

THE SOCIETY FOR THE STUDY OF GAMBLING NEWSLETTER
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	Page
Stuart Wheeler Betting on futures in financial markets	2 - 6
Sue Fisher Towards sociological understanding of juvenile fruit machine gambling	7 - 14
Mark Griffiths The development of amusement machine pathologies	15 - 23
Paul Bellringer The UK Forum on Young People and Gambling	24 - 26
Notice	27
Journal of Gambling Studies: volume 6 Abstracts	28 - 29

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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.

The Society holds regular meetings twice a year in London. Further details are available from the Honorary Secretary.

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BETTING ON FUTURES IN FINANCIAL MARKETS

Stuart Wheeler
Managing Director, I.G. Index Ltd

What is betting on financial futures? The first thing to do is to explain what on earth betting on financial features is. It's betting about the kind of thing which commodity brokers or futures brokers trade in - whether it's the price at some future date of gold, coffee, live hogs or treasury bonds, or whether it's the level of the stock market or of any of 80 or so different futures prices.

A simple example. Let me explain by taking a simple example. The level of the London stock market is measured by the Financial Times Stock Exchange 100 Index, otherwise known as the FTSE 100 or Footsie. What we are not doing is odds betting. We are not, for example, laying 5-1 against that index getting through 2700 by Christmas. It's much more like buying or selling and I'm going to use the language of buying and selling, even though what we are talking about is betting.

My company, I.G. Index, might make a quotation of 2260 to 2270 for the level FTSE will stand at by the end of September. You, the client, think it's going to be higher than 2270 and you "buy" the index. You must specify the size of the transaction and you may say 100 per index point. So you will win 100 for every point that the Footsie index is higher than your opening level of 2270, and you will lose 100 for every point that it is lower than that. So, if FTSE at the end of September is 2400, that is, 130 points above the opening level of your bet, you will win 130 hundred pound's, that is 13,000, and if you are wrong, you lose at the same rate of 100 per index point. The same principle applies to everything we deal in.

Why do it? So why do people want to bet with us when they could be dealing direct with a commodity broker or a futures broker? Let's take a little history.....

In 1975, I'd proved over a long time as an investment manager that the only value of my opinion on stock prices was as a contrary indicator - I was wrong almost invariably! So, not surprisingly, I found myself out of a job. I went to Cyril Stein, then as now the head of Ladbrokes, and told him that he should set up a company to compete with a small company called the 'Coral Index'. Coral Index was a subsidiary of another big bookmaking group - the Coral Group, and it already bet about stock indices in the way I've described. Cyril Stein never said "No" but he never said "Yes" either. Curiously, Ladbrokes later bought Coral Index, and then we bought that business from Ladbrokes. Anyway, at that time I then took the same idea to William Hill, the third major bookmaker, with the same result.

So I adapted the principle to betting about the price of gold. The point about gold was that in those days, due to what were called the "Exchange Control Regulations" you couldn't buy it or sell it in this country, but you have always been allowed to bet in this country about anything, and so it was a perfectly legitimate way round the regulations. Now, you were about to be allowed to buy gold for the first time for 12 years on 1st January '75, and there was a big speculative boom going on in gold; but by the time we got off the mark in May '75 the boom was over - you hadn't bought gold after all; so we got very little business. But I noticed something which hadn't been in our minds at all at the time we started the business i.e., that when our then very small number of clients made profits, those profits were totally free of tax, and the reason for that, which is very important, is that betting profits in this country are not subject to tax. So I adapted the whole principle to branch out and bet about all the other commodities that were dealt in London, and then when these Exchange Controls went we were able to go into all your markets as well, and then when the stock index markets started out over there, we went into those here too.

So you will see that one reason why people are very keen to deal with us is that they pay no tax at all on their profits. If they did the kind of thing which they do through us in the more conventional way through a broker, they would pay Capital Gains Tax which, in this country, above a small limit and for those who are well off, is 40%. So by trading through us they save 40% of any profits. There are other reasons why they want to deal through us though. For one thing we trade in the stock indices, which are the most important, from 8.30 in the morning our time until 9 o'clock at night, which is when wall street closes. So they can trade very, very much longer hours here, betting of course rather than in the conventional futures markets. Then again they can trade in smaller amounts. The minimum size of transaction on what we call the LIFFE market - the London International Financial Futures Exchange, is 25 per point. We allow our clients to bet 5 per point on this.

Also it's a great deal simpler. You don't have nearly so much paper flying around. It's really very much easier - you can open a bet with us straight away. We quote you a price and that's it - you accept it or not. With a broker, it is all too common that he goes unto the market, comes back and says "Sorry, I had to pay a couple of points more" - none of that with us. The simplicity is another great plus for our clients.

The attitude of the Inland Revenue. Now I think I've said enough to explain that there are very good reasons why our clients want to deal with us. The next question is, "what are the problems?" One question I am often asked is "well, this isn't going to last, surely? The Inland Revenue is going to close you down, aren't they? why do they allow this?" well, the answer is "They won't want to close us down if they've got any sense", and they certainly have got sense. First of all, the law is quite clear that these transactions are not at present subject to tax.

But would the Inland Revenue want to change it? They would be very unwise to do that because the paradox is that, while people may deal with us because they want to make a tax-free profit, the other side of the coin is that if they make a loss, they won't be able to set that loss against Capital Gains Taxes. The Inland Revenue, I have very little doubt, say to themselves, "There are more losers than winners among people who deal with bookmakers - in the end there have to be -and so, in general, notwithstanding that many clients do achieve their aim of making profits which are not subject to tax, the net effect is that there is more money lost which cannot be set against Capital Gains than there is money made which is free of tax". Quite apart from that, I.G. Index pays its own betting duty and corporation tax, and our employees pay their own income taxes and so forth. So, I really don't think there is any reason to suppose that the Inland Revenue will attack us.

Regulation. What other problems are there? Well, there's regulation. My only experience of regulation in America was in the late sixties. It was six o'clock on a Sunday morning and I was doing a little counting at the blackjack tables in a very famous Las Vegas casino. After a bit I made a particularly bad blunder. I smiled. This was too much for the pit boss. He beckoned me over to him and said "You're not losing. We don't care for that type of play here. Just cash in your chips and collect your cheque". I have never been of a courageous disposition and so I did as he commanded. But I said to him "The only place I've ever seen anyone doing what you are objecting to me doing was here last night in this casino. You didn't hassle the guy. You gave him a table to himself, dealt down to the last card and so on. Why was that?" "Oh, yes", he said, "I know who you mean. He's a friend of the boss and has business connections. He is allowed to do it".

Well, regulation in this country is on a rather more structured basis. We are regulated in two completely separate ways. We are regulated as bookmakers and have to comply with all the rules which apply to them, and, as quite a separate matter, we are considered to be carrying on investment business within the meaning of the Financial Services Act, which Tony Wollenberg has already touched on in relation to the very important question of enforcement of gambling debts. That was a very positive aspect of regulation from our point of view, but there are many aspects of it which have not been positive, and in fact when this Act had not yet been passed, more than four years ago, we had a tremendous struggle to get the rules of the regulatory agencies concerned changed in a way which would mean that they could be complied with by bookmakers. The top regulatory agency under the Financial Services Act is called the Securities and Investments Board, known as the SIB, and although they were unfailingly polite to me when I went to see them and bother them again and again about these matters, it was clear that they simply didn't want to be seen to be regulating 'bookmakers' as carrying on investment business. It was in fact exactly the opposite of the image that they were looking for people who "carried on investment business" and they asked me, for instance "Do you

really expect us to have special Risk Disclosure documents under out regulations for those who are dealing with bookmakers?" and really the question was asked rhetorically as being an idea too ludicrous to contemplate. But in fact they, and subsequently our particular regulating agency, the Association of Futures Brokers and Dealers, have been very nice to us over the years. They realised that they did have to regulate bookmakers, and now, of the Risk Disclosure Statements which are set out in the SIB's Rules - there are only about five or six of them altogether - two of them are indeed specifically for those who are dealing with bookmakers. So bookmakers have come a long way in the investment business.

Risk Management. Another completely different problem from our point of view is that of risk. It is obvious, if you think about it, that we have to keep our prices, at least when the markets on the basis of which we are dealing are open, in line with those markets, or we'd be subject to arbitrage and really would inevitably be killed. So we do that, and yet we may have clients all going one way and what are we going to do about that? well, it's quite simple. we simply deal on our own account in the real markets if our exposure becomes unacceptably high. In other words, we simply hedge and really we have no problems.

Marketing. what about other problems like marketing. It's a very interesting subject. who are the kind of people who want to deal with us? We have found that there is a staggering variety. Almost anybody. A lot of the people are in the investment business, but an enormous number are not as well. we have playboys, retired civil servants, retired tea planters, we have doctors, dentists and even vets - all the medical people seem to be speculators - and we have taxi drivers, hair dressers, goodness knows what! You name it, we have Members of Parliament, we have clergymen - there's really no category of person that doesn't seem to want to bet with us. A more interesting question in a way, though, is whether the kind of people who bet on racing, for instance, or who go to casinos, want to deal with us. we've found that there isn't a terrifically close correlation with racing. The worst single marketing effort we ever made was to take a whole page in the race course programme for one of our most famous horse races and our response was exactly zero! Now it was a bad bit of advertising and so on, but it may signify that the kind of speculative urge that leads people to deal with us is not the same kind of urge that leads to people going to the races. As to casinos' punters, we've never really made the effort with them that we should have, but it may well be that at least the bigger casino punters should be our clients.

Summary So there you have it. There really isn't time for me to go through the lot, but financial bookmaking is very much a coming thing, and we believe that it will grow and grow and grow, in this country at least. To sum up, the reasons why people do it are that they get the profits free of tax, they can often deal for much longer hours than in the real markets, the small man can deal in amounts which are smaller than the minimum on the real markets, and finally it's much quicker and simpler

and much more fun than dealing with a broker.

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TOWARDS A SOCIOLOGICAL UNDERSTANDING OF JUVENILE FRUIT MACHINE
GAMBLING

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Introduction. The inordinate commercial success of slot machines has been described as "one of the most disconcerting enigmas posed by contemporary amusements" (Caillois, 1958). Since this statement was made, some thirty years ago, the dramatic growth in slot machines has proved to be one of the most pervasive trends in the gambling industry. While fruit machines are played by all age groups their attraction in the U.K. is predominantly for young people and declines with advancing age (Downes, 1976). As with other gambling forms, existing research suggests that more young males participate than young females (Fisher, 1991).

Until the mid 1980's juvenile gambling has proved unattractive to sociological researchers. This is in spite of evidence that the majority of young people gamble, and many of these on a regular basis (Lesieur and Klein, 1987; Ladouceur and Mireault, 1988; Jacobs, 1989; Fisher, 1991). In addition, a spate of studies undertaken in the U.K. in the late 1980's have found that a minority of young people in the U.K. are persistently drawn to delinquent behaviour as a consequence of fruit machine play (Fisher, 1991). An attempt is made here to establish when and how children are initiated into gambling behaviour, to assess the importance of fruit machine playing vis a vis other gambling forms favoured by children, and to discuss ways in which the attraction of fruit machine gambling for juveniles might be rendered sociologically understandable.

Age at which gambling for money commences. Both in the United States and in the U.K. children report gambling for money whilst still in primary education. In the case of the U.S, the child who complies with the minimum statutory age threshold set by his/her state of residence is the exception rather than the rule. In a recent study more than a third of the respondents reported gambling before they were eleven years of age and 70%-88% said they gambled before they were fifteen years old (Jacobs, 1989). In the U.K. where gambling on fruit machines is lawful and readily accessible to children in amusement arcades, cafes, fish and chip shops and the like, the onset of gambling for money is likely to be even earlier with fruit machine gambling commonly starting at eight or nine years of age (Fisher, 1989).

The lack of public outcry in the U.S. against the open practice of a patently illegal activity by the majority of its children reveals the degree of societal acceptance of juvenile gambling. This acceptance, which finds endorsement in the statute book in the U.K., has been attributed to several possible bases of rationalisation or misconception by adults. The first is the implicit faith in legal sanctions for the protection of children from "really serious gambling" so that parents need not worry. The second is that adults in society are reluctant to face up to

their own crucial role in the socialisation of children into gambling behaviour. The third is that juvenile gambling (albeit illegal) is dismissable as merely "fun and games". Finally it is suggested that such rationalizations are simply grounded in ignorance; in a delayed awareness of this aspect of adolescent leisure (Jacobs, 1989 p.250).

Gambling games played by young people. The four favourite games played for money by U.S. youth since the mid 1980's are: cards with family or friends; lotteries (where available); games of skill such as golf, pool and bowls; and sports betting on football and baseball pools and offtrack betting (for the most part illegally pursued with a bookie). However, in the case of adolescents who live within striking distance of casinos the pattern is notably different:

"these glitter palace seem to have an irresistable lure for underage high school students that tends to preempt their gambling time and dollars" (Jacobs, 1989, p.253).

Most of the casino betting is on slot machines (around 2/3) with blackjack and roulette respectively as the second and third favourite activities (Arcuri et. al., 1985; Frank, 1988).

In the U.K. young people gamble with each other on cards, games involving skill, and a traditional children's game called 'coins up the wall' (Moran, 1987; Ide-Smith and Lea, 1988). But overwhelmingly the most common form of commercial gambling is on slot machines, preferably in the social context of an amusement arcade (Fisher, 1991).

Getting started. Initiation into gambling arises from a number of influences. Firstly, some writers hold that parental gambling is an important predictor of adolescent participation (Downes, 1976; Cornish, 1978; Amati, 1981; Arcuri, 1985; Jacobs, 1989). Indeed much adolescent gambling takes place in the company of parents (Lesieur and Klein, 1987).

Secondly, certain commercially provided games are specific to particular residential areas, so that the mere fact of being raised in an environment where gambling is a high profile activity may be consequential for children. For example, fruit machines are supernormally available to U.K. children who reside in seaside resorts and to U.S. children (albeit illegally) who reside near casinos (Jacobs, 1989; Fisher, 1991).

Thirdly, the media (particularly television) reinforces societal acceptance of gambling by the glamourizing of high risk gamblers and glitzy game shows (Smith and Abt, 1984; Griffiths, 1989). (In the U.K. some recent examples include a drama serial: "Big Deal", and game shows based on games of chance such as "Gambit", "Play Your Cards Right", "Bullseye", "Winner Takes All", and "You Bet").

Finally, it is suggested that gambling is essentially a form of play and as such is inescapably interwoven into the autonomous culture of children's games (Herman, 1976; Abt and Smith, 1984). Of course none of these initiating factors is mutually exclusive,

and it is likely that the examination of life histories of young gamblers would reveal varying degrees of each influence at work.

The idea that gambling behaviour can be explained with recourse to play was first expounded by Caillois (1957), at a time which preceded accepted, commercial, preadult gambling. It is now particularly useful as a theoretical construct for explaining, not only how children start to gamble, but the meanings which children attach to games of chance.

Children at play. Smith and Abt (1984) highlight the inherent contradiction of children's games; by definition they are pointless and yet they are significant for the part they play in the socialisation process. They offer respite from the demands of daily life, while expressing and transmitting the myths and values of the wider culture. They may also give a clue as to the male gender bias among child and adult gamblers.

while young females tend to play out caring roles and consensual contexts in their play, boys are inclined to adopt aggressive and heroic roles in games based upon competition (see also Opie and Opie, 1969). However, not all players are equally endowed with the appropriate attributes of strength and skill, so that games which combine varying measures of talent with the random favours of chance, are assured cultural success. Gambling-like games such as cards, marbles, picture card flipping, and (since the 1970's) video games, teach children the adult, societal values of commercialism and competition in the context of what Goffman terms a "fateful encounter" (Goffman, 1969).

Thus as in adult gambling games, the primary reward of success in children's gambling and gambling-type games is not material, but a highly prized gain in "character" in Goffman's sense of the term. By taking risks in games, reputations are built and the winners earn important social rewards (Smith and Abt, 1984; Opie and Opie, 1969). Keill's observations on the demeanour of five adolescent boys playing poker illustrates the point:

"The sub-surface habits, whether verbal or physical, which these adolescents brought to the poker table, are essentially those which they bring to the dinner table, their classroom, their other play. They are part of the maturative process. When the adolescent approached the card table, he brought his 'hidden manliness' with him. It is this kind of 'man-to-man' relationship, where adolescent striving for asserting maturity and achieving recognition thereof from his peers, can genuinely be observed, stripped of fraud, of role playing his adolescence in front of his seniors" (Kiell, 1956, p.88-89 cf. Griffiths, 1989)

Each game is immersed in its own subculture and is consequently rich in ritual and meaning. Thus a game of marbles may be a "rite of passage" for a child in a school playground, while a poker game simultaneously provides adolescents with relief from the tedium of daily life and an "opportunity to reflect the psychological traits which they feel should govern the rest of their lives" (Smith and Abt, 1984, p.132). An understanding of

the subculture surrounding each gambling or gambling type game would thus seem to be essential to a proper sociological understanding of it.

The pull of the fruit machine. If games reflect the culture of the players (Caillouis, 1958) then fruit machines are the ultimate manifestation of commercialism in modern leisure products. Names such as "Cash Arena", "Loads'a'money", "Action Bank", and "Noteshoot" leave the player in no doubt that the game involves the wagering of cash for more cash.

The fruit machine of today is the achievement of nearly a century's development of Charles Fey's first fully automatic payout, three reel machine. It still usually comprises three reels, each adorned with successive brightly coloured pictures of fruit (eg. an orange, cherry, or lemon). Once money has been inserted, the reels spin on a random ratio schedule for predetermined time cycles i.e. the first reel spins for approximately three seconds, the second for four seconds, and the third for five seconds (Griffiths, 1990a). The twenty-stop twenty-symbol reel system, in general use, allows for eight thousand possible combinations of symbols and frequent wins to maximize play value for money, (Costa 1988). Cash prizes are paid out when the middle line of a 3 x 3 symbol matrix reveals a winning combination of symbols e.g. three oranges (Griffiths, 1990a).

Visually today's fruit machine is incomparably exciting, with brightly lit displays in vivid primary colours, which change at frequent intervals to attract the eye of potential players. In addition a variety of "play features" increase the number of decisions a player has to make, and greatly enhance the experience of play. For example, instead of the machine automatically paying out on a winning sequence, it may be necessary to first press a "collect" button, or make a decision to store the winnings to "collect" later (or use for further play once the original stake is spent) by pressing a "bank" button.

Other features give the impression that the player may influence the outcome. For example, many machines have a "nudge" button which, when lit, can be pressed to change the position of any one of the reels to achieve a winning sequence, after automatic play is over. Similarly a "hold" button can be pressed to retain the favourable position of a reel before automatic play begins. Some fruit machines have a "gamble" button which may be pressed in response to the appropriate flashing graphics, to gamble winnings against various odds, eg. "double or quits" (Griffiths, 1990a). These are just a few of the more simple examples from a range of sophisticated play features on modern fruit machines.

In the absence of major ethnographic research, there has been much speculation as to why young people are particularly attracted to fruit machines. Some of the possible motivations are discussed below.

Ego-enhancement. On the face of it slot machines would seem to offer the least scope for interpersonal character contests (Downes 1976). Fruit machine gambling is held to be based purely on chance (Herman, 1976; Downes, 1976), and it is popularly conceived to be a "mindless" or "moronic" pursuit. Furthermore, fruit machine gambling is indisputably "petty gambling", wagering 10 pence or less per play for a maximum jackpot of £4. Thus on first examination there appears to be little scope for the gain of character through prowess of skill or courageous staking.

However, the idea that knowledge of a particular machine, or acquired skill can alter the odds in favour of the player, has been perceived by manufacturers as having a powerful incentive effect on many players. Whether memorizing the reel sequences, and gaining expert use of play features such as the "nudge" and "hold" makes fruit machine play more skillful, or merely creates the illusion of skill, is open to debate, although experimental evidence exists which suggests that regular players make their money last longer than irregular players (Griffiths, 1990b). In either case the potential for ego enhancement is available. Furthermore when these low stake machines are repeatedly played by children, huge amounts of money relative to income may be wagered and peers impressed by consequential risk taking (Fisher, 1989).

Herman's brief account of fruit machine gambling further endorses the relevance of applying Goffman's ego-enhancement theory to fruit machine gambling. He noted that when a machine pays out, the coins or tokens, drop noisily into a metal receiving tray. Simultaneously lights flash and electronic beeps and buzzes celebrate the win. The coins are not usually scooped out of the tray immediately, but are allowed to accumulate so that other players may observe and admire them (Herman, 1976).

Thus it is suggested here that, while the contest appears to be against the machine, indirectly the contest is usually against other members of a peer group, so that the machine becomes a vehicle for participation in a status game. Thus a specific subculture emerges which is organised around participation in an interpersonal contest, and which results in a hierarchy of performance and consequent status role.

An unfortunate corollary to the emergence of this subculture is that, for a small minority of players, mastery of the recurrent obstacles and techniques of the game supercedes social factors, so that beating the machine itself becomes a lonely obsession.

The social context of play. Fruit machines are frequently marketed within the specific, social context of an arcade or "leisure centre", or in casinos in the U.S. Some writers have stressed the primacy of the supply environment itself to the attraction of slot machine use for young people. Holmes description of U.K. arcades captures the atmosphere which pervades:

'...great fun palaces which are warmly carpeted and flashy. Rarely are they directly lit from overhead and the light beams and tubes would not be out of place in a disco. The sounds are interesting too - jingles, jangles, bleeps and zaps. Seductively, cash always seems to be falling and flooding out - if only from change dispensers' (Holmes, 1985, p.33).

The existence of a commercially provided cultural space, monopolized by young people, is not without precedent. Coffee bars and pool halls have similarly provided shelter from the surveillance of the major institutions which govern teenagers lives. Such social contexts have been described as facilitating the negotiation of status passages which accompany the transition from childhood to adulthood:

In these places teenagers can meet peers, relieve boredom, act on their emerging sexual identities and institute cultural practices that build peers into a stable, if temporary, form of social organization. (Panelas, 1983, p.62).

Observation in a British amusement arcade illustrates the point: "During breaks individual players might watch their friends or others at play, smoke a cigarette or leave the arcade in search of refreshment, and throughout the event there is a constant undercurrent of playful flirtation between girls and boys in the group" (Graham, 1988, p.23).

Panelas further suggests that such premises have always attracted the concern of adults who necessarily equate venues where youth meet without supervision with the spawning of delinquency.

Clearly both the ego-enhancement and the "cultural space" aspects of adolescent attraction to slot machines need to be fully explored. So also do other possible motivations such as the economic, thrill seeking, problem solving, teleological and "protest against ethics" motivations first suggested by Devereux with respect to adult gambling (Devereux, 1947). It is likely that systematic sociological research will reveal a typology of key orientations to fruit machine gambling by young people which will provide valuable insights into both "social" and "compulsive" preadult gambling. Enormous potential exists for sociological contributions in this field, both theoretical and empirical.

REFERENCES

Amati (1981). Juvenile delinquency and habit patterns. Indian Journal of Social Work, 44, 405-8.

Arcuri, A.F., Lester, D. & Smith, F. (1985). Shaping adolescent gambling behaviour. Adolescence, 20, 935-38.

Caillois, R. (1962). Man, Play and Games. New York, Free Press.

Cornish, D.B. (1978). Gambling: a review of the literature and its implications for research, London: HMSO.

Costa, N. (1988). Automatic Pleasures: The History of the Coin Machine. London: Kevin Francis Publishing Ltd.

Devereux, E. (1949). Gambling and the Social Structure. Unpublished Doctoral dissertation, Harvard University.

Downes, D.M., Davies, B.P., David, M.E., Stone, P. (1976). Gambling, Work and Leisure: a Study across Three Areas. London: Routledge and Kegan Paul.

Fisher, S. (1989). The use of fruit machines by children. The Society for the Study of Gambling Newsletter, 16, 13-33.

Fisher, S. (1990). Governmental response to juvenile fruit machine gambling in the U.K.: where do we go from here? Journal of Gambling Studies, 7, 3, in press.

Frank, M.L. (1988, May). Casino Gambling among College Students: Three Sequential Years of Data. Presented at the Third National Conference on Gambling Behavior, New York City, New York.

Goffman, E. (1969). Where the Action Is: Three Essays. London, Allen Lane. The Penguin Press.

Griffiths, M.D. (1989). Gambling in children and adolescents. Journal of Gambling Behavior, 5, 66-83.

Griffiths, M.D. (1990a). The cognitive psychology of gambling. Journal of Gambling Studies, 6, 31-42.

Griffiths, M.D. (1990b). The role of cognitive bias and skill in fruit machine gambling. In S.E.G. Lea, P. Webley and B. Young (eds.) Applied Economic Psychology in the 1990's vol.1 pp.228-253. Exeter: Washington Singer Press.

Herman, R.D. (1976). Gamblers and Gambling. New York and Toronto: Lexington Books.

Holmes, G. (1985). Against the Odds. Youth in Society, 12, 22.

Ide-Smith, S. and Lea, S.E.G. (1988). Gambling in young adolescents. Journal of Gambling Behavior, 4, 110-119.

Jacobs, D.F. (1989) 'Illegal and undocumented: a review of teenage gambling and the plight of children of problem gamblers in America' in Shaffer, H.J., Stein, S.A., Gambino, B. Cummings, N. (eds.) Compulsive Gambling: Theory, Research and Practice Massachusetts/Toronto: Lexington Books.

Keill, N. (1956). The behaviour of five adolescent poker players. Journal of Human Relations, 5, 79-89.

Lesieur, M.R. and Klein, R. (1987). Pathological gambling among high school students. Addictive Behaviors, 12, 129-135.

Moran, E. (1987). Gambling among schoolchildren: the impact of the fruit machine. London's National Council on Gambling.

Opie, I. and Opie, P. (1969). Children's games in street and playground. oxford: Oxford University Press.

Panelas, T. (1983). Adolescents and video games: consumption of leisure and the social construction of the peer group. Youth and Society, 15, 51-65.

Smith, J.F. and Abt, V. (1984). Gambling as Play. Annals of the American Academy of Political and Social Science, 474, 123-132.

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THE DEVELOPMENT OF AMUSEMENT MACHINE PATHOLOGIES*

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Introduction. Interest in the psychology of video games and fruit machines is growing but there is little survey data, and much of what has been written could best be described as "armchair theorizing". Both video games and fruit machines come under the generic label of "amusement machines", are potentially addictive, and have led to a number of allegations of delinquency (via dependency) including burglary, drug dealing, attempted murder, suicide, and prostitution (e.g. Cory, 1983; Griffiths, 1990a). The main differences between the two types of machine are that video games are played to accumulate as many points as possible, whereas fruit machines are played (i.e. gambled upon) to accumulate as much money. However, playing a video game could be considered as a non-financial form of gambling, and taken to excess, both behaviors can be considered non-substance addictions. The other major difference between video games and fruit machines is that on video games the outcome is by and large a product of skill, whereas on fruit machines the outcome is usually a product of chance. Another minor difference is that fruit machines can only be played upon in licensed premises (e.g. amusement arcades, casinos) whereas video games can be delivered via four general hardware systems -handheld, personal computer, home video console and arcades (Nawrocki and Winner, 1983).

Amusement machines: who plays them and how much? Most surveys which have reported on the incidence of amusement machine playing among a general population have concluded that they are most frequently played by male adolescents. In the U.S. approximately nine out of ten teenagers play video games at some point during their adolescent years (Atari, 1982; Gallup, 1982). According to Surrey (1982), the clientele of video games can vary from business people and teenagers, to women shoppers and young children, however it is the older teenage boys who predominate. In a survey of 2000 video game players, Loftus and Loftus (1983) reported that without exception the most frequent players were teenage males. Incidence figures for video games in other countries are lower than in the U.S. but the games are still mostly played by adolescents. Since American adolescents have little access to fruit machines (i.e. they are only found in licensed casinos where age admittance is a minimum of 21 years old) there are no incidence statistics. However, in the U.K., children and adolescents have ready access to both video games and fruit machines. Table 1 outlines a comprehensive summary of

* This paper is a much condensed and edited version of "Amusement machine playing in childhood and adolescence: A comparative analysis of video games and fruit machines", which will be appearing in the Journal of Adolescence, Vol.14 (1991)

Table 1. Summary of UK research studies on amusement playing in adolescents (f.m. = fruit machine; v.g. = video games)

Researcher(s)	Year	Total	Sample size		Age	Played (%)	Regular Players (%)	Research methodology
			Male	Female				
Waterman and Atkin	1985	451	(not specified)		14-18	77	9	Questionnaire to Schoolchildren
Huff and Collinson	1987	100	100	0	15-21	35 (f.m.)	24 (f.m.)	Questionnaire to juvenile offenders
Barham	1987	329	163	166	11-16	51	19	Questionnaire to schoolchildren
Ashdown	1987	71	40	31	11-15	70 (f.m.) 76 (v.g.)	23 (f.m.) -----	Questionnaire/Interview to schoolchildren
National Housing and Town Planning Council	1989	9752	5184	4434	13-16	64 (f.m.)	14	Questionnaire to schoolchildren
Spectrum Children's Trust	1988	2434	1223	1211	11-16	66 34	87 (f.m.)	Questionnaire to schoolchildren
Home Office	1988	1946	960	986	10-16	13 (f.m.) 11 (v.g.) 14 (both)	6 (f.m.) 10 (v.g.)	Questionnaire to schoolchildren
Wyatt	1988a	634	386	248	11-15	59 (f.m.)	-----	Questionnaire to schoolchildren
Wyatt	1988b	194	("roughly 50-50")		11-15		-----	Questionnaire to schoolchildren
Beverley Area Management Committee	1989	50	(not specified)		14-20+	94	90	Questionnaire/Interview to Unspecified "young people"
Leeds Polytechnic	1989	576	(not specified)		11-16	39 (f.m.) 44 (v.g.)	6	Questionnaire to schoolchildren
Brown	1989	134	(not specified)		12-16	44 (v.g.)	-----	Questionnaire to schoolchildren
Bentall, Fisher, Kelly.	1989	213	160	50	15-51+	100 (f.m.)	41 (f.m.)	Questionnaire to fruit machine players
Bromley and Hawksworth			(3 unrecorded)					
Griffiths	1990	8	8	0	19	100 (f.m.)	100 (f.m.)	Interviews with "addicted" fruit machine players
Griffiths	1990	50	39	11	14-21	100 (f.m.) 68 (v.g.)	34 (f.m.)	Questionnaire/Interviews to fruit machine players
Rands and Hooper	1990	2817	(not specified)		11-16	20 (f.m.) 23 (v.g.)	9 10	Questionnaire to schoolchildren

U.K. research studies on amusement machine playing in adolescence. Incidence figures of amusement machine playing ranged between 13% and 100% depending upon the research methodology employed, and in nearly all studies, males played upon both video and fruit machines significantly more than females.

Amusement machines: Sex differences. The significant association between gender and the frequency of video game playing has been reported by many authors (e.g. Kaplan, 1983; Trinkaus, 1983; Egli and Meyers, 1984) as has a similar finding between gender and the frequency of fruit machine playing (e.g. Fisher, 1989; NHTPC, 1988). Little explanation for why males play fruit machines more than females has been offered, except by Griffiths (1988; 1990c) who in interviews with "fruit machine addicts" reported that his players said "gambling (was) a man's domain".

Explanations for the gender difference in video game playing have been more forthcoming. One explanation may be the content of the games. As Gutman (1982) has pointed out, video game software is usually designed by males for males. For instance, Braun, Goupil, Giroux, and Chagnon (1986) reported that in 21 video games they examined, 12 contained exclusively masculine images, 2 contained both masculine and feminine images, 7 contained neither

and none contained exclusively female images. In a study of 117 undergraduate videogame players by Morlock, Yando, Nigolean (1985), males reported that they play to master the games and for competition. Females preferred more whimsical, less aggressive and to some extent less demanding games than men (a finding also reported by Malone (1981)). This may be explained by social factors; women have not been encouraged to express aggression in public and are unlikely to feel comfortable with games of combat or war (Surrey, 1982).

Another factor which may be important in explaining sex differences is that males on average perform better in visual and spatial skills - particularly depth perception and image solving (Maccoby & Jacklin, 1974). These skills are essential in good video game playing since good hand-eye coordination is needed in addition to quick judgements of spatial relationships (Keisler, Sproull & Eccles, 1983). Keisler et al., (1983) note that since boys would tend to score higher than girls on the evidence outlined, the fact that girls on average do not score as highly as boys could be considered a discouraging factor in girls' reluctance at playing video games.

Amusement machines and addiction. "Are amusement machines detrimental to a young person's healthy development?" is the question at the centre of almost all debate concerning the playing of amusement machines. A popular argument against amusement machines is that they are potentially addictive and that their over-use can produce excessive and irrational behaviour (Anderson & Ford, 1986; Griffiths, 1989c). This is probably due to the fact that in their respective countries, both video games (U.S.) and fruit machines (U.K.) have low stakes and can be found in a myriad of locations including cafes, bars, restaurants, hotels, cinema foyers, arcades etc. (Surrey, 1982; Bowman & Rotter, 1983; Griffiths, 1988b).

A number of researchers (e.g. Soper & Miller, 1983) have argued that "video game addiction" and "fruit machine addiction" are like any other behavioural addiction, consisting of compulsive behavioural involvement, a lack of interest in other activities, association mainly with other addicts, and physical and mental symptoms when attempting to stop the behavior (e.g. the "shakes").

Undeniably, amusement machines can absorb a lot of children's time and money. Egli and Meyers (1984) interviewed 151 adolescent videogame players and reported that 20 (13%) were heavy users who showed compulsive components and made many sacrifices by giving up going to the cinema, buying clothes, records and food as well as sacrificing sporting activities. McClure and Mears (1984) found that in a sample of 336 high school students, 15% of their subjects played video games to escape outside pressures and 26% used part or all of their lunch money to finance their video game playing.

However, much of the evidence for "video game addiction" in the U.S. is of anecdotal nature. Evidence for signs of "fruit

machine addiction" in the U.K. are still quite sparse but steadily growing. Nearly all the studies on fruit machine playing (outlined in Table 1) have shown that a small minority of individuals have severe behavioural problems as a result of their excessive fruit machine playing. The debate centres around how big the "minority" is. Table 2 outlines those studies which have

Table 2 Summary of UK research studies showing signs of fruit machine dependency

Researchers	Year	Dependency sign						
		Borrowing Money (%)	Using Lunch money (%)	Stealing (%)	Truancy from school/job (%)	Heavy playing (four more times week) (%)	Irritable If not playing (%)	Chasing Losses (%)
Huff and Collinson	1987	-	-	28	18	-	-	54
Barham	1987	16.4	-	3.2	0.9	1	-	-
National Housing and Town Planning Council	1988	35	16.7	7.4	6.2	5	-	-
Spectrum Children's Trust	1988	16.5	-	4.3	4.3	-	-	-
Home Office	1988	-	-	-	-	2	-	-
Beverly Area Management Committee	1989	-	-	4 (22)*	-	51	-	-
Leeds Polytechnic	1989	20	-	10	7	6	-	-
Griffiths	1990 _a	24 (38)*	18	12 (18)*	18 (32)*	6	8	4
Rand and Hooper	1990.	7.3	3.6	1.5** 0.8***	1.6	2	-	-

*May have only happened once

**

from family members

from outside family

reported negative consequences of fruit machine playing which could be taken as signs of fruit machine dependency. A number of studies have reported the using of lunch money to play fruit machines (NHTPC, 1988; Griffiths, 1990a; Rands & Hooper, 1990), stealing to play fruit machines (e.g. Barham, 1987; Spectrum Children's Trust, 1988) and truancy to play fruit machines (e.g. NHTPC, 1988; Leeds Polytechnic, 1989; Griffiths, 1990a), as well as a range of other behaviour (e.g. borrowing money, heavy playing, chasing losses, irritability when not playing) which may be indicators of potential fruit machine dependence. Although there is a dearth of hard data concerning "fruit machine/video game addiction" it is clear from the studies outlined that some

individuals (and quite possibly a significant minority) have a bona fide gaming dependency.

Future directions: A developmental model. Many of the research findings on video games (in the U.S.) and fruit machines (in the U.K.) parallel each other in many ways. Amusement machines on both sides of the Atlantic are typically played upon by older male adolescents, some of whom develop gaming machine addictions which can cause a number of negative behavioural consequences.

In future research programs it would be beneficial to adapt the DSM-III-R criteria of pathological gambling (American Psychiatric Association, 1987) for use in the monitoring of gaming machine addictions (see Table 3). By using the adapted

Table 3 *Adaption of DSM-III-R criteria of pathological gambling (APA, 1987) to amusement machine play*

Have you ever done any of the following?

1. Frequently play and obtain money to play
2. Frequently played with larger amounts of money
3. Need to play more to get more excited
4. Restless if you can't play
5. Return to win back your losses
6. Make repeated efforts to stop playing
7. Play instead of going to school/job
8. Sacrifice other activities to play
9. Continue to play even when you owe money

If a player answers "yes" to four or more of the above questions s/he is probably an amusement machine "addict".

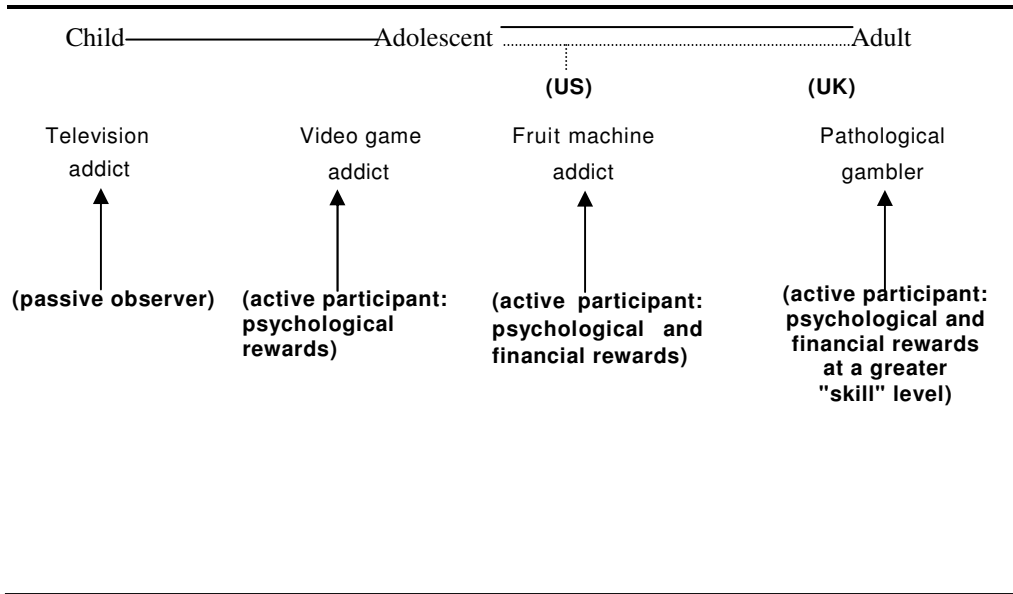
DSM-III-R nine-point checklist, it would be possible to record objective measures of incidence of probable amusement machine addicts.

Much research needs to be carried out into the roots, causes and incidence of addictive amusement machine play, as well as into the families of such individuals, and the impact of addictive playing on schooling. It would also be useful to illustrate particular problem cases highlighting arcade associated difficulties, maybe even following single case studies longitudinally and recording developmental features of the "adolescent amusement machine player at large". This would help determine the variables which influence how adolescents "learn" to play amusement machines.

Expanding on Brown's (1989) developmental model of a pathology of man-machine relationships, it could be that "addicted" amusement

machine players were previously "television addicts" and possibly go on to become pathological gamblers (see Table 4). In chronological terms, the child may invest an

Table 4 A developmental model of a possible route from a television viewer to pathological gambler



abnormal amount of time watching television because of parent and/or peer deprivation becoming a continuous passive observer. At some later stage, the child/adolescent may discover television has an active medium, that is, the playing of video games in which the child is psychologically rewarded through interaction and decision making via the television screen. At the next stage the discovery of fruit machines is made (probably as an adult in the U.S. and an adolescent in the U.K.). At this stage, the rewards during man-machine interaction are both psychological and financial (i.e. the player has the chance to win money). It is the final stage that the player may become a pathological gambler when s/he discovers that other forms of gambling (e.g. horse-race betting, card playing) have psychological and financial rewards but also require a greater level of skill than fruit machine playing).

Although predictions from this type of model are hard to test, retrospective questionnaire and interview studies may reveal that video game or fruit machine addicts were once constant television viewers or that pathological horse race gamblers were once addicted to fruit machine playing. As Brown (1989) noted in a similar model to the one outlined above, the theory may require more than merely a priori refutation.

REFERENCES

American Psychiatric Association (1987). Diagnostic and statistical manual of mental disorders (3rd edition - revised). Washington, DC: Author.

Anderson, C.A. and Ford, C.M. (1986). Affect of the game player: Short term effects of highly and mildly aggressive video games. Personality and Social Psychology Bulletin, 12, 390-402.

Ashdown, J. (1987). Young people and gaming machines. Unpublished manuscript.

Atari. (1982). A public perspective. California: Author.

Bentall, R.P., Fisher, D., Kelly, V., Bromley, E. and Hawksworth, K. (1989). The use of arcade gambling machines: demographic characteristics of users and patterns of use. British Journal of Addiction, 84, 555-562.

Bowman, R.P. and Rotter, J.C. (1983). Computer games: Friend or foe? Elementary School Guidance and Counselling, 18, 25-34.

Braun, C.M.J., Goupil, G., Giroux, J. and Chagnon, Y. (1986). Adolescents and microcomputers: Sex differences, proxemics, task and stimulus variables. Journal of Psychology, 120, 529-542.

Beverly Area Management Committee. (1989). Amusement arcades. Unpublished manuscript.

Brown, R.I.F. (1989). Gaming, gambling, risk taking, addictions and a developmental model of a pathology of man-machine relationships. In J. Klabberg, D. Croowall, H. de Jong and W. Scheper (Eds.) Simulation Gaming. Oxford: Pergamon Press.

Cory, C.T. (1983). Pac-man as playmate. Psychology Today, 17(1), 58.

Egli, E.A. and Meyers, L.S. (1984). The role of video game playing in adolescent life: Is there a reason to be concerned? Bulletin of the Psychonomic Society, 22, 309-312.

Fisher, S. (1990). The use of fruit and video machines by children in the U.K: An analysis of existing research. Society for the Study of Gambling Newsletter, 16, 13-39.

Gallup, G. (1982). The typical American teenager. Seattle Times, 19 May.

Griffiths, M.D. (1988a). Fruit machine gambling in addicted adolescents. Society for the Study of Gambling Newsletter, 14, 17-19.

- Griffiths, M.D. (1988b). Adolescent gambling: Report of a workshop. Society for the Study of Gambling Newsletter, 14, 12-16.
- Griffiths, M.D. (1990a). The acquisition, development and maintenance of fruit machine gambling in adolescence. Journal of Gambling Studies, 6, 193-204.
- Griffiths, M.D. (1990b). The cognitive psychology of gambling. Journal of Gambling studies, 6, 31-42.
- Griffiths, M.D. (1990c). Addiction to fruit machines: A preliminary study among males. Journal of Gambling Studies, 6, 113-126.
- Home Office (1988). Amusement machines: Dependency and delinquency. (Home Office Research Study No. 101) London: HMSO.
- Huff, G. and Collinson, F. (1987). Young offenders, gambling and video game playing. British Journal of Criminology, 27, 401-410.
- Kaplan, S.J. (1983). The image of amusement arcades and differences in male and female video game playing. Journal of Popular Culture, 16, 93-98.
- Kiesler, S., Sproull, L. and Eccles, J.S. (1983). Second class citizens. Psychology Today. 17, (3), 41-48.
- Leeds Polytechnic (1989). Cited in J. Long. Playing the Machine: Amusement arcade ethics. Leisure Management, 9(8), 65-66.
- Loftus, G.A. and Loftus, E.F. (1983). Mind at play: The psychology of video games. New York: Basic books.
- McClure, R.F. and Mears, F.G. (1984). Video game players: Personality characteristics and demographic variables. Psychological Reports, 55, 271-276.
- Maccoby, E.E. and Jacklin, C.N. (1974). The Psychology of sex differences. Stanford, CA: Stanford University Press.
- Malone, T.W. (1981). Toward a theory of intrinsically motivating instruction. Cognitive science, 4, 333-369.
- Moran, E. (1987). Gambling among schoolchildren: The impact of the fruit machine. London: National Council on Gambling.
- Morlock, H., Yando, T. and Nigolean, K. (1985). Motivation of video game players. Psychological Reports, 57, 247-250.
- National Housing and Town Planning Council (1989). Gambling machines and young people. London: Author.

Nawrocki, L.H. and Winner, J.L. (1983). Video games: Instructional potential and classification. Journal of Computer Based Instruction, 10, 80-82.

Rands, J. and Hooper, M. (1990). Survey of young people's use of slot machines within the Sedgemoor District in conjunction with Somerset Youth Association. Unpublished manuscript.

Soper, W.B. and Miller, M.J. (1983). Junk-time junkies: An emerging addiction among students, School Counsellor, 31, 40-43.

Spectrum Children's Trust (1988). Slot machine playing by children: Results of a survey in Taunton and Minehead. London: Author.

Surrey, D. (1982). "It's like good training for life". Natural History, 51, 71-83.

Trinkaas, J.W. (1983). Arcade video games: An informal look. Psychological Reports, 52, 586.

Waterman, J. and Atkin, K. (1985). Young people and fruit machines. Society for the Study of Gambling Newsletter, 7, 23-25.

Wyatt, W. (1988a). Survey on young people and gambling. The Children's Society Youth Link Project. Unpublished manuscript.

Wyatt, W. (1988b). Gambling and school children: A survey by Youth Link. The Children's Society Youth Link Project. Unpublished manuscript.

THE UK FORUM ON YOUNG PEOPLE AND GAMBLING

Paul Bellringer
Director, UK Forum

BACKGROUND

In February 1988 a range of professional disciplines and individuals involved with gambling issues met in London. The event was organised by Youth Clubs UK and arose from concern about a perceived growing problem of children and young people in trouble from playing fruit machines. The day centred on a case history discussion brought by a youth worker. Advice and guidance was offered to this worker from several perspectives. Part of the discussion was filmed by Eddie Joffe, then a producer for Thames TV, for The Buzz, which was screened later that year. The gathering provided an almost unique opportunity for individuals, previously working in isolation to share ideas, information, experience, and concerns. It clearly emerged from those present that there was sufficient commonality to continue meeting, and so a further gathering was arranged.

DEVELOPMENT

At the time, effort and initiative on gambling issues appeared fragmented and lacking in concrete help for youth organisations, young people, and their families. Those concerned with young people were casting around for information and help. This was happening despite the existence of Gamblers Anonymous, Gam-Anon, Parents of Young Gamblers, Gordon House Association, the National Council on Gambling and the Society for the Study of Gambling. So a group of around 12 people continued to meet and a clear structure began to take shape: twice more in 1988 and 4 times in 1989 we met. As a clear committee structure developed I found myself elected as chair.

The prospect emerged of providing a practical based service available to all concerned with the issues. However, because the initial impetus had come from a concern with the problems of gambling we started out with a somewhat 'anti fruit machine' stance and the need to take action. our early literature printed in the first half of 1989 reflects that to some degree.

As time went on and we shaped the organisation, a more balanced policy has developed that is neither anti-gambling nor anti-industry, and covers the whole range of gambling activities. The UK Forum on Young People and Gambling is interested in, and concerned with issues on all gambling activities relating to an age group from young children to 25+. But the UK Forum sees there is a 'downside' and aims to provide a forum for co-ordination, discussion and development strategies to reduce potential and actual harm to young people from gambling. Membership is therefore for organisations and individuals actively seeking to improve safeguards, to extend public awareness about young people and gambling and to provide support for those young people who are damaged by gambling.

The name of UK Forum on Young People and Gambling emerged as reflecting the span of the organisation's interest. Leicester became our operations base as it is the address of our principal supporter - Youth Clubs UK. It was realised early that if the UK Forum on Young People and Gambling was to succeed it needed paid full time staff. Volunteers busy in other areas, however committed, rarely make sufficient progress to provide effective service without a proper organisation and sufficient resources.

By the end of 1989 we had produced our first newsletter. An exchange visit to Berlin had been organised through CARITAS. Trusts were being approached for funds. To our delight by April 1990 sufficient funds had been donated to enable me to decide with tremendous committee encouragement, to take perhaps my own risky. step of becoming that full time employee. The visit to (West) Berlin took place in May 1990. A group of 8 of us stayed for a week studying aspects of gambling and other youth concerns in West Berlin. The visit centred on cafe Beispeillos; a non alcoholic cafe providing a focal point and help for dependent gamblers and family/friends.

I commenced my appointment as Director in June 1990 to develop in earnest the aims and objectives of the UK Forum.

CURRENT SITUATION

Since June the membership has doubled to 75 organisations and individuals without seeking publicity, and we are steadily growing. Members include several Probation areas, Social Service departments, The Trust for the Study of Adolescence, The Advisory Council on Alcohol and Drug Education, a theatre company, a large number of youth organisations, Gordon House Association, Parents of Young Gamblers, several individual members of The Society for the Study of Gambling, individual members of Gamblers Anonymous, and other notables such as Gordon Moody.

The Forum is developing a strong national network of contacts for support and help. An inaugural membership meeting was held in September. A further one is planned for January 1991 to focus on methods of working with young problem gamblers. We have collected a large number of articles and information on relevant issues. This list has gone out to the membership who are eager for knowledge on gambling issues. The UK Forum also responds to requests for information and advice that comes from both members and non-members. A strong platform of our work is the provision of training. Several multi-agency training days have been held and are planned to heighten awareness of the issues, help recognise danger signals, and give practical help to problem gamblers. Shorter workshops are also being held to cover issues. Fund raising efforts continue and we hope to obtain money from the trusts, industry and the government. Our charity trust deed has been submitted to the charity Commission and registration is pending. We are actively seeking links with trade organisations as for example we have already established good liaison with the British Amusement Catering Trades Association (BACTA). We are

seeking ways to develop education programmes for young people to inculcate a sense of responsible gambling through talks, leaflets, etc., and, we are beginning to develop joint ventures on education and direct work with young problem gamblers.

ROLE OF UK FORUM ON YOUNG PEOPLE AND GAMBLING

I would like to repeat, particularly for our trade colleagues, we are not anti-gambling nor anti-industry. We are not a lobbying group but may hold a view on specific issues. We recognise the right of individuals to gamble as a socially accepted activity and we wish young people to enjoy facilities and be entertained. What we want to see is the development of awareness of gambling issues and the development of a attitude of responsible gambling as prevention of future problems. Also we want to see the development of facilities and treatment for problem gamblers. That the UK Forum is meeting a need has been clearly demonstrated by a growing membership which despite little or no publicity steadily beats a path to our door. We do not see ourselves in competition with other helping agencies in the gambling field - indeed most are members, and we see our work as complementary to theirs - if you like we have filled a gap in the market! Through our network and the emphasis on young people we are providing a much needed service that has a long term benefit to individuals, helping agencies, the gaming industry as a whole. We are aiming to achieve long term funding and become a focal centre for information, advice & practical help to organisations and individuals concerned with the issues of young people and gambling.

If you would like more information about our work please contact me: Paul Bellringer, Director, UK Forum on Young People and Gambling, Keswick House, 30, Peacock Lane, Leicester LE1 5NY (0533 - 629514).

NOTICE

The following items are for sale (excluding postage).

Cunningham, Carl L. et. al. "Estimation of the Volume and Pattern of Bookmaking in the Greater Kansas City Area", US Dept. of Justice, LEAA. 30 October 1970. 102p.

Home Office. Gaming Board of Great Britain. Annual Reports from 1969-1980. Lot for £5.00.

Illinois. General Assembly. House. Policy Numbers Game Study Committee "Report and Recommendations to the Legislation" Chicago. June 1975. On microfiche. £2.50.

Kell, Jeffrey et. al. "Off-Track Betting Kentucky" (Research Report No. 109). Legislative Research Commission, Kentucky. December 1973. 143p plus appendices. £2.25.

Nevada. Gaming Control Board "Regulations of the Nevada Gaming Commission" Carson City, 1972. £1.25.

New Jersey. Casino Control Commission:
"Annual Report December 31, 1982" 30p. £1.00
Ibid. December 31, 1983 28p. £1.00
Ibid. December 31, 1984 29p. £1.00
Ibid. December 31, 1985 29p. £1.00
Ibid. December 31, 1986 29p. £1.00
Ibid. December 31, 1987 28p. £1.00
Ibid. December 31, 1988 28p. £1.00
Ibid. December 31, 1989 28p. £1.00

New York, Fund for the City of "Legal Gambling in New York" New York. November 1972. 157p. £2.75

US. Commission on the Review of the National Policy Toward Gambling "Seventh Regional Hearing on Organized Crime and Law Enforcement at State and Local Levels, Problem Gambling and Other Topics" September 1975. 603p. £4.25

US. Commission on the Review of the National Policy Toward Gambling:
Public hearings in Miami - transcript of proceedings
Public hearings in Boston - transcript of proceedings
Public hearings in Philadelphia - transcript of proceedings
other public hearings held, 1974-1975
All in microfiche form: £5.00 the lot

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DAVID CRITCHLEY, 5 PATTERDALE ROAD, LEIGH, LANCASHIRE, WN7 2LG

“The Words of My Mouth, and the Meditation of My Heart”: The Mindset of Gamblers Revealed in Their Language

Leonard R. N. Ashley, Ph.D.
Brooklyn College, CUNY, New York

The colourful language of gambling is essential to creating the players' world; in analyzing it we understand that world. This fringe vocabulary or slang is examined in connection with standard language, and is analyzed for its origins, its humor, and for the attitudes it expresses and transmits. This language is seen as a neglected indicator of *l'histoire de mentalité* the mindset of gamblers. It is also suggested that other factors-body language, paralanguage, stock expressions composed of standard words (jokes, catch phrases, etc)- hold clues to the outlook, superstitions, behavior, the rational and irrational beliefs of gamblers.

Gambling: The Shaping of an Opinion

Gabrielle A. Brenner, Ph.D. and Reuven Brenner, Ph.D.
University of Montreal

Examining historical and contemporary writings, the authors show that many of the negative arguments about gambling spring from selfish interest in the business and political sectors. The stigma associated with gambling turns out to be a method of preventing competition from gambling, and leads to misguided social policies.

**Market Niche Analysis
In the Casino Gaming Industry**

Dr. Lawrence Dandurand
Professor of Marketing, University of Nevada, Las Vegas

This article discusses the nature of market niche analysis in the casino gaming industry. It presents four approaches for conducting market niche analysis. An example of one approach, the Las Vegas Visitor Profile Study is used to identify a premium niche in the Las Vegas Slot Target Market. A detailed examination of the premium niche profile provides a description of the typical premium slot player. The description of the typical premium player leads to hypothesis regarding needs (the unique preference set) of the premium player. An analysis of the unique preference set suggests an appropriate enhanced marketing program.

**Jackpot Size and Lotto Sales
Evidence from Ohio, 1986-1987***

Larry DeBoer, Ph.D.
Department of Agricultural Economics, Purdue University

The impact of lotto jackpot size on sales is estimated using regression analysis on Ohio data for 1986-87. Sales accelerate as jackpots increase. This helps explain high variability in lottery net revenue, and implies that changes in game structure that lead to larger jackpots will increase net revenue. It was also found that Saturday drawings are more popular than Wednesday drawings, that sales increase less than proportionately when more days are available to purchase tickets, and that larger jackpots continue to increase sales even after that have been awarded.

**Demographic, Personality, Cognitive
and Behavioral Correlates of Off-Course
Betting Involvement**

Mark Dickerson
Department of Psychology, Australian National University

Michael Walker
Department of Psychology, University of Sydney

**Stephanie Legg England
John Hinchy**
Department of Psychology, Australian National University

A large (n = 381) explanatory survey of off-course bettors was conducted as a step towards rectifying deficits in current gambling literature. Information collected by interviews and questionnaires from off-course betting agency customers showed the level of betting involvement to be largely unrelated to demographic and cognitive variables and sensation seeking, but related to a variety of betting behaviours. A factor analysis produced three independent factors accounting for 30% of the variance. Loadings on these suggested an independence of items involved in the process of betting and those related to the control of betting behaviours, implying that non-pathological gambling involvement may be a reasonable goal for treatment programs.

The Cognitive Psychology of Gambling

Mark D. Griffiths
University of Exeter, Washington Singer Laboratories

A number of recent studies have shown there may be a strong cognitive bias in explaining persistent gambling. Theories that have been put forward include the illusion of control, "cognitive regret", biased evaluations and the "psychology of the near miss". Two explanatory studies examining the acquisition, development and maintenance of gambling behaviour involving adolescent fruit machine gamblers were carried out. Those factors which directly relate to the cognitive biases (notably erroneous beliefs about skill) during gambling activity are discussed with reference to the above cognitive influences.

**Addiction to Fruit Machines: A Preliminary
Study Among Young Males**

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Although most sources treat gambling as an adult phenomenon, adolescent gambling is more widespread than is generally recognized, and in some cases may even be pathological. This paper outlines a preliminary study of eight adolescents addicted to playing and gambling on coin-in-the-slot machines (more commonly known as fruit machines). Factors involved in the onset of fruit machine playing are examined along with their alternative gambling activities and associated problems. The role of 'skill' and 'excitement' components in persistent playing are also discussed.

**Minimal Treatments and Problem Gamblers:
A Preliminary Investigation**

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In view of the increasing popularity of minimal treatments for problem drinking, a self-help manual for people who wish to reduce or stop gambling was prepared. Twenty-nine (ACT residents who responded to advertisements for help with problem gambling were allocated to either of two minimal treatments, "Manual (only) and "Manual & Interview". On average, clients from both groups reduced the frequency of their gambling sessions, frequency of overspending, and amount spent per week in the first three months and next three months after first contact, but expenditure per session increased from three to six months, after an initial improvement. There was no evidence that a single in-depth interview added to the effectiveness of the manual.

**Gambling in the Netherlands: Developments,
Participation, and Compulsive Gambling**

**Piet Hermkens, Ph.D.
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University of Utrecht, The Netherlands

An inventory was made of the developments in what the gambling market had to offer and the extent of public participation in games of chance in The Netherlands for the period 1945-1988. Both these aspects show a sharp rise in the post-war years, but the more negative effects of gambling also becoming clearer. Since the beginning of the 1980's, assistance organizations have received increasing requests for help and advice on gambling problems. Roughly half of those seeking help are younger than 25 years, presenting the compulsive use of slot machines as their main problem.

Lottery Play and Problem Gambling

**Joseph Hraba, Ph.D.
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Iowa State University

This study sought to determine if lottery play along with other possible causes engenders problem gambling. Problem gambling was defined as a progression and measured by three scales: Gambling behaviour, loss of control over gambling and gambling consequences. Possible causes of problem gambling included lottery play, personality traits, exposure to gambling, leisure pursuits, marital status, residence, and other background characteristics of respondents. Respondents are a stratified random sample of adult residents of Iowa contacted by telephone in May-June 1989. It was found that lottery play is a predictor of gambling behaviour, as well as loss of control and gambling consequences when previous stages of problem gambling were deleted from the analysis as predictor variables. Other predictors of the latter stages of problem gambling include its earlier stages, as well as personality traits and various background characteristics of respondents. The relevance of the findings for theory and future research on gambling are discussed.

Lottery Mania: An Editor's View

H. Roy Kaplan, Ph.D.

The growth and transformation of state lotteries in the United States during the last half of the twentieth century has been dramatic. As lotteries have evolved into high stakes games of a pari-mutuel nature, states have come to rely on them as revenue generators. But lotteries have only limited ability to raise funds for government, and unintended social consequences derived from their growth and evolution may out-weigh their revenue generating capacity.

**The Acquisition, Development, and Maintenance
of Fruit Machine Gambling in Adolescents**

Mark D. Griffiths
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In the U.K., the major commercial gambling activity in adolescents is the playing of slot machines (commonly known as "fruit machines"). Over the past few years, the negative effects of "fruit machines addiction" have been reported by various helping organizations (e.g. Gamblers Anonymous) and the national press, including allegations of attempted murder, suicide and prostitution as well as a wider incidence of petty crime.

Fifty adolescent fruit machine players from a 'user population' participated in a face-to-face interview and questionnaire study examining factors in the acquisition, development and maintenance of gambling behaviour. Nine adolescent males were deemed to be pathological gamblers as measured by the American Psychiatric Association DSM-III-R diagnostic criteria, and a number of serious consequences were reported including gambling debts, truancy and stealing.

**Neutralizing Marginally Deviant Behavior:
Bingo Players and Superstition**

Kim M. King, Ph.D.
Hiram College

Bingo is one of the most popular and most accepted forms of gambling in the United States today. Yet, despite its popularity, many bingo players are not completely comfortable with the moral "rightness" of their actions. This participant observation and interview study spanning a 5 year period shows how bingo players use superstitious strategies, such as feelings, hunches and psi, attitudes, and luck to neutralise their marginally deviant behaviours.

State Lotteries and Compulsive Gambling

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The legalization of gambling, including state lotteries, has resulted in a dramatic increase of compulsive gambling. Not surprisingly, a new profile of compulsive gambler has emerged which differs significantly from the previous profile of white, middle aged, middle class male. This paper discusses public policy issues, lottery advertising, and legislative/lottery support given to address the problems of compulsive gambling.

**Casino Policies:
Have Australians Had a Fair Deal?**

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The introduction of commercial casinos to Australia in 1973 was arguably the most radical shift of gambling policy in Australia's history. At one level, the risk seems to have been justified, with very little organised public opposition to the promotion of casinos as a catalyst for tourism growth and regional economic development. However, recent events suggest that Australian casino policies have moved to a more politicised stage, a period in which governments could be forced to contend with new conflicts, tensions and contradictions. Now that some of the benefits and costs of casinos have become apparent, it is appropriate to evaluate existing casino policies and trends, and to reconsider other alternatives which might be available. This paper examines the broad social implications of the Australian casino "boom" the economic changes which have occurred, and the social and political costs which have begun to surface.

The Effects of State Lotteries on the Pari-Mutuel Industry

H. Roy Kaplan, Ph.D

The growth and success of state lotteries in the United States and Canada has been matched by a corresponding decline in pari-mutuel handle and attendance, especially in horse racing, causing speculation about the lotteries' presumed negative impact on that industry. This paper presents evidence showing that lotteries are not responsible for the financial problems of the pari-mutuel industry because many people buy lottery tickets exclusively. Further evidence indicates that the pari-mutuel industry would benefit from a decrease in governments' take-out rate and more vigorous marketing campaigns.

The Impact of the Daily Lottery on the Numbers Game: Does Legalization Make A Difference?

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There has been a profusion of state run legal lotteries over the last two decades. One justification for them has been their supposed diversion of funds from illegal games known as numbers, policy and bolita. Records obtained in a police raid in South Florida provided an opportunity to analyze the impact of Florida's legal lottery on its illegal counterpart. The records ranged over a 13 week period encompassing five weeks prior to the inception of Florida's legal daily numbers and lotto games and seven weeks afterward. While there was a 17 percent decline in monies wagered on the illegal games during the first week of the legal games, illegal wagers quickly rebounded to pre-legalization levels.

Is Excessive Gambling seen as a Form of Dependence? Evidence from the Community and the Clinic

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Data from two studies are used to examine the proposition that excessive gambling, unlike excessive substance use, is not generally viewed as a form of dependence. In the first study, the attitudes of 100 members of the general population towards the causes of excess and towards appropriate treatments, indicated that excessive gambling was seen in more moral terms than were other addictive behaviours. In the second study, of 54 people receiving treatment for one of four forms of excessive behaviour, gamblers were just as likely to use terms such as 'addiction' or 'compulsion' to describe their behaviour but were also more likely than others to describe it in terms of moral weakness or vice. Concern is expressed at the way in which gambling may be marginalized as a form of dependence.

Smart Money

"Rick"

Gamblers Anonymous

"Rick" was an ambitious entrepreneur beginning the first of several businesses at age 16. He amassed a fortune by age 35. Between the ages of 42 and 50, his gambling rampage liquidated his assets, he lost his business and licence to practice in his field, and he ended up in debt of over \$1 million. Today at age 53 he is starting a new career in counselling and working with compulsive gamblers.

Lotteries in the State Fiscal System

John L. Mikesell

Indiana University

Lotteries give states direct revenue from the commercial gambling market. Thirty-two states plus the District of Columbia, encompassing almost three-quarters of the population, operate games, a dramatic spread since the first modern lottery in New Hampshire (1964). These lotteries typically make only a small contribution to state finances, yield revenue that is subject to dramatic annual changes, are expensive to administer, and place relatively greater burdens on low income than on high income individuals. Proceeds are often dedicated to particular functions, but whether lottery proceeds do more than simply substitute for funds that the function would otherwise receive is doubtful. The fiscal limitations of lotteries have not dimmed the public popularity of the games.

Street Crime, Tourism and Casinos: An Empirical Comparison

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Only recently have researchers begun to study the "causes" of crime in tourist destinations, particularly in those areas which offer casino gaming. Critics, who cite the high crime rates of Atlantic City, New Jersey and Las Vegas, Nevada, fail to understand the relationship between tourism and crime. Casino gaming is a catalyst for tourism and one of the social consequences of tourism is increased crime.

The mean crime rates of three tourist areas (including Atlantic City) and two urban areas in New Jersey were examined to determine if the rates were significantly different. Additionally, the study examined and identified which types of crime have changed since the advent of tourism in Atlantic City.

Policy makers who reject gaming in favour of other mechanisms for urban revitalization need to take note. Tourist destinations have mean crime rates significantly different (higher) from urban areas, at least in New Jersey. Gaming-free tourism initiatives will have similar consequences for a community, as gaming has been identified to have had on Atlantic City.

The Emergence of Dutch Casinos: A Case Study of Mismarketing?

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Ostensibly, the approval of legalized casino type gambling in the Netherlands was intended to combat illegal and uncontrolled gambling. Very early on, however, the plan conceived and implemented by the Netherlands Parliament demonstrated serious mismarketing strategies and tactics. The new legal casinos were appealing to people other than those engaged in illegal gambling, in particular foreign tourists and local "high rollers". This paper attempts to analyze the ultimate process of goal displacement, as the state casino industry allowed economic objectives to supplant desires to utilize legal casinos primarily as controls over illegal gambling.

**Federal Control of Indian Lands v. State Control
Of Gaming – Cabazon Bingo and the Indian
Gaming Regulatory Act**

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In September, 1988, the 100th Congress passed the Indian Gaming Regulatory Act, concluding five years of debate over the Indian Gaming issue – brought to a head by a Supreme Court decision in February, 1987, that barred states from regulating Indian Gaming. That case (*State of California v. Cabazon Band of Mission Indians*) forced the legislature to take a serious look at issues of gaming on Indian lands. The result was the creation of a three-tiered system whereby tribes will control ceremonial games, the federal government will control bingo, and the states and tribes will negotiate agreements to cover casino games, parimutuel racing, and jai alai, if such games are legal in that particular state. In light of the case of the Cabazon Indians and the passage of the Indian Gaming Regulatory Act, this paper will address the following competing issues: tribal sovereignty, state interest, federal interests, and states like Nevada, which have a regulated gaming industry.

**A Review of Two Measures of Pathological
Gambling in the United States**

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This paper addresses a debate that has emerged in the field of pathological gambling research. This debate concerns measurement of the prevalence of pathological gambling in the general population. Two instruments have been used to measure prevalence in the United States, the South Oaks Gambling Screen and the Cumulative Clinical Signs Method. These instruments are described and several problems with the statistical properties of the Cumulative Clinical Signs Method are discussed. The authors conclude with a call for continued research in the area of prevalence studies of pathological gambling.

