1

The Research Context

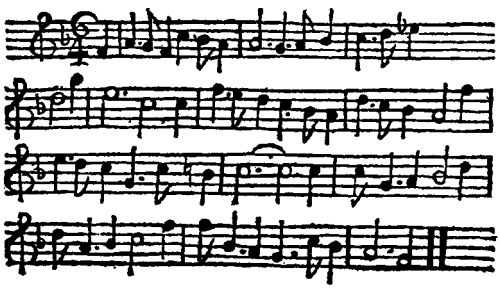
Contemporary Gambling Worldwide

Over the last three decades gambling has undergone a "profound transformation", as Reith (2003) puts it, in some of the largest markets in the world: "From being regarded as an economically marginal, politically corrupt, and morally dubious activity, it has, at the start of the twenty-first century, become a global player in the economies of North America, Europe, and Australasia." (p. 9). In jurisdictions where there has been expansion of the availability of gambling there is still an ongoing debate about whether there are net benefits to the community once the economic value of the revenue and jobs created are balanced against the social costs. The latter have mainly been expressed in terms of the incidence of problem or pathological gamblers: those individuals whose involvement in gambling has resulted in a wide range of harmful impacts impinging on themselves and those around them.

One outcome of this "transformation" has been the rapid expansion of gambling research notably in the area of problem gambling. Governments and the gambling industry have often found it a political necessity to evaluate the social impacts of legalising new or additional gambling products, whether gaming machines, casinos or lotteries. Funds have flowed to research in this process and also to support the development of policy to ameliorate the harmful impacts: policy comprising a range of strategies such as community awareness campaigns, harm minimisation and services for client problem gamblers and their families. In addition two significant national reviews of the gambling industry and its related economic and social impacts, one in the USA by the National Gambling Impact Study Commission (NGISC, 1999) and in Australia by the Productivity Commission (1999), supported by many other national studies of problem gambling, have provided a framework and direction that has already energised research activities worldwide.

In the broader context of the addictive behaviours there is a slowly evolving contribution of gambling research to addiction theory (Dickerson, 2003). In this context Orford (2001) was concerned that research into problem gambling did not occupy a more central position. Such research in his view had the potential to offer "*the greatest challenge to conventional wisdom on the subject, and arguably the greatest opportunity for development of a comprehensive understanding of addiction*" (p. 3) but was typically perceived at the periphery of the current understanding of addictive behaviour. This monograph might be perceived as an attempt to move gambling to a more central position. It is about one limited aspect of the rapidly developing research into gambling, limited but central to psychological conceptualisations of the addictive behaviours, and therefore with the potential to contribute to the theoretical foundations of addiction. The research focus is the ability of individuals to maintain their self-control over their level of involvement in gambling: the objective to develop an understanding of the psychological processes that erode or maintain self-control of gambling.

Historical Themes



"A Lottery is a Taxation,
Upon all the Fools in Creation;
And heav'n be prais'd,
It is easily rais'd,
Credulity's always in Fashion:
For, Folly's a Fund,
Will never lose Ground,
While Fools are so rife in the nation."
(A song from ***The Lottery***, a farce by H. Fielding 1732)

Of all the contemporary forms of legalised gambling the lottery remains closest to the ancient historical origins of gambling. The lottery was one aspect of sortition, the casting or drawing of lots, a practice found in many cultures probably preceding written historical references to gambling. Ewen (1932) notes "*the simplicity with which, by means of sticks of varying length, or stones of different colour, the spoil of the chase or the booty of war could be distributed in an amicable way, or an onerous duty allotted without possibility of offensive discrimination, must have appealed to mankind when first the rights of individuals began to be recognised by the primeval community.*" (p. 19)

The drawing of lots was particularly useful in the distribution of property that could not be equally divided amongst the parties involved whether it was Christ's clothes, booty from war, gifts of unequal size or government owned buildings in Tasmania. Its utility in these situations and its apparent fairness were key aspects of why the lottery became the foundation of most contemporary forms of chance-determined commercial gambling products.

The first detailed descriptions of lotteries designed to raise money for the organisers are to be found in the archives of medieval cities such as Bruges and Ghent in the Low Countries in Europe: from 1465 to 1474 thirteen lotteries were promoted in Bruges with the Duke of Burgundy taking a third of the net profit with the residue to the public purse to fund fortifications (Ewen, 1932): The forerunner of the contemporary partnership of operator and government? Certainly the language has a familiar sense of "spin". At the same time that the Portuguese were following the dictates of public relations and renaming Cape of Storms the Cape of Good Hope (Bryson, 2004), these early lotteries were described as "adventures". Regal patrons of lotteries added additional inducements. In 1569 Queen Elizabeth's "Lotterie Generall" the public announcement read:

> "The Queenes Majestie, of her power royall. Giveth libertie to all manner of persons that will adventure any money in this Lotterie to resort to places underwritten … the Citie of London … York, Norwich, Exceter, Lincolne … and there to remain also seven whole days, without any molestation or arrest of them for any manner of offence, saving treason, murder, pyracie or any other felonie…" (*cited by Ewen, 1932, p. 37*)

Throughout the 15th and 16th centuries lotteries were recorded throughout the German states, Italy and France. In the New World development in Virginia was aided by "adventures" organised between 1612 and 1621 but it was not until the next century that lotteries occurred regularly in Philadelphia and both Harvard and Yale in separate adventures raised and won monies for their university building funds.

The winning of millions of dollars is such a contemporary theme in the popularity of lotteries that it is somewhat surprising to find the first time such sums were advertised was 1694 in England, "The Million Lottery", authorised by Act of Parliament and interestingly paid out to winners in the form of annuities over 16 years. The long series of English State lotteries came to an end in 1826 but the first record of state prohibition occurred in Belgium in 1526 before the lottery had even crossed the Channel to England. State ambivalence toward gambling has continued throughout the world with the attraction of the possible revenues and the competing concerns from moral and religious arguments.

In the decade following the ban on lotteries in England George Adams was born, son of a farm labourer in the parish of Sandon just north of London, and who was to become associated with Australia's best known and continuing lottery, "Tatts", such a successful venture it led to the coining of an addition to the language, "to take a ticket on Tatts", to take a chance. The 16-year-old youth who landed with his parents on Circular Quay in Sydney on 28th May 1842 rapidly grew to a broad, strong man with flaming red hair and beard, taciturn yet with a ready laugh and ease in making friends. Early work at a variety of jobs followed by a period in the goldfields in Queensland led to part-ownership of a sheep station and the purchase of the Steam Packet Hotel on the south coast of New South Wales (NSW). His first involvement with gambling was when he became publican of the well-known Tattersall's Hotel in Sydney. This was the home of a sporting club set up according to the standards and rules of Tattersall's in London. In the presence of the new owner the first public Sweep, based on the 1881 running of the Sydney Cup horse race, was drawn in the main parlour of the hotel.

In a state where lotteries were banned it was inevitable that as the venture became popular, despite its reputation for integrity and fairness, the government moved to ban the sweeps in 1891. Moving to Queensland attracted similar public pressure for government to ban the sweep, but permanent stability and eventual fame came with wonderful irony in the form of the collapse of the largest bank in another state, Tasmania. With three other banks having gone into liquidation, the Bank of Van Diemen's Land was unable to withstand the run on withdrawals. It was not bankrupt, as it held a great many freehold properties, but it had to close its doors for business for lack of liquid assets and cash. Panic gripped the community and the whole economic structure of the state was threatened. After much lobbying, George Adams was invited to organise a lottery with the bank's property as the prizes (e.g. "13th Prize, Bank Premises, Devonport"). In return the Tasmanian Parliament passed a bill legalising Tattersall's sweep, and from this secure base grew what is now the largest privately owned business conglomerate in Australia.

Throughout the world today, wherever they are legalised, lotteries are the most popular form of gambling. Despite being popular it is significant that this particular form of gambling is least likely to be associated with participants' reports of impaired control over expenditure, or to result in harmful impacts, so much so that recent research has questioned whether consumption of the hypothetically most addictive form, instant or "scratch" lotteries, should be included within the mental disorder frame of reference of pathological gambling (De Fuentes-Merillas et al., 2003).

In contrast it is the relative "latecomer" to the gambling scene, the slot or fruit machine (called "poker machine" in Australia), that, wherever it has been legally and readily available, has been found to be both popular and associated with increasing community awareness of the significant harm experienced by some players and their families. Slot machines did not appear until the late 19th century in the USA, where Charles Fey transformed existing nickel in the slot machines by inventing the delayed, sequential stopping of the three reels of symbols, thereby providing what has been assumed to be the crucial element of suspense (Haw, 2000). Fey's "Liberty Bell", produced in 1899, was the forerunner of contemporary machines and found their way into casinos worldwide, notably in Nevada and also in the registered clubs in NSW, thereby adding to the existing lotteries and popular horse race meetings such as the Melbourne Cup first run in 1861 (won by "Archer", 170 pounds sterling and a gold watch), which brings Australia to a halt, with millions of dollars riding on the result (O'Hara, 1988).

Quite why Australia as a nation developed the highest participation rates in such a range of gambling activities has been the focus of scholarly debate and contemporary soul searching (Charlton, 1987; O'Hara, 1988, 1997; Costello & Millar, 2000). It is beyond the scope of this text but a personal story by the historian Ken Inglis (1985) illustrates the complex interaction of different religious beliefs and scientific progress. He relates how, brought up in a protestant family, he was "protected" from the temptations associated with betting on the Melbourne Cup by family outings, travelling deep into the bush beyond the city, arranged on the race day (a public holiday) to ensure that he and other children of like-minded parents were healthily engaged in running and sack races and the like. Catholic families enjoyed the embrace of a church more accepting of gambling and went to the racecourse. He vividly recalled the year when all this parental concern was undermined; vigorous panting youth was ordered to a silent halt while one parent attached a large wooden-cased radio to a car battery and tuned into the Cup commentary.

The clearest illustration of the outcome of a myriad of such minor struggles for and against gambling, some based on religious beliefs some on purely

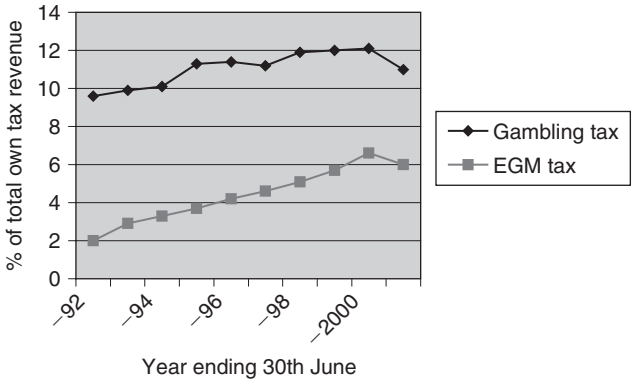


Figure 1.1. Trends in gambling tax dependency, all states and territories in Australia (adapted from Figure 3, Banks, 2003).

commercial grounds, is revealed in Figure 1.1, which shows the current dependency of Australian states and territories on the taxation revenue derived from gambling.

This drawing of the historical themes of different forms of gambling toward the present situation in Australia is driven neither by chauvinism nor a myopic worldview. It is important that any attempts to understand the processes whereby we come to both enjoy and harm ourselves from the consumption of what is described today as an "entertainment product", take account of the fact that gambling has probably been part of the human behavioural repertoire since we first understood the nature of chance.

However the focus on the Australian context is explained and justified in the following sections of this chapter, and comprises two broad themes:

1. The ready availability of the full range of contemporary gambling products within Australia permits some important causal themes to emerge that are obscured elsewhere in the world.
2. Empirical gambling data, whether describing the prevalence of harmful impacts or about player behaviours, emotions and beliefs, can only be evaluated if the community and venue context is known.

As the main empirical and conceptual thrust of this text is the bringing together of recent results that have a bearing on one, possibly key factor that causes the harmful impacts of gambling, impaired self-control, it is essential that the reader is aware of the context in which the data was collected. Only then can the conclusions drawn here, and limits to generalisation, be understood and debated. A focus on the Australian gambling context runs the risk that the research

presented and discussed becomes isolated from the main body of the literature. However there is evidence in the literature that the failure to take the sometimes unique context of a particular jurisdiction or a particular type of gambling product into account has resulted in findings being inappropriately generalised to other settings, for example the association between the preference for certain gambling products and the occurrence of harmful impacts.

A detailed accounting of the Australian context *does* limit the extent to which the findings and conclusions drawn in this text hold internationally, but the potential benefits of the robust Australian data are:

1. Where generalisation can be justified the implications are stronger and more clearly identified, consolidating or challenging what is known, and
2. When findings only hold for specific contexts, types of gambling etc. the identification of these limits clarifies and may facilitate the development of new research questions.

Definitions of Gambling

No consensus appears to have been reached on a formal definition of gambling, although the aspects that distinguish it from risk-taking in general appear to be an exchange of wealth determined by a future event, the outcome of which is unknown at the time of the wager (Griffiths, 1995a). Dictionary definitions of gambling per se are almost misleadingly simple. The New Shorter Oxford Dictionary (Brown, 1993), for example, says that to gamble is to "*play games of chance for money; … (to) risk money, fortune, success, etc., on the outcome of an event*" (p. 1057). This definition does not indicate that different forms of gambling vary greatly with regard to the probabilities governing outcomes. Most gambling in industrialised countries, such as Australia, is now structured in a manner such that a gambler can expect to lose should they persist in gambling (Walker, 1992b). This has been deemed a gambling paradox, that people should so willingly gamble when the odds are against them (Wagenaar, 1988), and most theories of "problem gambling" are attempting to explain the vigorous persistence, in the face of mounting losses, of a minority of regular gamblers.

Forms of gambling vary as to the degree of skill involved. In contrast to gambles that have minimal skill, if any (e.g. electronic gaming machines (EGMs) and roulette), are games of skill in which strict adherence to probability, coupled with experience and an aptitude for the game, can provide an advantage over an opponent (e.g. bridge, poker, blackjack – Walker, 1992b).

Somewhere on the skill continuum between the two extremes outlined above are gambling events which cannot be influenced by the gambler but involve

some degree of skill. For example, horse/dog racing and sports gambling involve some skill and, notwithstanding the role of chance, will reward the more knowledgeable and skilful gambler at the expense of other gamblers (Walker, 1992b).

Legalised Forms of Gambling and their Consumption

It is neither possible to do justice to the range of gambling and gaming products that have been legalised throughout the world nor to keep pace with the development of new ones. In the present psychological research context it is helpful to classify the range of different forms into continuous and other (Dickerson, 1991): the former enabling the individual gambler to repeatedly stake, purchase a game, "observe" the outcome and repeat the process, for hours at a time. Included in this category are EGMs, off-course betting, and casino gaming, all of which have cycles of stake, play and determination ranging from 5 seconds in EGMs to several minutes for horse racing. "Other" forms are epitomised by a longer fixed period of time between the results such as the lottery drawn weekly or daily.

This distinction is at present a key factor in understanding the development of a player's impaired control over their gambling but newly developed forms of gambling product may erode the distinction. One currently available form of lottery, the instant or scratch format, where the player may purchase a quantity and "use" them one after the other in an apparent replication of a session of continuous gambling (Griffiths, 1990), appears to bridge the "gap" between lotteries and EGMs. Recent prevalence studies from the Netherlands challenge this hypothesis showing such low levels of harmful impacts for excessive users of this gambling product that the authors questioned the validity of its inclusion within the Diagnostic and Statistical Manual for Mental Disorders – 4th edn. (DSM-IV) pathological gambling frame of reference (De Fuentes-Merillas et al., 2003).

The second distinction that is essential to an understanding of the research into the psychological processes that contribute to the erosion of a gambler's self-control was made by the Productivity Commission (1999): the division of the gaming machine market into three segments:

> "*high-intensity machines* – where spending per game and the speed of play is high relative to all other gaming machines – includes Australian gaming machines, US slot machines and video lottery terminals;
>
> *amusement with prizes machines* – where spending and the speed of play is relatively slower – these include UK amusement with prizes…
>
> *Japanese pinball style pachinko* and other machines (such as the UK crane grab) – where the stakes and speed of play are the lowest and the prizes are toys and biscuits, cigarettes…." (p. 2.11)

Table 1.1. *A comparison of gaming machine density for selected jurisdictions in Canada and Australia*

Jurisdiction	Total EGMs	EGMs/adult
New South Wales (Australia)	102,000	1:40
Victoria (Australia)	32,500	1:90
Nova Scotia	3,959	1:180
Newfoundland	2,539	1:162
New Brunswick	2,795	1:206
Quebec	20,421	1:275
Alberta	10,352	1:208
British Columbia	2,175	1:1409

Adapted from Azmier, 2001.

The majority of the high-intensity EGMs are in US casinos (64.4%), but there are 20% in Australia, half of them within the one state, NSW, where the research reported in the following chapters was conducted.

Consumption of Gambling

The consumption of gambling varies greatly worldwide reflecting the availability of the different gambling products. In the USA the annual per capita expenditure was estimated at $238 in 1997 with 60% of the population gambling during 1998 (NGISC, 1999). In the UK about 70% of the population participate in gambling in any one year with the annual per capita expenditure of 155BP (in $ about $226) (Sproston et al., 2000). In Australia over 80% of the population participate in gambling in any one year (Productivity Commission, 1999) and by 2000–2001 the annual per capita expenditure had grown to A$1000 (double the expenditure in the USA and UK), over half of which was spent on EGM play (Banks, 2003). Similarly over half of the revenue arises from EGMs whether in clubs, hotels or casinos that is over 5% of own-tax revenues (excluding federally allocated income).

It is the availability of EGMs in venues associated with the day-to-day work and leisure routines of most Australians (with the exception of Western Australia (WA)) combined with a high machine density per adult member of the population (e.g. in NSW 1 per 40) that is so very different from almost every other jurisdiction worldwide. In Canada some provinces approach similar levels and this is summarised in Table 1.1. In Nova Scotia for example the density of EGMs

(video lottery terminals) is about 1 per 180 adults, once again available in hotels/bars as well as casinos (Schrans & Schellinck, 2004).

In NSW just over 10% of the population play EGMs once per week or more often (Dickerson et al., 1998) (are "regular" players, Productivity Commission, 1999). Although the proportion of such regular players in Nova Scotia is much lower (2.4%, Schrans & Shellinck, 2004) the similarities in the type of EGMs and their "convenience" availability goes some way to explaining the similarity of the research findings in the two jurisdictions and this important contextual theme is further discussed later in this chapter.

Definitions: Excessive, Problem and Pathological Gambling

"I do not know if there is any other passion which allows less of repose and which one has so much difficulty in reducing … the passion of gambling gives no time for breathing … it is a persecutor, furious and indefatigable. The more one plays the more one wishes to play. With difficulty one resolves to leave off a little to satisfy the needs of nature … it seems that gambling had acquired the rights to occupy all his thoughts." (Jean Barbeyrac, 1737; cited in Orford, 2001)

Excessive Gambling

Excessive gambling (Orford, 2001) indicates a level of involvement and appetite for gambling that clashes with restraints (e.g. monetary, time, requirements of relationships, work obligations, values of the gambler or others) on an individual's gambling. It could be argued that the word "excessive" has moral overtones, that what is considered excessive may be vaguely defined and highly subjective (Walker, 1992b). However, an appealing aspect of the term "excessive gambling" is that it can apply to the situation where no problems are as yet in evidence, but nevertheless a potential for harm exists. Perhaps the gambling field needs an array of terms analogous to the framework adopted by the World Health Organisation (1982) for alcohol and other drug problems. In addition to the recognition of dependence, there are the terms "unsanctioned use" (quite simply, some people disapprove of the behaviour), "hazardous use" (there exists the potential for harm), "dysfunctional use" (there is disruption to relationships and performance) and "harmful use" (direct harm can be measured).

To a large extent, definitions of excessive gambling are often more implicit in a theoretical stance than made explicit in the difficult task of an all-encompassing definition (Walker, 1992b). Nevertheless, attempts at definition are made to satisfy clinical, research and policy requirements.