effect was observed with the majority of the measurements taken, in that participants who had had early wins perceived themselves to be more skilful, gave greater success predictions over future trials, and had over-remembered significantly more wins than the participants in the other two conditions.

The Concerns

A few potential concerns need to be raised with the methodology employed in studies such as Langer and Roth (1975). Firstly, the method used for controlling the outcome of each flip of the coin was only to show the outcome of the flip when it resulted in the predetermined win sequence being adhered to. Hence, participants only saw the outcome on 50% of the trials. This may have raised suspicions as to the randomness of the outcomes and the intentions of the experimenters. The second concern is with the frequency of measurement.

In these studies, measurements have only been taken once, at the end of all trials. A potential alternative to the early-win explanation of the exaggerated success rate predictions may be related to the late losses that are experienced by early-win participants just prior to being asked the IoC measures. Participants may have felt that in order to win at a chance rate, as one would expect with a coin flipping task, they were due a higher proportion of wins over future trials to balance out the number of losses recently experienced. The third point to note is that only long-term measures were elicited. Short-term confidence may also be affected by the win sequence experienced.

Previous work has also neglected the issue of whether males and females respond similarly to the experience of wins and losses. Controlling for the sex of participants allows this issue to be evaluated.

The Adjusted Methodology

One method of overcoming two of the above points is to elicit short-term confidence measurements throughout the task. In addition to sorting out which explanation most accurately accounts for the IoC observed, this technique increases the similarity between the paradigm and the gambling activities themselves, as the latter involve participants continuously modifying their stake. An assumption that could be made here is that, in relation to the real gambling environment, a person's confidence in their choice of outcome would be

represented by the amount wagered on that bet. In general, if gamblers were extremely confident that the next bet would be successful, then one would expect them to wager a higher amount on that particular gamble, in order to maximise their gains and minimise their losses. Short-term confidence levels were therefore elicited prior to each trial; other measures assessing the IoC were then elicited only at the end of all trials, as in previous research. To avoid any differences observed between the short and longer-term measures of confidence being purely due to the frequency of measurement, one group of participants had short-term throughout followed by longer-term at end, and another group *vice versa*.

To ensure that participants could view the complete trial, use was made of a double-sided Head and a double-sided Tail coin, switched depending upon the participant's prediction and the position in the sequence at which the prediction was being made. Hence, for example, if due for a win, and a Head was predicted, the Head coin was employed for that trial.

The Link To The Belief Revision Literature

The literature on the belief revision paradigm (and how we integrate new information) indicates that there is controversy over whether primacy or recency effects obtain following the manipulation of the order in which information is presented. What becomes clear is that the conditions under which primacy or recency effects obtain depend upon the precise conditions and procedures which are employed in the testing environment.

Hogarth and Einhorn (1992) go a long way in attempting to specify these precise conditions. One important distinction made, relevant to this paper, is that of their predictions for the occurrence of primacy and recency effects with respect to whether the task involves eliciting responses throughout a task (what they term a Step-by-Step response mode), or whether the participant accumulates all the information that is to be presented before providing a response (an End-of-Sequence response mode). Now gambling activities can be viewed in these terms, whereby gamblers modify their stakes on a trial by trial basis.

Based on a task analysis of previous studies, they proposed that the response mode makes a difference in the case of short, simple tasks, in which End-of-Sequence (EoS) induces primacy, Step-by-Step (SbS) induces recency. They also conclude that primacy seems to obtain when tasks are simple but long (and this is independent of response mode), and that recency is associated with more complex tasks (also independent of response mode).

The implications that their conclusions have on the current research are very apparent. In the IoC studies that follow, frequency of measurement of the two confidence measures was manipulated; hence responses were either elicited on a SbS or an EoS basis.

The Hypotheses

It was hypothesised that the early-win condition will induce a greater illusion of control than the late and random win conditions, but that this induced illusion of control would be dependent upon both the measure used to assess it, and the frequency of that measurement.

For the EoS measures, i.e. those measures not continuously elicited throughout the task, it was hypothesised that a primacy effect will obtain, hence replicating the findings of Langer and Roth (1975) in terms of their questions asked. With the SbS measures (either short or longer term confidence) a recency effect would obtain, in that participants, due to being asked to continuously revise their beliefs about their confidence and probability of success, would have paid more attention to the most recent outcomes when evaluating their confidence in comparison to the former trial, in line with predictions made and replicated by Hogarth and Einhorn (1992).

The Outcomes

What becomes apparent is that first of all, with respect to the measures used in previous research, the effects are the same. An early win experience does induce people to have an exaggerated memory of past success, to feel that they are better at the task than people who have lost to start with (even though everybody has won the same number of times) and also to predict significantly higher rates of success for the future, again both higher than the late-win participants and than the objective probability of success would predict. Hence participants who experience wins in the early stages do tend to develop an IoC.

However, what also becomes apparent is that this IoC only develops under specific conditions, and for specific measures. The illusion of the IoC lies in this finding, that the effects can be induced on some occasions but not on others, depending upon the specific test conditions. Having made the IoC paradigm more closely related to gambling tasks, by eliciting confidence ratings throughout the task, these different conditions are highlighted.

Looking at participants' confidence in the next trial (short term) it is clear that the primacy effect previously found does not arise; what rather happens with this measure would be described as a recency effect, in that participants appear only to be affected by the most recent wins and losses; confidence generally rises after a win and falls after a loss, (although this does not always apply to both sexes, see later). Hence it makes no difference whether this measure has been elicited throughout the task, as by the end of all trials all participants' confidence across the three win sequences is the same. This would not have been predicted from the Hogarth and Einhorn model, in that based on their model, one would expect to have a primacy effect when this measure was taken at the end only.

With respect to participants' longer term confidence, how many trials they think they would win over the next 100, the picture is somewhat different. With this measure, it does appear to matter how often it is elicited. If taken only at the end, as in previous work, there is indeed a primacy effect; the early-win experience elevates this measure. However, if this measure is elicited throughout, by the end of all trials there are no differences in people's response across the win sequences. If one reason why people continue to gamble in the face of systematic losses is that they believe that over the next batch of trials they will perform at better than chance rates, then there may be a very useful application of this finding. This lies in the potential to quash the development of this belief by getting gamblers continually to consider their longer term expectations of success.

From controlling for potential differences in the way that males and females respond to the experience of wins and losses, it is clear that they react differently. An additional loss sequence (8 consecutive losses) was experienced by all participants following the battery of questions. Throughout this period female confidence, both short and longer term, plummeted, representing the view held that as one loss has been experienced, so another loss is just as likely. However, male confidence did not alter significantly, either throughout this period or by the end of it. This represents the finding that approximately half the males followed the trend observed in the female participants, but more interestingly, the other half of the males became more confident that their predictions were correct. This suggests that males are more likely to believe in the "gamblers fallacy", that the more the losses occur, the more likely a win is due. This fallacy in itself may help to explain why males make up the majority of the population of "problem gamblers".

Further evidence for this sex differential comes from a series of studies conducted, using essentially the same paradigm, but with a different probability of success. In a second experiment, subjects were asked to predict the winning turtle in a series of turtle races, presented on a computer. There were four turtles to choose from, hence a success on a particular trial was only half as likely as in the previous experiment. Without going further into this series, it suffices to say that the results became more complicated as the sex of the participants began to interact with the other variables (short vs longer term, and SbS vs EoS). In both these studies, males also over-exaggerated past success rates more than their female counterparts, irrespective of the win sequence experienced, as well as believing that they were better than the females at predicting this chance-determined task. In chance tasks, no participant's characteristic has any influence on the actual outcome: despite this fact, males on the average feel better at the task.

In summary then, it could be argued that as people approach a task for the first time, they begin to consider the way in which the task is set up and run, and develop strategies in an attempt to increase their chances of success. When they then have success in the early stages, they easily associate these wins with these strategies, and hence start to develop a skill orientation to the chance task. This in turn leads to elevated confidence about future success rates as they attribute the successes very easily to themselves. Although this is true of females too, it is particularly the case for the male population exposed to an early win experience, with their short-term confidence fluctuating much less than females' and much less affected by the experience of a loss. Even though the scale on the short-term confidence for the coin flipping had "Uncertain" clearly marked as the centre point, people still fluctuated to both extremes. This further represents the established notion of people's perception of randomness; their belief in the law of small numbers (a small sample of outcomes represents the larger population from which it is drawn) and their belief that the outcomes are not independent.

The link to the belief revision literature is a clear one, and gambling research could benefit from a look at what is available on how we integrate information. The results in these studies could largely be predicted from belief revision models, particularly the one developed by Hogarth and Einhorn, although the latter would struggle to account for the lack of primacy effects with the short term measure.

It appears that the Illusion of Control effect is itself an illusion, as it does not always arise. Task characteristics can determine whether or not it develops. In these studies, it is dependent upon people not evaluating their longer term confidence throughout their experience with the task. Thus one has to be careful when attempting to explain systematic loss endurance in terms of the Illusion of Control developed. What is also notable is that the exaggerated future success rate predictions can be prevented from developing by getting people to consider what they feel their longer term estimates of success are, following the presentation and experience of each outcome.

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EX-GAMBLERS CLAIM THAT GAMBLING IS NOT WORTH THE RISK

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Abstract. *The introduction of the National Lottery has led to concerns among ex-gamblers about its social impact on the individual and the community. These research findings, coupled with existing studies, explore the growing trend in gambling addiction and the detrimental and destructive effect on family relationships that excessive gambling can have. The research findings also indicate that when these ex-gamblers were problem gamblers the influence of the National Lottery encouraged them to gamble more. Thus, reformed gamblers fear that the National Lottery is encouraging a new generation of compulsive gamblers, a development which will have dire consequences for the future of society.*

Introduction

Gambling is a common leisure activity in most countries and cultures throughout the world. However, it also attracts criticisms and censure in most societies. Much of this criticism is directed at the fact that some gamblers continue with the activity to such an extent that it disrupts their lives, their families and their employment. Within western cultures, useful employment, family life and the acquisition of material wealth are central goals of the socialisation process. One explanation for this failure is that the socialisation of the individual has been inadequate; in other words, society has failed in its task. Another explanation is that the heavy gambler is ill. That is, heavy gambling is not only socially deviant but it is caused by a disease process of the individual, which classifies heavy gambling as an 'addiction', or a pathological state (1).

Although almost all national surveys of gambling have concluded that there are more gamblers than non-gamblers, most of those participating are what might be termed "normal" or "social" gamblers who occasionally bet on a horse-race, play bingo or buy lottery tickets (2). "Normal" or "social" gambling is of no moral danger to most individuals in society because controlling the impulse to gamble is within their limits, i.e. money used for gambling is produced from their own disposable income on the basis of what they can afford to lose.

It is those individuals with severe gambling problems that are of interest and who are often described as "pathological gamblers". The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (3), or DSM-IV suggests that the essential feature of pathological gambling is persistent and recurrent maladaptive gambling behaviour that disrupts personal, family, or vocational pursuits. The individual may be preoccupied with gambling (e.g., reliving past gambling experiences, planning the next gambling venture, or thinking of ways to get money with which to gamble).

Most individuals with pathological gambling display an aroused, euphoric state, which tends to be seen as more important than winning money. Individuals with pathological gambling traits often continue to gamble despite repeated efforts to control, cut back, or stop the

behaviour. There may be restlessness or irritability when attempting to cut down or stop gambling. The individual may gamble as a way of escaping from problems or to relieve feelings of helplessness, guilt, or anxiety. A pattern of "chasing one's losses" may develop with an urgent need to keep gambling (often with larger bets or the taking of greater risks) to undo a loss or series of losses. The individual may abandon his or her gambling strategies and try to win back losses all at once. Although all gamblers may chase for short periods, it is the long-term chase that is more characteristic of individuals with pathological gambling.

The individual may lie to family members, therapists, or others to conceal the extent of involvement with gambling. When the individual's borrowing resources are strained, the person may resort to antisocial behaviour (e.g., forgery, fraud, theft, or embezzlement) to obtain money. The individual may have jeopardised or lost a significant relationship, job, educational or career opportunity because of gambling. The individual may also engage in 'bailout' behaviour, turning to family or others for help with a desperate financial situation that was caused by gambling.

Distortions in thinking (e.g., denial, superstitions, over-confidence, or a sense of power and control) may be present in individuals with pathological gambling. When not gambling they may be prone to develop general medical conditions that are associated with stress. There are cultural variations in the prevalence and type of gambling (e.g., cockfights, horse racing, the stock market). Females are less likely than males to be diagnosed as pathological gamblers and are more likely to be depressed and to gamble as an escape. Females are also under-represented in treatment programmes for gambling. This may be a function of the greater stigma attached to female gamblers.

The DSM-IV is used by researchers of many different orientations. It is used by psychiatrists, other physicians, psychologists, social workers, nurses, occupational and rehabilitation therapists, counsellors, and other health and mental health professionals. However, more recently social psychologists and sociologists have made use of DSM-IV. Research has, for example, attempted to create measures of pathological behaviour associated with fruit machines, computer video games and the National Lottery. The research concludes that in some people this behaviour does resemble pathological gambling(4).

The National Lottery and the Spread of Gambling

It is generally estimated that 75% of the British public gamble on the lottery and in jackpot rollover weeks it can be as many as 90% of the adult population. More people gamble on the National Lottery than vote in General Elections. Market analysts also note that the National Lottery has helped to create a nation of gamblers. For example, 89% of the population took part in various types of gambling activities in 1994, compared with 74% in 1993(5).

Spending on the British lottery is increasing. For example, over the first six months of 1995, lottery spending was equivalent to two thirds of gambling expenditure for the whole of 1994. Ten months after the Lottery had begun, the net figure on Lottery spending was £2.6 billion compared with £1.7 billion spent on books in 1994, and £2 billion spent on bread(6). Consumer spending on the National Lottery is, in fact, damaging the economy, according to official statistics, which show that during the first half of 1995 spending on entertainment and recreations (such as cinemas and trips to leisure centres), confectionery and soft drinks sales

all fell significantly(7). With the £77.5 million pre-tax profits announced in 1996 by the lottery operator Camelot and the £400,000 per year paid to its Chief Executive, the National Lottery is "big business"(8). Meanwhile, press reports of "lottery fever" abound. For example, an estimated £60 million was spent on tickets in one day, following a rollover week, in January 1996, which carried a £42 million jackpot. These sales represent the biggest gamble in British history and peaked at eight million tickets an hour, with up to 5,000 sales per second at one stage, causing all 20,000 lottery ticket machines to fail.

In parts of the USA and Europe where national lotteries are more established, "compulsive lottery gamblers" are already seeking professional help. This increase in gambling addiction has raised concerns by Gamblers Anonymous (GA) who point out that since the lottery started, they have seen calls rise by 17% and about 20% of these are related to the lottery. The North-West GA, have also reported a 61% increase in calls from people who are seeking help, with interest in the lottery accounting for a large proportion of this increase(9). The number of regular gamblers (i.e. those who gamble at least once a week) has increased dramatically. This is because Camelot's mass advertising has stimulated a demand that never previously existed. This should be of no surprise as it mirrors other potentially addictive and socially acceptable behaviours such as smoking and drinking.

Method

During late 1997 and early 1998 a postal questionnaire was completed and returned by 74 ex-problem gamblers who were members of seventeen Gamblers Anonymous groups throughout Britain. The GA programme of recovery uses the group therapy technique based on Alcoholics Anonymous (AA) and uses only ex-gamblers as helpers. GA treats pathological gambling as an addiction that cannot be cured but merely arrested. This means that relapse into a life of compulsive gambling is just one bet away for the rest of that individual's life. There has been little systematic study of GAs (10). Indeed, problems were encountered when conducting research into this area. For example, no case records are kept and no systematic attendance records are compiled. Membership is voluntary and is continuously changing and some members attend multiple meetings. This means caution must be taken in trying to generalise the results.

The respondents consisted of a spread between young and seasoned gamblers with 6% in the 14-18 age group, 7% aged between 19-24 years, 24% aged between 25-34, 27% aged between 35-44 years, 31% between 45-55 years and 5% aged 56 and above. The sample consisted of 72 men and only 2 women. This is not surprising, as only small numbers of women attend GA groups. It is also the case that, with the exception of bingo, men are much more likely to participate in all forms of gambling, to gamble regularly, and gamble to excess, than women. Indeed, most accounts of gambling concentrate on the motives and behaviour of male gamblers(11). A total of 61% of respondents were from professional classes with the remaining 39% belonging to the more manual classes.

The questions asked focused on the respondents' gambling activities and attitudes towards gambling and the National Lottery. More specific questions attempted to log the influence of the National Lottery on the respondents' gambling activities when they were problem gamblers. The questionnaire consisted of 29 questions of which four were open-ended. The

closed questions were of a focused variety and often contained sub-questions within the main question.

Results

The Personal Troubles of Gamblers

Table 1 shows that certain gambling behavioural traits can indicate the development of excessive gambling. Gambling, thus, did have a serious influence over the respondents. For example, when they gambled, a total of 70% of respondents *worried* that they were spending too much time and money on gambling. A total of 58% needed to give up food, clothes and entertainment in order to find the money to gamble. When they gambled, 78% of respondents needed to spend increasing amounts of money in order to obtain the excitement that comes with gambling. A total of 91% also became restless or irritable when they were not gambling and 84% stated that they needed other individuals to provide financial support as a result of over-spending on gambling. Many respondents (84%) also became involved in deviant acts, such as the misuse of house-keeping money, or they stole from home or elsewhere, in order to fund their gambling activities. Respondents became bored with every day non-gambling activities, with 84% using gambling to escape from problems or unbearable feelings and 95% feeling the need to gamble again soon after losing: i.e.; chasing their losses.

Table I: Behaviour Traits Indicating Excessive Gambling (n=74)

Give up Food, Clothes and Entertainment in order to fund gambling	58%
Gamble increasing amounts of money in order to obtain excitement	78%
Become restless or irritable when not gambling	91%
Gamble as a way of escaping from problems and unbearable feelings	84%
Chase Losses	95%
Lie to family and friends in order to conceal personal gambling activities	95%
Involved in deviant acts in order to fund gambling activities	84%
Fall out with family and friends as a result of gambling activity	85%
Need other individuals to provide financial support as a result of over spending on gambling	84%
Worry about spending too much time and money on gambling	70%

A common thread amongst the respondents' statements was the detrimental and destructive effect of gambling on family relationships. Table 1, for example, also shows that a total of 95% stated that they lied to members of their families and friends in order to protect and conceal the extent of their gambling. When they gambled, 85% stated that they fell out with family members and close friends as a result of excessive gambling.

A total of 36% of respondents also suggested that they had suffered "personal problems" and a "lack of self control", due to their gambling activities. A total of 31% of respondents had experienced a "breakdown of family life". The impact of gambling on family life and relationships was strongly evident within many comments, most of which told of such problems as debt, deceit and the breakdown of relationships. Several wrote of being on the brink of disaster, losing everything and close to min. For these respondents, gambling took over their lives and families, and relationships had to take second place. For

example: ... *Gambling has ruined my family's life, we are all trying to pick up the pieces and move on to better life and along similar lines from a seasoned gambler, ...all of my income is used for enhancing my remaining years, and I try to repay my wife for her help and support she gave me when I was a gambler.* The following quotes similarly offer a reflection on the effect on relationships:

...gambling was responsible for the breakdown of my marriage. I could think of very little else but gambling which brings about a great personality change in oneself. I only had time for gambling and so little time for my family.

It has virtually destroyed my life, misused the trust of my partner and hurt everyone around me. Gambling has totally ruined a large part of my life. For 20 years I gambled. I lied cheated on lovely people and really neglected all my family.

Gambling has taken from me everything I ever wanted from life, my wife, children, and my self respect

I have gambled for 25 years ...I have been in recovery for 6 months and am now seeing the pain and damage I have done. My family have all suffered through my uncontrollable gambling

I won occasionally but eventually I was so in debt with gambling I just carried on chasing my losses to try and make things all right again. I was stupid, but now I know better.

I was on the verge of losing my wife, children, house and job but since coming to G.A. all that has changed I now live a near normal life for someone who is unemployed but gamble free!

Ex-Gamblers' Concerns over the Introduction of the National Lottery

A total of 76% of respondents showed concerns over the introduction of the National Lottery and its impact on British society. These respondents were worried about the socially acceptable image and respectability of the National Lottery, and the fact that the game encourages the legitimate promotion of gambling. particular concern from GA members indicated that people who are not regular gamblers could be drawn into the world of the compulsive gambler. Other members could reflect in hindsight and see the destruction it had caused in their lives. Clearly they did not wish to see other people going through the same predicament.

A total of 87% of respondents felt that the National Lottery prize money could be better spent on welfare and community projects. Many respondents commented on the adverse effects of the lottery on the UK population, showing a concern for the general population and notably young people and children. There was some fear by 54% of respondents that the National Lottery would lead to greater addiction amongst those who play it. It was felt that the National Lottery will cause a lot of misery to people who win and lose and will create many more gamblers (compulsive or otherwise). For example, 19% of respondents felt that the National Lottery gave people "false hope" of obtaining better futures.

The National Lottery was seen by 38% as being of benefit to those individuals who do win, although 34% did suggest that *there were no positive aspects of the National Lottery*. Many respondents were also concerned over the National Lottery's enticing people to gamble who may never have gambled previously, and as it is only £1 to play then many people think that it is an insignificant sum; therefore it is not seen to be a problem, or even a potential one. However, the respondents know better, as was attested by 89%, who stated that the National Lottery is as much a form of gambling as casinos, horse racing, etc. The following quotations are typical examples of the worries expressed by the respondents:

I am worried about the children who are growing up in this heavily publicised form of gambling.

Although the lottery has not worsened my position as I was gambling heavily before its introduction I can see how it effects people who have previously not gambled... This will eventually lead them to gambling on horses etc.

My feelings on the National Lottery is that it can lead on to heavy gambling. It took one little win to plant the seed of gambling in me and any form of gambling - e.g. National Lottery - that encourages people who would otherwise not gamble to try it and possibly get that same thrill of winning as I did and have the same seed planted in them and put them through the same pain I am 100% against. Making it respectable and socially acceptable makes it more dangerous for everyone".

Concerning the National Lottery, my view is that its caused our country or many people within our country to view gambling as a way out, the sad thing of all is that the government condones gambling via the lottery because of the revenue it receives and it pushes the addictions under the carpet.

I believe that the National Lottery will, in time, produce a large number of "lottery addicts" and these people will end up becoming addicts as much as horse, machine and casino gamblers, having equally disastrous consequences for their families and friends.

I think the National Lottery has lifted the lid off of gambling, it is now everywhere! Scratch cards are even being put into children's lucky bags - how bloody sad!! We are becoming a nation who are becoming dependant on false dreams and the government are making big bucks out of it.

The lottery is very addictive and can lead to other forms of gambling. The only way the lottery is a success is by people losing money. Since the National Lottery started other forms of gambling have gained ground i.e. allowed to advertise, fruit machines in betting shops. The lottery has been used as a lever allowing the spread of other gambling activities".

The problems arise due to the easy accessibility of all lottery outlets and scratch cards, which then become problems to people who have never had gambling problems before. You have to balance up the amount of extra compulsive gamblers due to the lottery against the enjoyment and money raised by the lottery"

The National Lottery as an Avenue back into Gambling

The research findings do indicate that when these ex-gamblers were problem gamblers the influence of the National Lottery encouraged them to gamble more. Table II shows that the personal behaviour traits indicating excessive gambling increased for the 21 respondents who used to gamble on the National Lottery. Thus, spending on all forms of gambling, their need to "chase their losses" and the sacrifices they made in order to gamble, all increased. Respondents also noticed increases in the number of times they neglected their domestic responsibilities, or took time off work in order to gamble. The respondents' reliance on friends and family and the lies they told to family members in an effort to conceal their gambling also increased. Feelings of restlessness, irritability and gambling as a means to obtain excitement increased, as did the respondents' involvement in anti-social behaviour as a way of funding their gambling.

Respondents were concerned about how easy it would be to become heavily involved in gambling again, and for a number of respondents the lottery was seen as a possible mechanism to rekindle this activity. For these respondents, the lottery is a temptation and given the publicity and hype surrounding its launch and television celebrity status, it is a continuous and ever-present enticement. Many respondents were quite clear about this danger: *Being a compulsive gambler, if I did the National Lottery I would go back to gambling and further, ...Any form of betting is fatal to a person who has a gambling addiction and could get them started back to hell. Any form of placing a bet for me can be very destructive.*

Table 11:

Influence of the National Lottery on Gambling Behaviour Traits (n=21)

Spending on all forms of gambling increased after began playing on the National Lottery	32%
Giving up food, clothes, and nights out, in order to gamble, increased after began playing on the National Lottery	13%
Gambling increasing amounts of money in order to obtain excitement, increased after began playing on the National Lottery	25%
Feelings of restlessness and irritability increased after began playing on the National Lottery	19%
Attempts to escape from problems and unbearable feelings increased after began playing on the National Lottery	26%
Need to "chase losses" increased after began playing on the National Lottery	26%
Lying to family and friends increased after began playing on the National Lottery	20%

The need for financial support from other individuals as a result of too much gambling increased after began playing on the National Lottery	20%
"Falling out" with family and friends increased after began playing on the National Lottery	13%
Activities such as, having days off work and neglecting the house work, in order to gamble, increased after began playing on the National Lottery	20%
Deviant activity increased after began playing on the National Lottery	32%

Discussion

It may have been the case, as was claimed by one politician, that one objective behind the launch of the National Lottery was to combat the threat of West Germany flooding the British market with German lottery tickets. In reality, the introduction of the lottery is closer to the sentiments expressed by the eighteenth-century poet, Henry Fielding, who wrote that a ... lottery is a form of taxation upon all the fools in creation and Heav'n be praised it is easily raised".

The research highlights the family disruptions, personal turmoil and the day to day trials and tribulations that come with excessive gambling. Obviously, with the National Lottery being such a large scale enterprise, nothing on this scale is without adverse effects, but many of those predicted have still to become widely apparent. What is certain is that the research findings, together with a range of well established surveys, have indicated a trend towards pathological behaviour patterns related to all kinds of gambling activities(12) and most researchers believe, that with an increase in the legalisation of gambling activities there will be an increase in the number of pathological gamblers(13). The National Lottery is no exception to this trend. There is now a danger that "pathological compulsive lottery gambling traits" are becoming institutionalised simply because access to the lottery is easy, its influence is so overt and it is sanctioned by the policy makers.

The research also showed that when the respondents were problem gamblers their gambling activities increased after the introduction of the National Lottery. Whether Britain's lottery can be "cleared" of "a problem gambling charge" is debatable, and it is not helped by ambiguous statements issued by the previous Conservative administration or by Camelot and Oflot, the National Lottery regulator. In August 1995, for example, the Heritage Secretary, suggested that the lottery should be seen "as harmless fun"(14), whilst in February 1996, Oflot was "unconcerned" by the lottery risk of encouraging problem gamblers(15). In May 1996, a senior staff member from Camelot admitted fears over a small percentage of players who are "addicted" to lottery games(16). "Health warnings" to counter the addictive effects of National Lottery scratchcards have already been urged by Labour politicians and by gambling counsellors(17). A report by Dr Doyle, a consultant psychiatrist, suggests that "Lottomania" is occurring, whereby victims delude themselves into thinking they have won the Lottery jackpot. Dr Doyle believes that this type of delusional belief will become more common as the lottery progresses(18).

This increase in gambling activity was compounded further by the Conservative Government, which produced a White Paper outlining sweeping reforms to Britain's gaming laws and proposing a fundamental shift away from social controls and towards gambling on demand. For example, the £800 million bingo industry would be almost completely deregulated and book-makers were to be allowed to advertise in newspapers, whilst jackpot machines might have been able to pay out thousands of pounds. Thirteen towns were to be added to the current list of 53 areas in which casinos may be sited. These developments have now been put on hold after the election of a Labour Government in April 1997.

However, it may be too late to stem the flow of this increasing gambling activity. For example, specific concerns are associated with young people and instant scratchcards. Sales of these cards reached £38 million a week within a fortnight of their launch in March 1995, more than matching the annual sales for the entire UK scratch card market. A study by Moran 1995(19) looked at 187 mixed sex under 16s at a London comprehensive school and found that almost two-thirds had bought lottery tickets (including scratchcards) although it is against the law for retailers to sell to this age group. Because "instant" cards are seen as a "harder form of gambling" the Gaming Board' called for a ban on under-18s buying scratch cards and lottery tickets(20).

Latest research by Fisher, commissioned by Oflot 1998 (21), indicates that this trend is becoming more severe. For example Fishers research (summarised in this *Newsletter*) on 10,000 children aged 12 to 15 concluded that 47% of the sample had gambled on scratch cards and 40% on the National Lottery. Further recent research by Wood and Griffiths 1998 (22) (also in this issue) who surveyed 1,200 children aged 11 to 16, contradicts previous evidence that only scratchcards are addictive. Wood and Griffiths found that children are becoming "hooked" on the Wednesday and Saturday draws as well. The point here is that addiction tends to develop over months or years and is driven by habit. Instant scratch cards, with their promise of immediate riches, are a greater risk for children than the weekly draw because they provide a "quick fix". They have many features of "hard gambling" with large jackpots and "heart stoppers" giving the illusion that the person has almost won a prize.

These recent findings are to be expected, as since the National Lottery began the spread of gambling has not been abated. For example, following the twice weekly National Lottery draw in January 1997, Camelot also produced plans to expand overseas by selling lottery tickets in other countries such as Bermuda(23). Further announcements were made to introduce special "superdraws" whereby, the weekly prize pool of £12 million could be boosted by National Lottery reserve funds, thus producing a much bigger payout, expected to be in the region of £20-£25 million(24).

Today, there are dozens of different scratch cards from various manufacturers in many thousands of retail outlets. Pubs and clubs throughout Britain are also running their own "mini-lotteries", which has caused some controversy, as alcohol and "games of chance" do not mix. Meanwhile, further controversy has arisen over the BBC's National Lottery Big Ticket Show, launched on March 28th 1998. This involves the public buying a £2 scratchcard to win a chance to appear on the programme with a £100,000 first prize. This has prompted calls for an inquiry by the present Labour Government. Meanwhile, it has been estimated that there already exist around 90,000 teenagers addicted to other forms of gambling in Britain, with, the behaviour that leads to adult gambling, starting, on average, at the age of 14.

The introduction of the National Lottery and the liberalising of Britain's gambling laws means that we now need to become more informed about gambling and its social, cultural, medical and psychological consequences. National Lottery discourses and practices have entered popular culture and are therefore being learned, and transmitted through the medium of patterns of behaviour, institutions, customs, conventions and experiences of professions or disciplines.

There is a danger that Britain is becoming a gambling free-for-all - a breeding ground for social ills. The National Lottery is a symbol of today's widespread job insecurity and "risk society" and is a monument to the "casino culture" of Britain. If, as a nation, we want state-sponsored gambling in the UK, then we have a moral responsibility to provide even larger funds towards the help and rehabilitation of problem gamblers.

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THE FINANCIAL FUTURE OF BRITISH HORSERACING

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(extracted from his address to the Society on 14 May 1998)

Abstract. *The key proposals in the BHB's Financial Plan for British Racing, currently being discussed with Government were:*

- *additional annual investment of £105m required to place British Racing on a level playing field with its major international competitors and on a firm financial footing for the longer term*
- *racing to raise £25m through continuing programme of self help initiatives*
- *balance of £80m to come from racing receiving a larger percentage of horserace betting turnover*
- *gambling on racecourses to be deregulated to allow all forms of betting on non-race days and gaming machines*
- *Government to review all gambling legislation with a view to a proper debate about the opportunities for the widening of the off-course distribution of horserace betting*
- *structure of General Betting Duty to be reviewed*

Implementation of the Plan would create more employment, provide better quality racing for racegoers and punters, increase Government tax revenues and improve the profitability of the betting industry.

In January 1998 the BHB published its Financial Plan, behind which the racing industry has united as never before. The Plan, all 83 pages of it, represents a substantial advance in the Board's efforts, with others, to place racing on a sound financial footing for the longer term and contains a range of proposals to improve the Industry's position. It goes without saying that the successful implementation of the Plan is important for the financial future of British racing.

By way of general background, it is important to recognise that racing is one of Britain's most prestigious assets. It is not only one of the country's leading spectator sports, but a major employer and a key industry, an international industry. It is becoming more popular too. In 1997 attendances climbed above five million, their highest level for more than 30 years. Prize money is slowly on the way up. Income has risen and the contribution made by racing to the national exchequer in taxes and duty approaches half a billion pounds annually. The racing industry itself has worked very hard to make this happen, with supportive initiatives from Government and a measure of co-operation with the betting industry.

What is more, such progress has been achieved at a time when, because of the outdated and restrictive legislative framework within which racing has to operate, the industry has had, in effect, to compete with one hand tied behind its back. What British racing now wants is the chance to compete on more equal terms, realise its full potential and make an ever greater contribution to many aspects of British life. So yes, racing is moving ahead on many fronts

but there are some fundamental long-standing structural problems still to be dealt with. That is what lies behind the Financial Plan.

The first area the Plan addresses is this: What is wrong with the current system?

This can be summarised thus:

- From the £4.6 billion bet off-course on horseracing each year, government receives over £300m in betting duty and the betting industry makes profits of over £100m. In comparison, just £50m goes to racing, which, at just over 1p in every £1, is a lower proportion of the total amount bet than in any other major racing nation.
- Compared with how much is returned to racing, the burden of betting duty is far higher in Britain than in any other major racing nation.
- Betting turnover in Britain makes a much smaller contribution to the cost of staging racing than in any other major racing nation.
- The cost of running Licensed Betting Offices is so high that money raised from betting which could be going back to racing or indeed in part to government is swallowed up in overheads.
- Because of all these circumstances, the return to owners from prize money against the cost of keep and training, at 24%, is the second lowest of major racing nations, and there is inadequate funding for other key areas such as marketing, integrity, research and staff training, while pay scales in training establishments languish behind those in comparable industries.

What does the Plan therefore propose?

To place British racing on a level playing field with its major international competitors and on a firm financial footing for the longer term requires an extra annual investment of £105m.

Racing, which has an outstanding record of generating more income itself, should raise £25m of that through self-help initiatives. Self help has always been, and will always be, centre-stage in Racing's agenda. Marketing; improved and more imaginative management of racecourses of the kind exemplified by the Group with which Nigel Kent-Lemon (*who shared the platform with Tristram Ricketts*) is associated; sponsorship; the Tote under the leadership of John Heaton (*also on the platform*) and his Chairman Peter Jones; enhancements to the Fixture List and race programme; and the exploitation of media rights are all areas from which additional income can be derived. The other £80m should come from racing receiving a bigger, internationally more competitive percentage of horseracing betting turnover.

The Government should deregulate gambling at racecourses to allow all forms of betting on non-racedays and gaming machines.

Next there should be a fundamental review of all gambling and lottery legislation, for which many other bodies have called, albeit for different reasons, with a view to widening the off-course distribution of horserace betting. At the very least, these issues ought to be properly and comprehensively debated, with an eye obviously both on legitimate social considerations and on the extent to which continuing rapid technological advances will influence and ultimately drive the future legislative agenda.

And finally, the structure of General Betting Duty should be reviewed so that horserace betting does not continue to be disadvantaged against rival betting products.

What then are the benefits of the Plan?

An Impact Study commissioned by BHB and conducted in 1997 by the major accounting and management consultancy firm, KPMG, concluded that an extra £105m annual investment would:

- Create more than 9,00 new jobs
- Attract over 2,400 new owners
- Attract 3,400 new horses, which would reduce the number of races with fewer than eight runners - currently around one-third of the total. This is an important benefit to punters and others
- By using the additional investment constructively, BHB, together with racecourses, would:
- Ensure that the average quality of the extra horses was high enough to have the effect of improving the horse population overall
- Stimulate horserace betting turnover by about £450m

- Increase direct Government tax revenues by more than £110m and improve the Betting Industry's profitability by some £50m - more than enough to cover the £80m additional investment sought from betting turnover
- Enhance the quality of British racing through more competitive racing, increased marketing, higher attendances and improved facilities at racecourses

Since the publication of the Plan in January 1998, racing has continued its programme of self-help initiatives, while Government has said that it will make an immediate start by looking carefully at the proposals for wider gambling facilities at racecourses. BHB has also initiated discussions with key Government Departments on the ways in which the proposals in the Plan might be implemented, and further meetings are planned.

Racing is a key national asset. Racing is a key international business. BHB's aim is to keep it that way.