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HOMO ALEATOR

A Sociological Study of Gambling in Western Society

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Thesis submitted to the Faculty of Social Science in partial fulfilment of the requirements for the Degree of Doctor of Philosophy.

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SUMMARY

The subject of this thesis is the nature and form of gambling in western society. Unlike other academic studies, which approach the subject in piecemeal fashion and treat it as essentially problematic, this research aims to provide a comprehensive analysis of the activity by situating the phenomenological experience of modern gambling within a formal and historical framework, and examining it from a variety of theoretical perspectives.

The thesis is divided into five Chapters.

The first describes the historical development of the concept of chance and argues that, after a lengthy period in which it existed first as a sacred and later as an epistemological category, in the twentieth century chance was secularised and ascribed ontological status as an explanatory feature of the modern world.

In Chapter Two, a study of the historical development of gambling forms, and the social affiliation of the various groups associated with them complements the outline of chance given in Chapter One. Here it is argued that the nature of these games reflected wider social attitudes towards the perception of randomness, and also the general configuration of the society in which they were played. The development of games from their genesis in divination ritual to their formation into a recognisably modern gambling economy, is also traced, and the historical specificity of their various forms examined.

The formal parameters and phenomenological experience of the gambling economy - the ‘phenomenological sites’ - is the subject of Chapter Three. It is argued that the commercial organisation of games of chance in the late twentieth century is beginning to overcome the traditional stratification that for years has determined the social formation of gambling forms.
In the third Chapter an attempt is made to outline what is unique to the experience of each type of gambling, so that, having established the varieties of gambling experience, the fourth Chapter can go on to examine what is common to them all. In essence, this is an attempt to describe what it is actually like to play at games of chance. The subject of this part of the thesis is the nature of the experience of play and the creation of meaning within that experience. In Chapter Four, play is presented as a ‘thing-in-itself’, within which perceptions of time, space and causation are altered. The understanding of these categories, as well as the medium of play - money - are analysed here, while the perception of cause forms the subject of Chapter Five.

In the final Chapter it is argued that the rejection of probability theory and the entertainment of magical-religious notions of causation in gambling create order and meaning in an environment of uncertainty, and so resolve the experiential chaos of play itself. It is here that the dynamic of the gambling situation - the tension between uncertainty and order, chance and meaning - becomes apparent.
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The Dice Players

Georges de la Tour; early sixteenth century
'Those iron hands of necessity which shake the dice-box of chance play their game for an infinite length of time: so that there have to be throws which exactly resemble purposiveness and rationality of every degree. Perhaps our acts of will and our purposes are nothing but just such throws ....'

Friedrich Nietzsche: *Daybreak*, Book II:130
INTRODUCTION

One of the most striking features to emerge from a cursory glance at the phenomenon of gambling is its almost universal prevalence throughout history and across cultures. Despite its apparent insignificance as 'mere' games, it can be said to constitute a fundamental feature, in some form or another, of human society. Drawing attention to the expression of the totality within the fragment, Sartre wrote that 'man is a totality and not a collection' and that 'consequently he expresses himself as a whole in even his most insignificant and his most superficial behaviour'. In other words 'there is not a taste, a mannerism, or a human act that is not revealing' (Sartre 1957, p68). Drawing on an insight of Pascal, Sartre writes that 'there exist activities like hunting or tennis which, while absurd if reduced to themselves, nevertheless contain meanings which transcend them' (Sartre 1957, p60). Gambling is one such activity.

This thesis, then, will examine the phenomenon of gambling in both its historical and contemporary forms; in relation to social structure and to individual consciousness, and, from the analysis of its many separate fragments, attempt to arrive at a picture of it that is a 'totality not a collection' and which, in its essential form, reveals something fundamental about western society. From this it will become apparent that, along with the image of *homo ludens, homo faber* and *homo economicus*, the sphere of human activity also embraces *homo aleator* - man the gambler. First however, the activity of gambling itself must be defined.

A gambling event can loosely be described as the unproductive redistribution of wealth, where the redistributive mechanism is governed to a greater or lesser extent by the operation of chance and the medium of participation is something of value; in the modern west, money. Further, in contemporary gambling games these revolutions of money and chance occur within the parameters of a strict set of rules and within certain limitations of
time and space which make such games separate and distinct from the flux of everyday life going on around them.

The ubiquity of gambling does not imply a corresponding homogeneity of form, however, for both its historical occurrence and modern individual preferences exist in a determined relation to social structures, social roles and cultural conditions. In this, gambling is revealed as a complex phenomenon, although one which has often been oversimplified in the rhetorical response of much of the contemporary literature which claims to explain its essential character. It is to a review of this literature - which has defined the academic study of gambling - that we now turn.

In the late twentieth century, a proliferation of academic monographs and specialised journals have given birth to the discipline of 'gambling studies'. The activity has suddenly become of interdisciplinary interest, researched in fields as diverse as psychology and history, sociology and mathematics, law and economics. This diversity of approach has at the same time fragmented the phenomenon: gambling is reflected from so many different perspectives that any broader image is lost in a myriad of narrow specialisms. It occupies a portion of many larger fields without establishing a paradigm of its own. To date, no comprehensive framework for discussion and no demarcated area of analysis exists.

This leads us to the peculiarly ambivalent position of gambling in the late twentieth century: on the one hand, strongly condoned and encouraged by commercial interests and state authorities as a 'harmless flutter', on the other, denounced most vehemently by treatment agencies and academic researchers as a morally corrupt trade in human hope and credulity.

In order to pick through the myriad of approaches that constitute the contemporary literature, it is useful to look first at their historical predecessors, and so outline their intellectual heritage. Out of this morass, two separate traditions gradually emerge, from which our modern perspectives can be traced. One 'tradition of license' generally condones all forms of play as manifestations of the sublime element of human nature, while the other regards play in general and gambling in particular as inimical to a healthy society
Within a changing terminology of criticism, the latter regards gambling as fundamentally problematic and condemns it as variously sinful, wasteful, criminal and pathological.

In the first and, from our perspective, less influential tradition originally propounded by Plato, all forms of play are viewed as noble, life-enhancing activities. Systematised in the *Laws* as part of his general theory of education, Plato regarded the natural instinct of children to 'leap and bound - and dance and frolic... with glee' (Plato 1934, p30) as a divine attribute which should be cultivated in adult forms of play. Play is fundamental, for, since the Divine is the only true object of serious endeavour, 'man's life is a business which does not deserve to be taken too seriously...'. Indeed, man, 'has been constructed as a toy for God, and this is the finest thing about him' (Plato 1934, p187). The faculty of play is the highest attribute of humanity, and man has a duty to live by its precepts: 'All of us then, men and women alike, must fall in with our role and spend life in making our *play* as perfect as possible'. This is the 'right course' for life to take, and will ensure a happy and peaceful existence, for in Plato, the notion of play also has a *sacred* character. If we 'pass our lives in the playing of games', the result will be 'an ability to gain Heaven's grace, and to repel and vanquish an enemy when we have to fight him' (Plato 1934, p188).

The equation of play with the noblest virtues of humanity found renewed expression in German romantic writers when, in the late eighteenth century, Schiller lamented the effects of commerce and rationalisation on creativity, and on the 'wholeness' of the human personality (Clayre 1974, p15). However, at the same time he recognised the need for restrictions and for rules: Rousseau's noble savage, free of all conventional constraint, was not for him. In modern life, *Spieltrieb* - the play impulse - satisfied these demands. As detached enjoyment free from purpose, it represented the Kantian ideal, and it also embodied man's need for restraint without denying him freedom, thus realising the essential 'harmony' of mankind. In his *Fourteenth Letter*, Schiller describes this *Spieltrieb* 'as it abolishes all accident, it will also abolish compulsion, and place man, both morally and physically in freedom' (Schiller 1845, p105). Play is here the highest manifestation of humanity: in it the true nature of the individual can be realised and expressed. Schiller continues: 'in every condition of man it is play and only play that makes him complete, and
unfolds at once his twofold nature' (Schiller 1845, p110). Ultimately man 'is only entirely a man when he plays' (Schiller 1845, p111).

In the twentieth century, the continuing relevance of this perspective has been stressed by Johan Huizinga with his ground-breaking *Homo Ludens*, by Roger Caillois with *Man, Play and Games*, and, to a lesser extent, in an unacknowledged debt by Erving Goffman.

Huizinga makes play the basis of culture: civilisation does not come from play, rather 'it arises in and as play, and never leaves it' (Huizinga 1949, p173), for all forms of human expression - law, art, science, commerce, language and even war - are rooted in the 'primeval soil of play' (Huizinga 1949, p5). Huizinga's definition of play has been used as a working model, or at the very least, dutifully acknowledged as standard, by generations of subsequent writers, and in it we can clearly see the influence of the Platonic notion of sacred play, and the romantic regard for its life-affirming tendencies outwith the sphere of material utility. For Huizinga, play 'is an activity which proceeds within certain limits of time and space, in a visible order, according to rules freely accepted, and outside the sphere of necessity or material utility' (Huizinga 1949, p132). It thus reconciles the contrary impulses of sensuousness and form outlined by Schiller. The sensation of play is like that described by Plato when the latter writes that men and women should play the noblest games 'and be of another mind from what they are at present' (Plato 1934, p19).

Despite his argument for the centrality of play in human culture, Huizinga is surprisingly dismissive of games of chance themselves, devoting less than two pages to their discussion and refusing to consider the applicability of his criteria of play to the specific instance of gambling. In two sentences, he dismisses them from his study: 'In themselves, gambling games are very curious subjects for cultural research, but for the development of culture as such we must call them unproductive. They are sterile, adding nothing to life or the mind' (48).

It is this omission that Caillois attempts to rectify. In a study that is perhaps as indebted to Schiller's comments on play as it is to Huizinga, Caillois draws attention to the latter's omission of games of chance and includes it in a four-fold classification of his own. This
taxonomy rests on a formal definition of play as that which is materially unproductive, free and voluntary, uncertain, isolated in space and time, and bound by fixed rules (Caillois 1962, p6-10). The four fundamental characteristics of play described by Caillois are *agon* (competition), *alea* (chance), *simulation* (mimicry), and *vertigo* (ilinx). Games of *ilinx* are based on the creation of physical vertigo or disorientation (Caillois 1962, p23), while *mimicry* involves the players' escaping from himself and becoming an 'illusory character' (Caillois 1962, p19). *Agon* involves competitive games which presuppose training, skill and discipline (Caillois 1962, p14) while in games of *alea*, or chance, work, skill and experience are negated and 'winning is the result of fate rather than triumphing over an adversary' (Caillois 1962, p17). In conjunction with money, Caillois points out, these games include gambling games, and in fact, as we shall see later, traces of *all* of these characteristics can be found in gambling. Caillois posits a broad interdependence between games and culture, writing that the favourite games of a society reflect, 'on the one hand, the tendencies, tastes, and ways of thought that are prevalent, while at the same time, in educating and training the players in these very virtues or eccentricities, they subtly confirm them in their habits or preferences' (Caillois 1962, p82). He goes on to draw a similar conclusion to Schiller on the reciprocity between games and society, speculating that 'perhaps... Sparta's destiny could be read in the military rigour of the games in the palaestra, that of Athens in the aphorisms of the sophists, that of Rome in the combats of the gladiators, and the decadence of Byzantium in the conflicts in the hippodrome' (Caillois 1962, p83).

Caillois argues that the evolution of these forms begins with the historical transition from 'Dionysian' societies based on the principles of *simulation* and *vertigo* to modern rational ones governed by *agon* and *alea*. The displacement of what he calls the world of the mask and ecstasy by that of merit and chance is testimony to the 'progress' of civilisation, a progress encapsulated in the games that culture plays. The social forms of Dionysian society do not disappear in modern times however, but continue to exist in the sphere of play. In rational society, the 'chaotic original' forces of *vertigo* and *simulation* are 'relegated to the limited and regulated domain of games and function where they afford men the same eternal satisfaction, but in sublimated form, serving merely as an escape from boredom or work and entailing neither madness nor delirium' (Caillois 1962, p97).
According to Caillois, civilisation can only flourish when the principles of *agon* and *alea* displace those of *simulation* and *vertigo* as the basis of social organisation. This ensures the primacy of *equality* in social life, for in their different ways, both stress the equality of the contestants under the rules.

The broad scope of Caillois' argument situates play at the centre of human culture, and, despite its obvious evolutionism, provides a formal definition of the principles, and outlines the importance of, games of chance in modern society. It suffers however, as Downes et al. point out, from a failure to convey the *meanings* as distinct from the formal essences of different types of game: 'He analyses games in terms of their formal properties with great assurance, but we are left wondering why people really play them' (Downes et al. 1976, p14). For illumination, the authors turn (somewhat optimistically) to Goffman whose long essay on risk taking - *Where the Action Is* - has made a not wholly justified impact on the literature on gambling. Goffman does however, sit (albeit uneasily) within the tradition that recognises the centrality of play in human life: his unacknowledged debt to writers like Huizinga and Caillois is apparent in his description of the creation and realisation of character in risky - and especially gambling - situations. The 'action' of the title refers to 'activities that are consequential, problematic and undertaken for what is felt to be their own sake' (Goffman 1969b, p136). In modern life, such activities are 'sharply curtailed' (Goffman 1969b, p143), (rather like Caillois's *simulation* and *vertigo* in modern society), so that opportunities to display bravery, heroism and character have to be deliberately sought out in separate spheres, such as games of chance. The 'maintenance of the self' in such situations displays evidence of character: courage, gameness, integrity, gallantry and composure emerge in stressful or risky occasions, and the individual becomes more fully human for them. As Goffman puts it 'These naked little spasms of the self occur at the end of the world, but there at the end is action and character' (Goffman 1969b, p206).

Goffman's subsequent attempt to document the inner life of the gambler falls prey to the shortcomings of an elaborate exegetical gloss: in the description of the temporal sequence of play, characterised by what he calls 'squaring-off', determination, disclosure and settlement phases (Goffman 1969b, p111-113), the modesty of his observation is masked by the gratuitous complexity of the language in which it is expressed.
In the second - and dominant - of the two traditions outlined earlier, gambling is perceived as essentially problematic. Although the terms of the invective directed against it have changed, the persistence of the condemnation of gambling has continued more or less throughout history. While Plato was writing of man as 'God's plaything', Aristotle could see nothing but idleness in the pursuit of games, and particularly games of chance,condemning those who played them as 'robbers and thieves' (in Ashton 1898, p10).

Throughout the middle ages, prohibition of gambling on account of its unproductive nature and disorderly effects on the population was widespread, although games of chance were not specifically regarded as sinful. The Catholic church never expressly forbade gambling per se and, despite its regulation of the activity, always allowed it at Christmas. The statutes of the middle ages were rather directed against a pastime that diverted efforts from activities more important to warfare - such as archery - and that dissipated the energies of labourers and the wealth of the aristocracy. It was not until the Reformation that a strong moral stance against gaming was adopted by the Church, and not until the emergence of the bourgeoisie that a group with a real antipathy towards the activity really appeared. Together, these groups fronted a massive assault on games of chance, the residue of which is still visible today. A stream of invective poured from the pulpits of the Reformed Church, damning gamblers for their idleness, greed, blasphemy and superstition.

Games of chance forced God's intervention to 'decide the lot' on trivial matters, flouting the values of the Protestant by divorcing the creation of wealth from the efforts of labour, and reducing it instead to the vicissitudes of chance.

In the Enlightenment climate of moderation and reason, the idea of the sinful nature of play was replaced with an emphasis on its embodiment of irrationality. At the end of the seventeenth century and throughout the eighteenth, the mania associated with games of chance appeared as the epitome of irrationality, and, if the mark of humanity was reason, what was left of man once he voluntarily forfeit his rationality? In this formulation, the gambler was not a sinner, but nor was he altogether human either.

By the nineteenth century the essential irrationality of the gambler was irrelevant so long as he possessed that other attribute of humanity - the ability to work. The industrialising west needed labour power; time became a commodity only slightly less precious than money,
and gambling squandered them both. The problems of the organisation of labour were encapsulated in the figure of the (working class) gambler - an individual who refused to acknowledge the importance of time, money or disciplined labour. The imperative of the Protestant ethic now became institutionalised in laws forbidding games of chance along with other 'vices' such as alcoholism and prostitution: the gambler became a criminal.

This historical overview serves to highlight approaches to gambling which, far from fading into obscurity as their era passes, continue to be reflected in twentieth century perspectives. Despite its own unique response to what it perceives as 'the problem', a complex of historical continuities can be traced in what can be called the 'therapeutic' tradition of contemporary gambling literature. Conservative observers no longer seek to punish and outlaw what they regard as immoral, unreasonable or criminal behaviour. Instead, their more liberal descendants attempt to understand what is regarded as a manifestation of illness which, crucially, can be cured. The moralistic tone of previous centuries has been replaced by a clinical one: gambling is still problematic, but in a medical rather than an ethical sense. In the literature that is reviewed next, gambling is treated broadly as a sickness or defect; in psychology, in the individual; and sociology, in the social order itself.

For the first half of the twentieth century, the framework for discussion was set by Freud's short essay on *Dostoevsky and Parricide*, in which the gambler as a compulsive neurotic was born. Freud traced the descent of the gambling addiction from the primal addiction to masturbation: 'the "vice" of masturbation is replaced by the mania for gambling, and the emphasis laid upon the passionate activity of the hands betrays this derivation' (Freud 1950, p241). Further, the guilt that was experienced afterwards was related to the Oedipus complex of the players' youth: the desire to kill the father and possess the mother (Freud 1950, p229). At this point, Freud referred specifically to Dostoevsky's ambivalent relations with his father and his subsequent 'mania' for gambling: 'if the father was hard, violent and cruel' he writes, 'the super-ego takes over these attributes from him' (Freud 1950, p231). The super-ego thus becomes sadistic, the ego masochistic, and 'A great need for punishment develops in the ego, which in part offers itself as a victim to fate, and in part finds satisfaction in ill-treatment by the super-ego' (Freud 1950, p231). The guilt
Dostoevsky felt for his hatred of his father was assuaged in gambling, where in exposing himself to fate he symbolically confronted his father, so that ‘for him, gambling was another method of self-punishment’ (Freud 1950, p238).

This analysis initiated the description of the gambler in the psychoanalytic tradition as a masochist, who, because of various unresolved conflicts in his past, was compelled to repeat an endless cycle of punishment. Bergler developed the theme of psychic masochism, describing the gambler as ‘a neurotic with an unconscious wish to lose’ (Bergler 1970, vii). Traces of the Puritan abhorrence of gambling are manifest in Bergler's research: his book is an exercise in moral contempt, an outburst of disapproval thinly disguised by medical imperatives, Gambling, he tells us, is a ‘dangerous neurosis’, and the gambler, an ‘objectively sick’ individual, who, having failed to renounce the efficacy of the pleasure principle, lives in a ‘fiction of omnipotence’ (Bergler 1970, p16). Gambling activates the megalomania and grandiosity of childhood: thus the gambler is convinced he will win. However, his aggression towards the reality principle is paid for by feelings of guilt and from this is derived the need for self-punishment. Losing is such a punishment, and so, to maintain his physical equilibrium, the gambler must play to win, but always lose. Continued by writers such as Greenson and Lindner, the psychoanalytic tradition persistently portrayed the gambler as an unbalanced, disturbed individual: ‘an obsessional neurotic’ plagued by ‘an illness of the mind’ (Lindner 1974, p237) and victim to ‘the severely regressive character of disease’ of gambling (Greenson 1974, p214).

By the late 1970s cracks began to appear in the hegemony of the psychoanalytic approach and new perspectives became prominent. Despite changes in terminology, however, the gambler remained a sick individual, and research became increasingly oriented towards ‘therapeutic’ models which abounded in programmes and policies that might ‘cure’ him. In 1980, compulsive gambling was formally accepted as a mental disorder by the American Psychiatric Association, and as a result was included in the 3rd edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM III) under the new title ‘pathological gambling’. The move from ‘compulsive’ to ‘pathological’ shifted attention from the activities that the individual became compulsive about, to the physiological presence of a disease (Walker 1992, p172). In this climate, a range of theoretical perspectives flourished.
Not all agreed with the label 'pathological', but the overwhelming majority of academic studies considered the gambler aberrant in some way, and sought to explain why anyone would voluntarily gamble to 'excess': that notion of something to one side of a balanced ideal bequeathed to us from the Enlightenment. Of these, the *sociocognitive* model attempted to explain the perseverance of gambling behaviour in terms of the 'irrational cognitions' of the gambler. Such irrational cognitions include the 'illusion of control' (Langer 1975, Gadboury and Ladouceur 1988, Griffiths 1990a, 1994c, 1995), the 'belief in luck' (Wagenaar 1988, Li and Smith 1974, Oldman 1974), the 'biased evaluation of outcomes' (Gilovich, 1983, Gilovich and Douglas 1986) and the notion of 'near misses' (Kahneman and Tversky 1982). These models present an image of the gambler as a hopelessly confused individual, bewildered in an environment of chance and prey to the vicissitudes of wildly 'irrational' impulses. The level of analysis of these studies is at times breathtakingly shallow. In the paper that passed the term 'irrational thinking' into common analytical parlance, Gadboury and Ladoceur present us with the banal conclusion that, in an environment governed by chance: 'All things considered, it is hardly surprising that gamblers show signs of irrationality' (Gadboury and Ladoceur 1988).

*Arousal* theories posit excitement as the motivation for continued play and frequently attempt to measure 'scientifically' such excitement to support their claims. It has been suggested that such arousal may be automatic and/or cortical (Brown, 1987a), or opioid mediated (Pratt et al. 1982), and reversal theory's telic and paratelic states put forward to explain it (Anderson and Brown 1987). Ultimately, arousal theories are reducible to the search for a physiological dimension of addiction, and to this end, gamblers' brainwaves have been measured (and found wanting), in studies of EEG activation and hemispheric dysregulation (Carlton and Manowitzl 1987, Goldstein and Carlton 1988). The search for a 'gambling gene' has become respectable in such study, with Comings et al (1994) reporting that variants on the DRO2 gene are found in certain addictions, including alcoholism and pathological gambling.

Before going on to review the therapeutic sociological literature, some methodological problems with these models should be noted. Firstly, many researchers conduct experiments using non-gamblers in non-gambling situations. Research carried out in
laboratories and clinical settings loses the 'ecological validity' of genuine locations (Anderson and Brown 1984), and the use of students by some academics (e.g. Ladouceur 1995), in the opinion of this writer, seriously compromises the research. Secondly, the criteria for pathology tends to be defined partly in terms of the percentage of gambling losses to income. The problem with such a definition is simply that some gamblers have more money than others and can literally buy their way out of the pathological label. As Dickerson points out there are only regular gamblers, some of whom encounter financial difficulties. The status of pathology is only a function of their seeking help (Dickerson 1985).

Despite - or perhaps because - of its unproductive nature, sociological accounts of gambling invariably attempt to endow it with some kind of utilitarian function. These accounts have never really recovered from Edward Devereaux's seminal study, Gambling and the Social Structure; a functionalist, quasi-Durkheimian model of social dysfunction which rationalised gambling in terms of its latent social function. According to Devereaux, the tensions and conflicts in the capitalist economic system produce ambivalent feelings of anxiety and hostility in the individual (Devereaux 1949, p947). Entire societies can be 'sick': 'The conflicting and potentially disruptive psychological forces generated by this peculiar economic system thus represent a serious threat to the equilibrium of the personality, and, by implication, of society as well' (Devereaux 1949, p947). Society tends to select psychological solutions to this conflict and institutionalise them, thereby resolving or at least accommodating them. These 'solutions' function as 'shock absorbers' or 'safety valves' which can channel dangerous effects into the service of the dominant system, or discharge them harmlessly 'either vicariously or overtly in carefully segregated, controlled and disguised contexts' (Devereaux 1949, p949). Gambling is one such institutionalised solution: 'a particularly convenient mechanism in which the psychological consequences of economic frustration, strain, conflict and ambivalence may be worked out without upsetting the social order' (Devereaux 1949, p955).

This theme of displacement and catharsis ran as a leitmotif through the mainly American sociology of gambling of the 1950's, '60's and '70's with the addition of a 'deprivation' dimension in studies by Zola, Herman, Bloch and Newman. Here, gambling emerged as a
social safety valve for frustrated (mainly working class) citizens, providing a context in which the deprivations of the outside world could be compensated for by symbolic activity. It is in those terms that Newman described gambling as 'a structurally positive-functional component of the social system' (Newman 1972, p230). For those denied access to socially legitimate modes of the pursuit of wealth, gambling 'provides the perfect shadow system, within which the retreat from the external failure situation is achieved and where, in a circumscribed and regulated setting, a "miniature version" of the external value system can effectively be... acted out and can be made... to serve as a sublimation of the "real thing"' (Newman 1972, p160).

In all these studies, gambling serves as a compensation for a social deficit. In Zola, games of chance 'can help deny [the] futility' of lives over which the working class have no control, and can also act as 'a way of harnessing or channelling their otherwise destructive frustrations' (Zola 1967, p31). According to Herman, horse betting 'fills a decision-making void' (Herman 1967, p102), while for Bloch it is 'an escape from routine and boredom' (Bloch 1951, p217). Functionalism and deprivation models are combined in Tec to form a kind of functional-deprivation hybrid. She writes that 'instead of turning against the original source of their deprivations and unfulfilled aspirations, bettors are relieved through gambling of some of their frustrations and hence are less likely to attack the existing class structure' (Tec 1967, p103).

In the idealised working class communities where these compensatory games of chance go on, the surrounding society is generally portrayed as dysfunctional. In these models, the only motivation for play can be frustration, the only reward, release.

Of the two traditions outlined earlier, it is this 'pathological' one that is dominant in contemporary gambling literature, and so it is within the ideology of sickness and dysfunction that the terms of reference and parameters of discussion are set. In such a climate, we can hear distinct echoes of puritanical and rational disapproval: in the proselytising zeal of writers trying to 'cure' gamblers, we can see the figure of the Puritan damning them from the pulpit. The focus of this tradition is concentrated solely on a
minority of gamblers\textsuperscript{1} to the exclusion of all others. Such a narrow focus, intentionally or otherwise, tends gradually to obscure the majority of the gambling population from view. With this loss of perspective, the problem area inevitably assumes massive proportions: there is no 'healthy' state with which to compare the 'diseased' one. This begs the question whether such ‘pathological’ researchers believe a normal gambling habit that is not a manifestation of addiction or a compensation for a deprived lifestyle exists at all. One gets the impression that for them, the only ‘healthy’ gambling state is one which is never played!

It is with the neglected majority that this thesis is concerned, and as such it is situated firmly in the former of our two traditions - ‘the tradition of license’ - in which Plato first condoned play as the best part of human nature. Assuming the fundamentally non-problematic nature of the activity, it will attempt to situate the modern experience of gambling in an appropriate philosophical-historical framework. It will present a broad picture of gambling as a ubiquitous feature of human society, and also describe it as a ‘thing-in-itself’ with meaning for the player. Against the trend towards increasing specialisation in the social sciences, this study will offer a more eclectic approach, intended to transcend the narrow preoccupations of individual authors. In order to do this, empirical research, including participant observation and informal interviews with gamblers in Glasgow and Las Vegas, has been incorporated into a diverse theoretical framework which combines a formal historical survey of gambling with a phenomenological inquiry into the experience of the modern gambler. The five separate Chapters represent five different approaches to the phenomenon, each one chosen for its ability to illuminate a particular facet of gambling so that together they shed light on the varied aspects of a complex and multifarious phenomenon.

The first two Chapters of the thesis consist of a historical survey of the relation of chance and gambling to each other and to the social structure, while Chapters three, four and five deal with the experience of play and the beliefs held by gamblers themselves.

\textsuperscript{1} Estimates range from 0.25\% of the adult population (Dickerson and Hinchy 1988), to 2.8\% (Volberg and Steadman 1988).
Chapter one examines the place and historical contingency of chance in modern thought. After noting its ancient conjunction with notions of fate and divine providence, it traces their separation and the emergence of probability theory in the seventeenth century. It is argued that after a lengthy period in which the operation of chance was denied and condemned as irreligious, this period of increasing secularisation saw its gradual acceptance as a category in its own right. This was the beginning of a movement which culminated in the twentieth century, when ontological status was granted to chance as a constituent part of the universe. This development was coeval with wider socio-economic changes which saw the emergence of a mercantile form of capitalism and culminated in a metaphysical state of ‘ontological insecurity’ in the twentieth century.

The second Chapter goes on to examine the social history of gambling forms: the nature of the games themselves and the various groups who played them. It is found that, typical of their status as microcosms of society, the commercialisation of these games converged with the commercialisation of economic life and with the emergence of probability theory - the science that ‘tamed’ chance.

A formal analysis of the resultant modern gambling economy is the subject of the third Chapter. The economic and social constitution of each of the ‘phenomenological sites’ of the lottery, casino, slot arcade, bingo hall and racetrack is delineated and an attempt made to outline the experience of play unique to each.

The next two Chapters are concerned with what is common to the experience of gambling in all these sites: what it is actually like to play at games of chance. An attempt to penetrate the inner world of the gambler presents obvious methodological difficulties, and was recognised by Huizinga when he declared ‘the fun of playing’ resistant to rational analysis; play being ‘a thing on its own’ (Huizinga 1949, p3). The difficulties encountered in describing what Rudolf Otto refers to as ‘wholly other’ can, however, be at least partially overcome through a phenomenological approach. Whatever the limitations of phenomenology, which are most obvious when it is employed to describe a general mode of perceiving reality, it is ideally suited to describing the inner world of the gambler, for this world is comprised of its own separate universe, set apart from the flux of everyday
existence and bound by its own rules and conventions. In this realm ‘normal’ standards of
behaviour and modes of consciousness do not apply. So, specifically as a method of
penetrating that which is otherwise inaccessible to us, phenomenology can be used as an
effective means of describing the peculiarities of the experience of gambling.

Using this approach, the fourth Chapter looks at the experience of play itself: the various
psychological and affective states the gambler goes through during the course of a game,
as well as his perception of the fundamental categories of time, space, and, in the gambling
world, money. Together, these elements constitute the experience of chaos - the ‘thrill’ of
play.

In the course of this Chapter, and throughout the next, we begin to build up a picture of
gambling as a unique mode of experience, for while at play, the gambler is subject to a
peculiar form of consciousness that prevails under certain conditions of modern life. Using
a similar approach to that of Chapter Four, Chapter Five continues the pursuit of the
gamblers’ inner world, this time focusing on the perception of causation and the existence
of wider belief systems. In describing the creation of meaning in unusual environments,
anthropologists such as Lucien Levy-Bruhl and Marcel Mauss, psychologists such as Jean
Piaget and Sigmund Freud and phenomenologists of religion such as Gerardus van der
Leeuw have been drawn on. Often these writers have been used, not so much for what
they purport to tell us about their own explicit subject matter, but more for what they
inadvertently reveal about the existence of alternate forms of thought and modes of
experiencing the world.

Having established a methodology, the fifth Chapter examines the creation of order and
meaning in the world of play. The subject of this part of the thesis is the dynamic of
gambling: the precarious tension between the maintenance of chaos (the plunge into
chance), and the resolution of that chaos (the creation of order).

Each Chapter, then, is concerned with a different facet of gambling, and each one takes a
different methodological approach to its subject matter, resulting in a composition that at
times may appear to be made up of antithetical elements. This eclecticism however, is
deliberately chosen as the means best suited to reflect the multifarious nature of the phenomenon itself. That certain facets of gambling often stubbornly refuse to sit neatly together is only a theoretical reflection of the true diversity of social life. Any study which attempts to force such diversity into a neat ‘package’ is guilty of a procrustean assault on reality, and can never hope to do justice to the genuine complexity of its subject.

Furthermore, despite their superficial disparity, the Chapters are coherently inter-related. Each one stands on its own but also highlights aspects of the phenomena analysed differently elsewhere. For example, the history of chance finds parallels in the history of gambling, while the historical specificity of certain gambling forms helps explain the modern equivalents of those forms and also highlights continuities in the experience of both.

Note on the text

Where possible, information taken from fieldwork and quotations taken from interviews have been designated as being from ‘punters’ in order to distinguish them from literature-based material taken from ‘gamblers’ or ‘players’.

With the exception of the section on bingo, a predominantly female site of gambling, I have used the third person pronouns ‘he’, ‘him’ and ‘his’ throughout the text to avoid stylistic clumsiness. This is not intended to imply that gambling is a male preserve however, and is a decision forced on me by the lack of a suitable neutral alternative in English.
CHAPTER ONE: THE IDEA OF CHANCE

THE ORIGINS OF CHANCE

The Origins of Chance
Chance and Divination
Chance, Fate and Necessity

CHANCE AND DETERMINISM

An Absent Family of Ideas
An Ancient Family of Ideas
Reasons for the Absent Family
The Renaissance

THE BIRTH OF PROBABILITY

Pascal
‘Chance is Nothing’
Chance in the Age of Reason
British Chance
Caveat: The Paradox of Probability

CHANCE AND MODERNITY

The Birth of the Average
The Mutation of Determinism
Chance is First
Chance as Explanation
Risk
THE IDEA OF CHANCE

In the twentieth century, chance is understood as a constituent part of the world, codified in the rules of probability theory. However, this theoretical perspective is a recent development, and represents the apogee of a long historical process that culminated in the separation of the unexplained event from notions of divine providence and fate.

In its symbiotic relation with fate and/or divine providence, chance was first interpreted as a sign of the gods; the random event was regarded as a hierophany of divine will. Until the notion of chance was disengaged from these beliefs, its existence was persistently obscured by man's more immediate concern with his relation to the transcendent 'beyond'.

In the seventeenth century, the separation finally began. During this period of mercantile capitalism, a system of enumeration and a secular appreciation of risk flourished, creating both new ways of looking at the world and new ways of expressing such viewpoints. In a climate favourable to the scientific calculation of probability, chance came to indicate, not the favour of the gods, but an absence of knowledge. From being a sacred, it now became an epistemological category. However, as we shall see, it was a long time even after it had emerged as a distinct secular category before it finally shed the last vestiges of its earlier religious meaning, and it was only when it was thoroughly secularised into a 'meaningless' determinism in the nineteenth century that a path was cleared for its emergence as a genuine part of the world. By the twentieth century, chance had been stripped of its sacred and metaphysical attributes to become a secular tool of scientific explanation, so that what were once regarded as divine laws came to be understood as statistical probabilities. For the first time, chance became radically autonomous: an ontological category in its own right.
This process can be regarded as a secularisation of chance, and it is this, as well as its implications for the removal of metaphysical meaning from the world, that are the subject of this Chapter.

THE ORIGINS OF CHANCE

The prevalence of chance in creation myths is indicative of its essential contingency, in an anthropomorphic universe, on the idea of the sacred; on notions of the will of the gods and of divine providence.

In these myths, the world exists in a primal state of chaos, from the Greek ὅαος: 'the first state of the universe, a vast gulf or chasm, the nether abyss, empty space' (The Oxford English Dictionary 1961 vol 2, p273). In this time of formlessness and darkness: 'the sun grows dark, the earth is swallowed up by the sea, fire destroys even the stars' (Ekeland 1993, p1). This is the state of 'primal nature', 'full of disorder' that is imagined by Plato in the Statesman. In it, God feared that 'all might be dissolved in the storm and disappear in an infinite chaos', whereupon he 'brought back the elements which had fallen into dissolution and disorder', so creating order and the world as we know it (Plato 1987, p 588-9).

The image that continually reappears in these world-creating transformations is one of gambling. In Greek mythology, Poseidon, Zeus and Hades divided the world between them by throwing dice. The outcome of the throw was not mere chance, for, the lots and the vessel they were shaken in 'were either credited with a will of their own... or thought to be controlled by higher powers who thus revealed their will' (Onians 1988, p393). According to legend, possession of the land of Norway was determined by a dicing match between two Kings, and backed by the hand of God (Ekeland 1993, p3). The Ases of Scandinavian mythology, like the Hindu Siva, also determined the fate of mankind by throwing dice. When the world was ordained, the gods assembled for dicing on a golden playing board and, in this tale, when it is reborn, the rejuvenated Ases will be the
instigators of the new order, dicing once again on their mythic board (Huizinga 1949, p57).

We see, in these myths, an image of chance as a thing intimately connected with the falling of dice or lots, an image which befits its derivation from the Latin cadere, to fall. The noun cadentia means ‘the falling out or happening of events, the way in which things fall out: fortune, case’ (*The Oxford English Dictionary* 1961 vol 3, p263). The word ‘chance’ then, literally refers to that which falls to us, a sense which is still evident today when we speak of good or bad fortune befalling an individual.

**Chance and Divination**

From the symbiotic relation of chance to notions of fate and the will of the gods derives the efficacy of divination as a means of communicating with the transcendent ‘beyond’. Regarded as meaningless *in itself*, in divination ritual, chance operates as a cypher for the expression of the will of the gods, and it is in this crucial relationship that the earliest conceptions of chance are to be understood. Because *alea* signifies and reveals the favour of destiny (Caillois 1962, p17), in divination, chance becomes a vehicle for sacred meaning. The word itself, from the Latin *divinatio*, clearly highlights the derivation of the activity from the divine. Flaceliere emphasises the relation, writing that ‘it is also an essential part of religion, for the etymology of the word makes it applicable to all aspects of religion’ (Flaceliere 1965, p2). In divination, the expressive function of the chance event was deliberately courted so that the gods might intercede and determine an outcome, which was then interpreted as a divine pronouncement. In this way, divination, consisted of the ‘attempt to elicit from some higher power or supernatural being the answers to questions beyond the range of ordinary human understanding’ (Loewe and Blacker 1981, p1). Above all, it assumed belief in ‘a providence that is concerned with the lot of humanity and is prepared to help man by revealing what would otherwise be unknown to them’ (Flaceliere 1965, p2).

As an expression of the will of the gods, divination indicated the future course of events as well as the approval or disapproval of destiny with regard to human actions. Before being
undertaken all enterprises of importance were referred to a diviner or prophet, who would establish whether or not they would succeed, and if so, which times were most propitious for such success.

The practise was universal and pervasive, occurring in societies as diverse as monotheistic Israel and polytheistic Athens. This ubiquity was recognised by Cicero in his De Divinatoire: 'I am aware of no people, however refined and learned or however savage and ignorant, which does not think that signs are given of future events, and that certain persons can recognise those signs and foretell events before they occur' (Cicero1971, p223).

Paralleling its widespread occurrence was a broad range of divinatory techniques, of which two fundamental types existed. These corresponded to Plato's distinction between inductive or artificial divination, and intuitive or natural divination. The former was based on the study of natural phenomena, such as clouds and birds, which were regarded as signs and omens, while the latter consisted of a kind of madness, a prophetic ecstasy of divine inspiration. For Plato, this latter was the superior form of divination, for it was directly inspired by the gods without the need of any perceptible intermediary.

The variety of natural phenomena which could be interpreted as divine signs was almost unlimited, ranging from the flight of birds, regarded by Euripidis as the 'messengers of the gods', to the formation of clouds, known by the Hindus as 'castles in the air'. The unconscious or involuntary expression of a word could also indicate a supernatural meaning. For the hearer, such an utterance would be a prophetic sign, known as a cledon to the Greeks, and was all the more reliable when uttered 'by those least capable of calculating their effect', for example, children (Flaceliere 1965, p6). The appearance of unexpected phenomena were regarded as omens, and as such were both cause and sign of the event they foretold. As Flaceliere explains '...the marvellous omen was not merely a sign of what was going to happen, essentially it was its cause; the omen and its fulfilments were fatally connected by a bond that could not be dissolved by prayer or any other religious rite' (Flaceliere 1965, p6).

1 See Plato's Phaedrus (1987, p123) and Ion (1987, p144) for his views on divination and divine madness
The patterns into which apparently uncontrolled phenomena fell could also be interpreted for hidden significance: divination by an animal's liver was believed to be a particularly efficacious ritual by the ancient Babylonians, while the Germans, who, Tacitus tells us, had 'the highest regard' for lots and omens, utilised strips of bark and even horses in their divination rituals (Tacitus 1982, p109). Meanwhile, in China, the cracks in turtle shells were interpreted as manifestations of 'eternal, universal truths that transcend the ephemeral attainments or mundane purposes of the human intellect' (Loewe and Blacker 1981, p38).

In every instance of inductive divination, chance events are possessed of a sacred significance and nowhere is this more evident than in the practise of cleromancy - the drawing or casting of lots. As a mechanism for the articulation of the Divine Voice, the lot was the earliest and most basic application of the random event for divinatory purposes. A simple action, such as the tossing of sticks, arrows or animal bones would be carried out by a suitably qualified individual - a priest or Shaman - and a question addressed to a deity or fate. The formation of the falling objects would then be interpreted as the 'answer' of the god, for the disposal of the lot was always recognised as divine intervention.

Cleromancy was widespread throughout the ancient world and, despite the strident criticism that it would later direct at all blasphemous, 'pagan' practices as lot-casting, Christianity was not initially opposed to the activity. References to it appear regularly throughout the New Testament; for example, in Numbers 26:55 the allocation of the lands of Canaan among the Israelites is decided by lot: 'And the Lord spoke unto Moses saying... the land shall be divided by lot... According to the lot shall the possession thereof be divided by many and few'. The validity of the lot is explained in Proverbs 16:33: 'The lot is cast into the lap, but the whole disposing thereof is of the Lord', indicating that divination is never a resort to meaningless chance, but an appeal directed at transcendental powers, which, in the Judeao-Christian tradition, happens to be God.

References to such practices are also found in I Chronicles 24-26, when David distributed offices among the Levite princes by lot. Mathias was selected as an apostle in the same fashion in Acts 1:24-26, while in Leviticus 16:8, Aaron cast lots on two goats to decide which one would be for God and which a scapegoat.
The highest form of divination however, at least for the Greeks, was the *intuitive* form, whereby specially gifted individuals such as seers and mediums afforded a direct link with the supernatural world. Their inspiration, or divine madness - *mantike* - was a result of the literal presence of the deity in their souls. When possessed in this way, they would receive prophetic revelation directly from heaven and in this state, were able to transmit the utterances of the oracle, as did the Greek Pythia and the Japanese miko, or 'see' the answer to a question, as did those Tibetan prophets possessing the faculty of Tra (Loewe and Blacker 1981, p1).

At the beginning of *De Divinatoire*, Cicero describes the ubiquity of what he calls this 'human faculty of divination': 'There is an ancient belief... that divination of some kind exists among men; this the Greeks call *mantike*, that is the foresight and knowledge of future events ... [by which means] men may approach very near to the power of gods ... We Romans have excelled [the Greeks] in giving to this most extraordinary gift a name, which we have derived from *divi*, a word meaning "gods", whereas, according to Plato's interpretation, they have derived it from *furor*, a word meaning "frenzy"' (Cicero 1971, p223). Cicero's denigration of the Greek term was a little presumptuous, however, for inductive divination contained elements of both frenzy and divinity. Plato had regarded this type of divination as synonymous with madness, but it was a *divine* form of madness, and so 'a noble thing', and in the *Phaedrus* is described as being superior to a sane mind, 'for the one is only of human, but the other of divine origin' (Plato 1987, p123). The origin of the insight bestowed by prophetic madness is God himself. In *Ion*, Plato tells us that God 'takes away the minds of poets and diviners and holy prophets in order that we who hear them may know them to be speaking not of themselves who utter these words in a state of unconsciousness, but that God himself is the speaker, and that through them he is conversing with us' (Plato 1987, p144).

Dreams played an important role in the prophesy of inspired individuals, for when the body relaxed in sleep, 'the reasoning portion of the soul was languid and inert' (Cicero 1971, p291), and so was open to communication with the world of the supernatural. Any involuntary word, thought or act could be regarded as a supernatural sign, 'and what could be more involuntary, more unconscious, than dreams, which occur when both will and
consciousness are overcome by sleep?' (Flaceliere 1965, p21). Oneiromancy - the interpretation of dreams - thus found widespread acceptance as a means of divination. Plato suggested the stimulation of the part of the soul responsible for wisdom in order to learn the truth from dreams, while the followers of Pythagoras attempted to calm their minds before sleep and so avoid demonic visitations. Consequently, both the Platonists and the Pythagoreans prepared themselves for the occurrence of prophetic dreams through ascetic practises before sleep.

The state of ecstatic possession was a prerequisite of divination ritual, and the ability to enter it was one of the diviner's most sacred qualities. Before any divination could take place, the diviner first had to establish contact with the world of unseen powers. 'Thus he enters into the realm of what is 'sacred'. Then and only then, may he put the question which is occupying his mind and hope for an answer' (Levy-Bruhl 1966, p196). In order to enter the realm of the sacred in this way, the occurrence of the ritual was strictly proscribed by rules determining when and where it would be held. An area was usually marked out: 'In the absence of any other locus, the magician sketches out a magic circle or square, a templum, around himself and it is there that he performs his task' (Hubert and Mauss, in Cryer 1994, p56).

To further assist his passage into the sacred, the diviner would attempt to enter an altered state of consciousness. Adorning himself with elaborate robes, bells and feathers, he would dance to a rhythm of gongs and the chanting of singers, whirling around in a frenzied state of semi-consciousness, into a condition 'bordering on dissociation'. Such preparation demonstrates that 'magical rites take place in a differentiated magical milieu' which is marked off and circumscribed from the 'normal' outside world (Mauss 1972, p49). A distinct demarcation takes place, both in the physical space for the ritual, and in the consciousness of the diviner, for during such ceremonies, diviners experience trances, hysteria, cataleptic fits and ecstasy, which indicate that they have left their normal consciousness behind, become another person and entered the realm of the divine. In this state of temporary madness, Mauss observes, the diviner becomes one of the elect and

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3 Evans-Pritchard (1991, p72-88) provides a full description of the furious and grotesque ritual that in some societies acts as a prerequisite for communication with the supernatural.
communicates with sacred powers. The Azande witchdoctor talks 'as though in a trance, his speech laborious and disconnected', while the Esquimaux angekok lapses into 'a state of hypnotic slumber or cataleptic or ecstatic trance', experiencing a 'dream which has been induced - a privileged and infallible vision' (Levy-Bruhl 1966, p216)

Divination played an important role in ancient society and was used primarily as a means of making - or at least consolidating - decisions. van der Leeuw draws attention to the important (but often overlooked) point that in consulting the gods, the enquirer wants to know not necessarily what will happen next, but whether what he wants to happen will occur. He thus repeats his questioning until he gets the desired result (van der Leeuw 1938, p379). Levy-Bruhl also records that when an unfavourable omen appears, primitives try to solicit a favourable one, and 'when at length the good omen desired does present itself, it nullifies those which have gone before' (Levy-Bruhl 1966, p142).

Here we see an essentially practical, even irreverent orientation, towards the still very serious matter of man's relation with destiny. It is an attitude recognised by Flaceliere in the 'genuine wisdom' and 'credulity' shown by the Greeks towards their divinatory practices. He points to the strand of scepticism which ridiculed the efficacy of divination and which existed within a society which, while considered the womb of enlightenment and reason, still had widespread recourse to such practices. Such ambiguity is typical of human life, for, whilst propitiating the gods on the one hand, individuals were under no obligation to take their advice, and in fact often used them as an excuse if a suggested course of action went wrong!

Within the seriousness of divine ritual then, there was also room for some frivolity and equivocation, an attitude which must be borne in mind throughout our further discussion of divination, and especially in the next section when we consider the development of games within religious rituals.

Social life is seldom demarcated into clear cut areas, and this is no bad thing, for it is out of these ambiguous crevices that the most fertile insights can be found. The Greek attitude to divination is typical of this duality. Flaceliere quotes Alain, who writes 'These twists
and turns, this subtle interplay of naivety and discretion, of reason and absurdity, are much closer to human reality than the prophecies we read about in books, clearly expressed, abstract, inflexible and humourless. There was very great maturity, genuine wisdom, in this Greek credulity, which always and everywhere, was accompanied by its shadow, doubt' (Alain, in Flaceliere 1965, p87).

**Divination and Gambling**

The concurrence between the formal properties of divinatory ritual and gambling behaviour has been commented on by many authors (Levy-Bruhl, Caillois, Cohen, Barrow, David, Tylor) and will be examined further in Chapter Two.

Many writers draw attention to the similarity of the implements and ritual in both practices. For example, Caillois cites the use of cards and dice (*astragali*) by gamblers in games of chance and prophets in the prediction of the future as one of the most 'conspicuous examples' of this association (Caillois 1962, p48). In a similar vein, Levy-Bruhl describes the use of the *astragali* in the Ba-Nkouma's prayers to their ancestors: 'the tribe make sacrifices and mutter incantations naming the god to whom the offering must be addressed, according to the order given by the *astragali*...’ (Levy-Bruhl 1966, p88). However, we find this concurrence most often employed in an evolutionary argument for the development of one form out of another. According to Tylor, the gambling of primitive man probably originated in the practice of divination, since the same devices were used in both activities (Tylor 1913, 78); while David holds that the wager, and hence gambling, grew out of the drawing of lots and interrogation of oracles 'which have their roots deep in religious rituals' (David 1969, p7). Far from presenting itself as evidence for evolutionary progression, it can be argued that this concurrence supports the far more complex and subtle conflation of game and ritual which exist in the same instance as part of the irreverent attitude discussed by Flaceliere. The frivolity and equivocation that existed alongside serious divination provides a space in which other, less serious states of mind could grow. The 'subtle interplay' of 'reason and absurdity' that characterises all human endeavour is manifest in the intrusion of the play spirit into serious matters of ritual, and means that gambling and divination were never entirely separate. It is not a case
of one 'growing out' of the other, as the evolutionists have suggested, for the two were conjoined from the very start, each part of the same outlook. There existed a playful aspect to divination, and a sacred aspect to gambling. The latter did not simply emerge, as a secularised version, out of the former, and in any case, the prophetic connotations of gambling have never been completely extinguished, either formally, for example in fortune-telling with cards, or in the mind of the gambler whose beliefs will be studied in Chapter Five.

The process of institutionalisation which encouraged the separation of recreational play and sacred ritual, and gave us our modern forms of gambling, will be examined in Chapter Two

**Chance, Fate and Necessity**

Nowhere in ancient or primitive cosmology do we find systematic consideration of chance as a phenomenon in its own right. Instead, its occurrence is consistently conflated with notions of destiny and the will of the gods.

Roberts et al. state categorically that 'explicit theories of chance do not appear in primitive cultures' (Roberts et al. 1959, p602), where the unexpected instead has a meaningful place as part of an anthropomorphic universe of spirits and powers. Levy-Bruhl describes this outlook: 'Every accident is a revelation, for there is nothing fortuitous and the slightest departure from ordinary occurrence shows that occult forces are at work' (Levy-Bruhl 1966, p123).

It is in classical Greek philosophy that we first find anything approximating a consideration of chance, but here, as in primitive thought, the approach is never entirely divorced from religious ideas of the existence of the gods. From Socrates and Plato, through to the Stoics and Boethius, the existence of chance is consistently subsumed under more important questions of divine providence, determinism and the role of free will.
Nussbaum describes the sense of exposure to fortune that existed in the Greek mind as ‘the fragility of goodness’: the contingency of happiness and virtue on the forces of luck and destiny. This perception of luck - tuche - was of a thing which just happened to an individual, without being the result of his own agency. It did not, however, imply that events were random or uncaused; ‘its basic meaning is ‘what just happens'; it is the element of human existence that humans do not control’ (Nussbaum 1986, p89).

The notion of chance - tyche - is intimately connected to this idea of luck, and also to the notion of timeliness - kairos. An individual is lucky because circumstances make it so. ‘In other words’, Pfefferkorn explains, ‘it is the right time and place for whatever happens to happen. It is the proper opportunity, the favourable or fit time for an event... to occur’. This 'active time' is known as kairos, and is part of the operation of chance. ‘For in the concept of tyche the temper of the moment is an active ingredient, and time is understood as a dynamic power’ (Pfefferkorn 1986, p39). Far from denoting contingency, both notions refer to the fatedness of human life. Kairos, as the 'qualitative nature of time in general', serves as the foundation for the different aspects of destiny - moiri, tyche, potmos or daimon. Pfefferkorn emphasises that ‘never is tyche, in this sense, simply blind chance. As navigator she is handmaiden to the telos and determines the outcome of all conflicts in agreement with the divine will and plan’ (Pfefferkorn 1986, p50). Hence, the fatedness of divine providence can be seen to underlie all things, and determine the roles of tyche and kairos.

In the Laws Plato articulates this notion of God as the final telos, to which all so-called 'contingency' is subservient: ‘One might be moved to say... that no law is ever made by a man, and that human history is all an affair of chance... and yet there is something else which also may also be said with no less plausibility... That God is all, while chance and circumstance, under God, set the whole course of life for us...’(Plato 1969, p1300).

Greek philosophy resonates with the notions of fate and necessity, as Cicero puts it, ‘applying forcibly to all things’ (Cicero 1991, p91). In his learned work, The Origins of European Thought, Onians describes how this notion of fate is surrounded by the metaphors for spinning and weaving, for in the classical world, fate was conceived as a
bond, spun by the gods on the 'spindle of necessity', encircling the world and binding every individual to a preordained destiny. Its subtle pressure often went unnoticed on the individuals it effected, for, as the author writes: 'Ever so invisible to men are the mystic bonds of fate, the threads divinely spun' (Onians 1988, p337).

The binding metaphor is apparent in Stoic philosophy; that school which, of all the Greeks, was perhaps the most deterministic, and which did most to encourage the belief in divination. Their 'chief philosopher' - Chrysippus - defined fate as a 'certain everlasting and unalterable sequence and chaining of things, involving and entwining itself with itself through the external laws of sequence from which it is fitted and bound together' (Chrysippus, in Cicero 1991, p 97). For the Stoics, the contents of the universe were united by 'universal cosmic sympathy', so that every fact was connected with the totality of facts, past, present and future. 'The function of providence in this scheme was to reveal these relationships, these tensions connecting threads that ordinary reason was powerless to grasp' (Flaceliere 1965, p79). The Stoics reasoned that since fate governs the universe, and the gods know everything, then the latter necessarily reveal the future which can therefore be revealed by divination. Their belief in divine foreknowledge was thus an argument for universal determinism, and within this strict determinism the existence of the gods was synonymous with the efficacy of divination. Cicero thus described how 'it is appropriate for the Stoics, who say that all things come about by fate, to accept oracles... and the other things which are derived from divination' (Cicero 1991, p81).

There was no room for chance in this radical determinism, for in a world in which 'nothing happens that [is] not necessary' (Cicero 1991, p 69), the very conception of it as an independent entity could have little real meaning.

In Aristotle however, we do find a specific consideration of chance as part of the doctrine of final causes. In a teleological system in which nature exhibits purposeful processes, chance for Aristotle is not an absence of causality, but rather an instance of coincidence. In the Physics he distinguishes luck from chance, stating that luck concerns what is achievable by action and so is confined to rational agents, while chance is a broader

4 Fuller examination of this argument can be found in Flaceliere (1965, p79) and Sharples (1991, p25-7)
category, relating to non-rational agents, such as animals and inanimate objects. Here, chance is primarily an absence of purpose; ‘an event happens by chance whenever it is pointless. For the stone did not fall in order to hit someone, it fell then by chance, because it might have fallen, because someone threw it to hit someone’ (Aristotle 1977, p210). For rational agents, chance as well as luck, is a ‘coincidental cause’. It is ‘something contrary to reason. For rational judgement tell us what is always or usually the case, but luck [and chance] is found in events that are neither’ (Aristotle 1977, p209). As an example, he cites a case where A wants to collect a debt from B and one day meets him unexpectedly at a market on the very day when B is collecting subscriptions (Aristotle 1990, p209). This is not chance, but merely a case of the coincidental intersection of two separate causes, which, as Sharples points out, is not incompatible with determinism (Sharples 1983, p5).

As the link between ancient and medieval thought, Boethius attempted to resolve the problem of divine foreknowledge and human freedom. In his Consolation of Philosophy, we see an explication of the harmony of divine providence, as well as an explanation of chance in essentially Aristotelian terms. Once again, there is no room for chance, for all things are linked in a great cosmic design. Thus ‘a certain ordering embraces all things so that what departs from its place in that order falls back into an order... so that in the kingdom of providence, nothing should be permitted to random chance’ (Boethius 1991, p115). What appears as chance is only a manifestation of limited human understanding, for things only appear 'random and confused' when the principle governing their order is not known. However, there is an order, even if it is opaque to our understanding: ‘although you do not know the reason in so great a design, nevertheless do not doubt that all things come about rightly, since a good ruler governs the world’ (Boethius 1991, p103). It is only as an epistemological category, then, that chance can be said to exist, for if it is defined some other way, for example as an outcome produced by random events, without cause, ‘then chance does not exist at all’ and in fact nor can anything exist: ‘the world is, I judge, completely empty. For when God directs all things into an ordered pattern, what place at all can there be left for randomness?’ (Boethius 1991, p125). Having said this, Boethius goes on to give his own Aristotelian example of the appearance of chance as coincidence. A man who digs to cultivate a field but finds gold is not subject to chance, but to ‘unforeseen and unexpected coincidence’ for there are causes of fortuitous gain which are
not dependent on the intentions of the agent. Neither the man who buried the gold nor the one who tilled the field expected the gold to be found; its finding is simply an intersection of causes. Here, chance is described as 'an unexpected outcome, as the result of causes that come together, in these things that are being done for the sake of something'. This coincidence is ultimately explicable in terms of pattern and design. It is 'brought about by that order, advancing by unavoidable connections, which descends from providence as its source and arranges all things in their proper times and places' (Boethius 1991, p129).

In all these philosophers we see a strict determinism which encompasses notions of fate, divine providence, order and cause, and which resonates throughout the classical world, consistently obscuring, or at best marginalising, the study of chance as pure randomness.

These issues were carried over into the middle ages, a period in which, despite the subsumption of philosophy to theology, the heritage of classical thinkers excited 'fervent curiosity' and frequently 'deep respect' (Marenbon 1983, p3). The medieval concept of chance was derived from the Aristotelian notion of an absence of purpose or design, and was profoundly influenced by Boethius for whom chance as an absence of cause simply could not exist. However, monotheistic Christianity added elements of its own, most importantly a Church that railed against all forms of secular knowledge and saw evidence of the hand of God in every earthly phenomenon. In such a climate, the concept of the random event was rejected as pagan. Many Christians sought to explain chance events on earth with reference to notions of fate, astrology or 'some created superpower short of divine providence itself' (James and Weisheipl 1982, p526) and although such fatalism posed problems for the existence of free will, medieval scholastics remained deeply imbued with the idea of the influences of celestial bodies and intelligences on terrestrial phenomena.

St Augustine anticipated the dominant medieval response to chance, explaining that it was the ignorance of man and not the nature of events themselves that caused the latter to appear to occur at random. Attacking Cicero's denial of determinism and hence of divine foreknowledge, Augustine argued that man's true endeavour was to submit himself to the Divine Will and not to question its workings by searching for the exceptional or unusual.
In monotheistic Christianity, chance was insignificant in itself, being viewed instead as an epiphenomenon of a single, all-embracing Divine order. Such order implied 'limitation, restraint, control' as part of God's 'foreknowledge of the order of things' (Kirwan 1989, p100). This order was seen by Augustine as determining all aspects of human action. 'However they behave it cannot fall out otherwise for them than God has determined ... so all effort is abolished, all virtues destroyed, if God's arrangements precede human wills, and under the name of predestination a kind of fated necessity is introduced' (Augustine, in Kirwan 1989, p112). In his discussion of divine foreknowledge, we see in Augustine traces of Boethius' all-seeing, a-temporal divinity. Foreknowledge, to this God, was not strictly foreknowledge at all, but simply an absolute kind of knowledge: 'For what is foreknowledge but knowledge of future things? And what is future to God who spans all times? For if God's knowledge grasps things themselves they are not future to him but present, so that he cannot be said now to have foreknowledge but only knowledge' (Augustine, in Kirwan 1989, p172).

The existence of such an all-powerful deity left no place in the medieval world for chance; rather, every event was divinely caused and the fate of every individual was divinely predestined. For Aquinas, the fact that something was contingent made it no less a result of divine providence than if it were necessary: 'The effect of divine providence is not merely that a thing should result somehow, but that it should result either contingently or necessarily. Therefore what divine providence disposes to result infallibly and necessarily results infallibly and necessarily, and what divine providence has reason should result contingently results contingently' (Augustine, in Kirwan 1989, p120).

In two important strands of later medieval thought, the principle of causation was replaced with that of direct divine intervention. William of Ockham, the principal exponent of nominalism, and the Israeli MutaQallimits developed the theory of metaphysical occasionalism, and so protected the historicity of miracles in a deterministic universe (Courtney 1984, p78). This was a philosophy in which there existed no natural, only divine causality, and which posited 'exclusive divine activity in every change and motion of
the universe'. Such an orderly world was absolutely immutable. for God did not alter his design 'by whim or caprice' (Courtney 1984, p87).

Ockham explained the incidence of miracles by reference to a dual notion of causality. Events, he said, are always the result of God's primary causality and also of a secondary cause. The only exceptions are miracles, which are a result of God's primary causality. and 'far from upsetting or undermining the natural order, they reveal the benevolence and the dependability of the God that upholds that order' (Courtney 1984, p92).

In such a scheme, the entire universe was a harmonious, orderly manifestation of the divine will of God - even the apparent exception of miracles could not disrupt the orderly unfolding of causes, for they, like every other natural event, came about by divine action. Anselm's insistence on the consistency of God was thus a fundamental tenet of medieval thought. Order was everywhere, and it revealed that: 'The will of God is never irrational' (in Courtney 1984, p60).

CHANCE AND DETERMINISM

The most prolific and fertile analyses of shifting historical perspectives on chance have been annexed to the study of probability - 'the mathematics of uncertainty', whose development in Hacking's evocative phrase, engendered the 'taming of chance' (Hacking 1990). The creation of an 'empire of chance' (Girgenzer et al. 1989) and the ambivalent enlightenment attitude towards the 'shadows of chance' (Kavanagh 1993) have provided the subject matter for a series of studies on the place of the aleatory in human consciousness. Backed by a profusion of vivid metaphors, these authors' interest in chance is thus mediated by their focus on its codification in probability theory.

The eventual birth of probability theory in the mid seventeenth century was an intellectual development long overdue. However, once granted scientific status it developed rapidly and matured into an important independent discipline over the course of the next two hundred years. In the course of its maturation from the 'doctrine of chances' to the science
of calculations, the problem of chance was tackled in more and more diverse epistemological fields until finally it stood victorious at the helm of an empire of chance. It was the development of probability theory itself which facilitated the formation of such an empire, for during its growth, chance began to emerge as a distinct entity in itself, separate from notions of fate and the gods. This separation was vital, for before probability could 'tame' chance, chance had to exist as an independent phenomenon to be tamed. Parallel to the emergence of probability, then, was the emergence of chance, which, between the mid seventeenth and nineteenth centuries, became visible for the first time.

An Absent Family of Ideas

In the previous section we saw how the utilisation of chance in divinatory practice was widespread in ancient, primitive and Christian societies, and how the history of gambling itself appears as a record of the recreational pursuit of the random. For Hacking, this ancient practical interest in chance is 'ubiquitous enough to be positively primeval' (Hacking 1975, p1), while David is aware that the proliferation of early references to gaming and divination is an indication that 'the random element... was pursued with assiduous fanaticism' (David 1969, p21). Interest in chance through gaming, religious ritual and the observations of everyday life was intense, yet paradoxically, no corresponding analysis of it existed. The study and observation of randomness, frequency, betting and probability lagged well behind everyday involvement in the practicalities of such pursuits. It was 1500 years after the idealisation of the first solid figure before the emergent stirrings of probabilistic thinking were felt, and 450 years after that before the study of chance was suitably abstract to be divorced from its practical application in divination. The word 'probability' only appeared in its modern form implying a numerical idea of randomness in the seventeenth century, finding its way into print for the first time in 1661. Until the decade around the 1660s, such notions as the abstract quantification of chance were simply not found, and comprised what Hacking calls 'an absent family of ideas' (Hacking 1975).
An Ancient Family of Ideas

Despite the essentially deterministic nature of the classical universe, strands of scepticism towards the primacy of fate and divine providence had existed in Greek thought. Although the practice of divination was generally held in high esteem, voices of dissent were frequently heard, most notably those of the cynical Epicureans, and Cicero. For Epicurus, it was not fate but chance that ruled the world. No design or providence was recognised in the universe, and everything that existed could be explained by the motions of atoms in empty space (Epicurus 1977, p314). The role of such chance could be minimised by the rational action of the wise man. Such an individual 'thinks it better to be unlucky in a rational way than lucky in a senseless way; for it is better for a good decision not to turn out right in action than for a bad decision to turn our right because of chance' (Epicurus 1977, p317).

In Roman philosophy, Cicero rejected the view of chance as an aspect of divine providence, and wrote On Fate, On Divination and On the Nature of the Gods to deny the efficacy of divination and determinism, which he could not reconcile with his views of human freedom. In Book II of De Divinatione, an understanding of what would later be known as the law of large numbers is evident: 'Nothing is so uncertain as the cast of dice, and yet there is no one who plays often who does not sometimes make a Venus-throw and occasionally twice or thrice in succession. Then are we, like fools, to prefer to say that it happened by the direction of Venus rather than by chance?' (Cicero 1971, p507). In this practical, eminently secular understanding of the world, Cicero regards lot-casting firstly, as synonymous with games of chance, and secondly - and more cynically - as the deliberate encouragement of superstition. The practice, he says, 'is much like playing at morra, dice or knucklebones, in which recklessness and luck prevail', and which has been 'fraudulently contrived from mercenary motives, as a means of encouraging superstition and error' (Cicero 1971, p467).

Such scepticism about the divine function of the lot and the providential nature of chance is at its most scathing in Cicero, who gave voice to a strand of thought in the classical

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* A throw in which each of four dice fell with a different number on its upper face.
world that could imagine the outcome of a chance event to be an expression of something other than godly will. Together with a highly developed system of scientific logic and mathematics, this current amounted to the existence of what David calls an incipient ‘instinctive feeling for probability’ (David 1969, p24). The antithesis between tuche - luck and techne - human art or science, prevalent in Greek thought since Plato's youth, must be regarded as contributing to this ‘instinctive feeling’. The contrast, Nussbaum tells us, is between living at the mercy of tuche, and having life made safer and more controlled by techne. In this sense, techne is associated with practical judgement and forethought, and concerns the management of need and the prediction and control of future contingencies (Nussbaum 1986, p94-5). The individual who lives by techne ‘possesses some sort of systematic grasp, some way of ordering the subject matter, that will take him to the new situation well prepared, removed from blind dependence on what happens' (Nussbaum 1986, p95).

Within the realm of mathematics and logic - the realm of certain knowledge - issues such as the enumeration of possibilities and causes were being tackled, and the suggestion that the likelihood of an events' occurrence was not merely a matter of subjective interpretation being discussed. David points to the first stirrings of combinatory theory in Chrysippus, who tried to calculate the correct diagnosis of an illness by discussing the number of 'molecular propositions' which arose from all possible combinations of 'atomic propositions'. Early combinatorics can also be found in Xenocrates, who absorbed himself in the calculation of the number of syllables produced by re-arranging the letters of the alphabet up to 1002000 million times! (David 1969, p23).

Alongside a strict, providential determinism we find in the classical world an understanding and codification of chance which led to the beginnings of a full-blown theory of probability. In philosophy and mathematics, the Greeks showed themselves to have sufficient acumen to develop further from these promising beginnings. Yet such a development never happened; the precocious understanding of combinations and randomness did not lead to what we now know as modern probability.
In medieval Europe, chance was regarded as an epiphenomenon of the Divine Will, which in itself was nothing, and could not be the object of serious study. The existence and manifestation of randomness was simply not an issue with which the medieval mind was engaged. Rather, what consideration of 'the random' did exist was formulated around the more immediate question of knowledge and opinion. Medieval natural philosophy did recognise the existence of events that happened 'by chance' - *ut in paucioribus* - but these were considered outside the range of true 'scientific' knowledge and could only be referred to as likelihood's, not certainties (James and Weisheipl 1982, p526). These twin axes of interest can be seen to constitute a medieval form of 'probability', not in its modern sense, but as a concern with the notions of *opinio* and *scientia*, from which the dualistic notion of probability that emerged in the seventeenth century can be traced.

The medieval distinction between knowledge and opinion contrasts strongly with all modern epistemology and can be traced back to Plato. In Thomist doctrine *scientia* is knowledge, and is concerned with universal truths which are true of necessity. Knowledge can be of first truths which are beyond disputation because of their simple and fundamental nature, and can also be acquired through demonstration. Aquinus' *opinio* refers to beliefs not attained by demonstration and may also include propositions which result from reflection, argument and disputation and cannot be demonstrated. The objects of such opinion are therefore not the kinds of proposition that can be objects of knowledge. In scholastic doctrine, probability - *probabilitas* -stemmed from this sense of *opinio*, and indicated acceptability of approval by authoritative, respected sources. According to Aquinus, the dialectician should proceed 'on the basis of best opinions, namely what is held by the many or especially by the wise' (Aquinus, in Hacking 1975, p22). Medieval probability then, was based on tradition and authoritative opinion, and as such was not concerned with the discovery of new knowledge of the world. It also contained pejorative connotations insofar as a proposition was *merely* probable and therefore not demonstrable, as were scientific propositions. For both reasons probability would not be the focus of interest of scholars seeking knowledge and scientific facts. Furthermore, since truths about the world were not considered the proper subject of *opinio*, probability was not viewed as a realm in which real knowledge would be found.
Hacking sees in Galileo's failure to develop probabilistic ideas from gaming problems the restrictive influence of this notion of opinion which was not the focus of a serious scientist (Hacking 1975, p26). Galileo called the opinion of Copernicus improbable because of the experiences which contradict the notion of earthly movement, and, more importantly here, because of the strength of the Ptolemaic and Aristotelian debate around it. That is, Copernicus' opinion was improbable and still the one best supported by argument. In contrast, less than a century later a more modern notion of probability propagated by Leibniz defined the same situation quite differently. For the latter, despite all evidence to the contrary, the Copernican hypothesis was 'incomparably the most probable'. Thus in Leibniz's era probability was determined by evidence and reason while for Galileo it rested on approval.

Reasons For the Absent Family

We can see how the nature of medieval epistemology precluded the serious consideration of probabilistic ideas. As 'mere opinion', such a topic was not worthy of systematic academic pursuit. However, a tradition favourable to the recognition of randomness did exist in classical thought: why did it never develop to become anything more than an 'instinctive feeling' for probability?

In answering this question, authors have frequently drawn attention to relatively unsophisticated Greek numerical systems (e.g. David, Hacking, Girgenzer et al.). Despite their mastery of logic and geometry, the Greeks had not made corresponding advances in arithmetical computations - especially the writing down of numbers. The symbolism that facilitates multiplication and addition is a prerequisite for the expression of a theory of probability, and the Greeks and Romans, whose notation, being rather cumbersome, did not lend itself to arithmetical operations, 'lacked a perspicuous notation for numerals' (Hacking 1975, p6). Furthermore, the manipulation of numbers as though they were objects was unknown in Pythagorean mathematics, for in this tradition, numbers were regarded as bearers of magical and mysterious powers. Number was seen to express divine harmony and order and, thus mystified and hypostatised, was unable to simply represent the mundane, secular implications of individual quantities or occurrences. Until number
could be released from Pythagorean mysticism, and until a workable notation for it existed, the arithmetical and algebraic level necessary for the full development of probability theory could not appear (David 1969, p23). Nor was scientific method conducive to the testing of chance that the calculation of probabilities relies on. In the classical world, a gap existed between the construction of theoretical hypotheses and the observation of empirical data, and until this gap was closed in the Renaissance, the extensive, repeated testing and observation of large groups of numbers was impossible (David 1969, p23).

Amongst all this speculation, Kandell utters a word of warning: 'Mathematics' he says 'never leads thought, but only expresses it' (Kandell 1970, p30). There are more fundamental reasons for the absence of probability theory than an insufficiently advanced number system. Rather, the absence of probability is to be found in an entire worldview: 'the very notion of chance itself, the idea of natural law, the possibility that a proposition may be true and false in fixed relative proportions... all comprise a cosmology in which there is no place for probabilistic thinking' (Kandell 1970, p30).

In the medieval as well as the classical worlds, neither religious nor deterministic providential worldviews recognised the independent existence of chance. As secular signifiers of the Divine Will, chance events were regarded as meaningless on their own. As long as random phenomena were viewed as theophanies of sacred meaning, the phenomena themselves were deemed insignificant and ignored. The consideration of such random events was not only worthless, it could even be considered an impious act of human presumption interfering with the will of God. In such a climate, the calculation of chances was best left alone.

The Renaissance

The first steps towards the taming of chance were taken in late fifteenth century Italy, when mathematicians like Fra Luca Pacioli and Geronimo Cardano raised some of the basic problems of the calculation of chances and even made 'some small progress towards solving them' (Kandell 1970, p29).
The impetus behind these anticipations of probability theory was commercial in nature, for the probabilistic reasoning that was concerned with the division of spoils in an incompletely completed game was similar to a host of problems, such as the distribution of goods in trade, that beset the new merchant class at the time (Hacking 1975, p49). Pacioli's *Summa de arithmetica, geometria, proportioni et proportionalita* (1494), famous as the origin of double entry book-keeping was a part of this commercial milieu, and was used by merchants in the calculations of profits and losses and the recording of commercial transactions (Hacking 1975, p4-5).

The new commerce acted as an incentive to statistical development too. The trade and manufacture of fifteenth century Italy became a subject for accountancy and mathematics as the need for numerical assessment paralleled the growth of commercial enterprise. Kendall writes that 'the commercial requirements of the age alone necessitated the collection of a great deal of material that would now be called descriptive statistics' (Kendall 1970, p46). The enumeration and quantification of the world in this early statistics went some way towards creating the arithmetical basis that was vital for the further growth of probability and which had been absent in its earlier, classical appearance.

It was into this milieu that Geronimo Cardano's *Liber de Ludo Alea* (1550) appeared. This seminal work benefited from its author's vast knowledge of randomness, for Cardano was an avid gambler who used his experience of gaming in the calculation of dice throws. For the first time in the consideration of chance, the abstraction from empirical evidence to theoretical concept was made, and, also for the first time, the equal possibility of throwing any number on a die on each subsequent throw, was stated: 'I am as able to throw 1, 3 or 5 as 2, 4 or 6. The wagers are therefore laid in accordance with this equality if the die is honest...' (Cardano 1953, p193). Even now, Cardano's reputation is disputed between those who consider him a probabilist of unequivocal importance (e.g Ore, David), and those who find his deficiencies typical of the intellectual limitations of the time (e.g Girgenzer et al., Hacking). Girgenzer et al. are concerned with the implications of Cardano's calculations, which 'mathematically obliged' him to assert that each face of the die should occur once every six throws. He resolved the problem with an appeal to luck; a phenomenon whose intervention disrupted the realisation of mathematical probabilities and
re-introduced the ancient idea of supernatural guidance. Cardano thus relinquished his claim to the founding of the mathematical theory of probability, for classical probability could only arrive when factors like luck were banished (Cardano 1953, p215).

The importance of Cardano as well as Pacioli derived as much from the problems they got wrong as from those they solved. They were aware of the significance of issues relating to games of chance, but were quite unable to solve the dilemmas they set. For Hacking, what is most striking about these early works 'is not that problems on chance [were] chiefly aimed at the new commerce, but that these books were quite unable to solve the problems. No-one could solve them until about 1660 and then everyone could' (Hacking 1975, p5).

The solution to these problems would have to wait another century, time for an intellectual climate change in which the concepts of numbers, averages and signs as evidence would clear the way for probabilistic reasoning. The concept of the average - vital for the development of the notion of expectation - was developed by Pascal in the seventeenth century, and in it the solutions to Cardano's puzzles were eventually found.

**THE BIRTH OF PROBABILITY**

The story of probability is one of the reconciliation of the ancient arch rivals of Fortuna and Scientia (Girgenzer et al. 1989, p292). The hero of the story is probability - 'the mathematics of uncertainty' - whose development from the seventeenth century onwards 'tamed' or 'cleared a space' for chance (Hacking 1990, p182) resulting in the creation of an empire of chance which now 'sprawls over whole conceptual continents' (Girgenzer et al. 1989, p271).

**Pascal**

The inexorable march towards the empire of chance began, ironically enough, with a chance encounter. In Poisson's famous sentence: 'A problem about games of chance proposed to an austere Jansenist by a man of the world' (Hacking 1975, p37). The 'austere
Jansenist' was Pascal, the 'man of the world' the Chevalier de Mere, a philosopher and gambler who wanted to know how much a stake in a game would be worth if the game were interrupted. The question created a surge of interest in proportions and chance and led to Huygens De Alea and Pascal's correspondence with Fermat. The surrounding debate marked the birth of classical probability, a concept which was 'Janus faced' - the legacy of the medieval distinction between scientia and opinio - on the one hand, statistical, on the other, epistemological (Girgenzer et al. 1989, p274). The former was concerned with stochastic processes, the latter with assessing degrees of belief, a duality of which Pascal was quite representative. In his 1654 essay on the arithmetical triangle, he introduced the notion of expectation into games of chance, and in so doing was able to solve problems which had baffled his predecessors for centuries. Cardano, Pacioli and other writers had thought the best way to divide the stakes of an interrupted game was to assume the game played so far was representative or proportionate to what would happen next. In other words, they assumed chance would behave in the future as it had in the past. Pascal however looked at the game as an unfinished story; crucially, the future of it was not yet resolved by previous play. Any provisional division of the stakes should be made in such a way that each player saw it as in his interest to continue playing. For Kavanagh, this change of perspective was of seminal importance. Pascal's innovation was the enlargement of the narrative frame: 'the moment of the game's interruption had to be approached, not as the end of the story, but as one point in an ongoing narrative - as a present moment to be understood through its relations to future expectation as well as past performance. An adequate resolution of the problem had to involve not only a memory of the past but an anticipation of the future, an assurance that both players would be motivated to complete the scenario as originally written' (Kavanagh 1993, p117).

Pascal's essay on belief in the existence of God is typical of the epistemological strand of probability. His wager demonstrates that reasoning on games of chance can be transferred to uncertain situations in general, and applied as a method of reasoning. The argument concerns the utility of the belief in God: either God exists or he does not - 'God is or he is not' - which way should we incline? We must incline one way or the other, for simply by living, we are involved in the 'game', and demonstrate our belief or disbelief in our actions. Pascal argued that belief - the wager that 'God exists' is a more rational course of action
than disbelief - the wager that he does not. For Pascal, the uncertainty faced by the doubter is like that faced by the gambler, and so he used the reasoning behind a gamble as a template for the reasoning of the doubter. 'Does God exist?', he asked, and answered: 'Reason cannot decide this question. Infinite chaos separates us. At the far end of this infinite distance a coin is being spun which will come down heads of tails. How will you wager? Reason cannot make you choose either, reason cannot prove either wrong' (Pascal 1987, p150). If you act as though God does exist and you 'win', then 'you win everything, if you lose you lose nothing' (Pascal 1987, p151). In this way, the doubter acts like the gambler, for 'Every gambler takes a certain risk for an uncertain gain, and yet he is taking a certain finite risk for an uncertain finite gain without sinning against reason' (Pascal 1987, p151). If God 'is not' neither belief nor disbelief will have any effect on us. However, if he exists, wagering that he does not will bring damnation, whereas wagering that he does could bring salvation. Since damnation is the worst possible outcome, and salvation the best, we should act as though we believe God does exist. Even if the chances of this are infinitesimally small, the payoff if God exists, is infinitesimally great - far outstripping the potential reward if we opt for non-existence and he turns out not to exist. No matter how great the daily pleasures of the libertine, they are finite; salvation however is infinitely blessed, and although we have no idea of the chance that God exists, it is not zero.

Pascal's wager was an argument from expectation with an equal probability distribution. Its conclusion, that salvation if God exists is more valuable than earthly pleasures if he does not, provided a strategy for behaviour based on belief. It placed the interlocutor in the same epistemological position as someone gambling on a coin whose aleatory properties are unknown. The existence of God was not, then, a matter of chance, but a question of reasonable belief, and the wager provided an outline for the action of rational man.

For Girgenzer et al., the wager was an example of how 'reasoning by expectations had become almost synonymous with a new brand of rationality by the mid seventeenth century' (Girgenzer et al. 1989, p4). Pascal's 'libertine interlocutor' was to be persuaded by 'uncertain wagers rather than theological certainties'. At the same time that the intellectual climate had changed as a result of Reformation controversies between Catholics and Protestants, the revival of sceptical philosophy undermined the ideal of certain knowledge.
dominant in intellectual inquiry since Aristotle (Girgenzer et al. 1989, p4). At the forefront of this revival was Descartes, whose attempt to eliminate doubt by disregarding all previously held certainties actually served to put it on a firmer footing by establishing it as a method of philosophical pursuit in its own right. In Descartes' rational scepticism, inquiry had to begin with doubt - how can I know anything? - to proceed to certainty (Descartes 1985).

The result of these movements radically reshaped the intellectual landscape, setting the scene for the next three hundred years and laying the foundations for the empire of chance. Girgenzer et al. described this period of unbounded Enlightenment optimism in the potential of reason as a time when: 'all of the traditional sources of uncertainty, religious and philosophical, came simultaneously under attack. Confronted with a choice between fideist dogmatism on the one hand, and the most corrosive scepticism on the other, an increasing number of seventeenth century writers attempted to carve out an intermediate position that abandoned all hope of certainty except in mathematics and perhaps metaphysics, and yet still insisted that man could obtain probable knowledge. Or rather they insisted that probable knowledge was indeed knowledge' (Girgenzer et al. 1989, p5).

These intellectual developments influenced, and were influenced by, a process of radical economic change, for in the seventeenth century, Europe was entering a period of mercantile capitalism. This momentous period saw the birth of what is now modern science, of individualism, and of many of our contemporary institutions and ideas. In short, it gave us the birth of modern society itself.

The eminently speculative nature of this period of merchant capitalism branched out in two major directions, both of which encouraged the development of a numerical, probabilistic worldview. On the one hand, trading in stocks and shares created an international stockmarket in which companies and individuals alike competed with each other to amass vast fortunes through speculation in the new global economy. At the same time, the speculative mania extended in more conservative directions, in the creation of insurance and annuities (Hacking 1975, p4, also Douglas 1992, p23). Originally intended for the assurances of marine risks, such insurance calculated the chances of a ship coming home
against the chances of its being lost at sea. This practise had been around since the fourth millennium B.C. in what were known as 'bottomly contracts' - loans to ship owners, the repayment of which was contingent on the safe completion of the voyage (Encyclopedia Britannica 1992 vol 6, p336) - but in the seventeenth century, a form of marine insurance which dealt specifically in risks, and which took account of the probability of losses and gains emerged. This insurance was directly linked to the emergence of capitalism, developing 'as a consequence of and spur to the expansion of long distance trading', and paralleling the spread of commercial innovations like bills of exchange and various credit mechanisms (Encyclopedia Britannica 1992 vol 6, p336).

It was also during this period of general socio-economic upheaval that the meaning of securitas changed from the expression of a subjective state of freedom from care to an objective sense of sûreté, later sécurité, in French (Luhmann 1993, p13). Luhmann writes: 'It is as if, in the face of an increasingly uncertain future, a secure basis for the making of decisions had to be found' (Luhmann 1993, p13). The idea that fate or providence would oversee the unfolding of events could no longer provide sufficient assurance to those whose goods might be at stake in trading situations. Individuals were beginning to feel the need to take matters into their own hands, and to make practical, objective efforts to ensure their security. Thus, 'the old cosmological limitations, the constraints of being and the secrets of nature were replaced by distinctions falling within the domain of rational calculation...' (Luhmann 1993, p13). In other words, a practical, rational orientation to action was developing around the newly recognised concepts of risk and insurance. A dictionary of 1665 defined insurance specifically in terms of commercial risk - 'The Covenant of preventing Danger (commonly called Insurance) frequent among Merchants, added a Shadow of Law; whereby the Uncertainty of the Event is usually transferred to another with some certain Reward' (in The Oxford English Dictionary 1961 vol 5, p363).

It is at this point that we also see the emergence of the notion of risk, in both its senses of 'danger, exposure to peril' and the more specific 'chance or hazard of commercial loss in case of insured property. Both these connotations appeared in the seventeenth century, from the Anglo-French risqué; the first instance of the term being cited in 1661 as 'Risqué - peril, jeopardy, danger, hazard, chance' (in The Oxford English Dictionary 1961 vol 8, p363). Slightly later, the sense of risk as something linked with commercial exploits, was
made explicit. The 1728 edition of Chambers warns 'There is a great Risk run in letting Goods go upon Credit to great Lords'. And later still, we find it linked (as it often is today) specifically with insurance against commercial loss. In 1750, it is described as 'A Contract or Agreement by which one or more Particulars... take on them the Risque of the Value of the things insured' (in The Oxford English Dictionary 1961 vol 8, p714). From its first documented instance in the Lloyds company in 1613, marine insurance rapidly expanded into a multitude of smaller companies throughout the seventeenth century. Its objective also expanded, so that by the end of the century, marine risks had been left behind by ambitious companies organising a form of speculative insurance which could be purchased on anything, including lives.

In this new capitalising economy, as trade expanded into a system of international exchange, enumeration and accountancy became vital. The tentative, numerical development which had seen the beginnings of a form of Renaissance statistics continued with renewed vigour under the dynamic of nascent capitalist enterprise. At the same time, the expansion of a money economy created a standardised, universal measure of value. Unlike the gold and land of the feudal economy, money existed as a 'universal equivalent', a convenient abstraction, in whose international language the most distant and disparate groups could communicate. This spirit of enumeration is apparent in the transition, during the seventeenth century, from the Renaissance concept of 'measure' in the sense of moderation and balance, to the modern concept of measurement as quantification, a move that is philologically visible in the German shift from Maß to Messen (Guttman 1978, p85).

Significantly for our study of probability, it is to this period of mercantilism that the widespread enumeration of society took place. The utilisation of number in rational accountancy is, for Weber, a precondition for the development of the spirit of capitalist enterprise, and it was in the seventeenth century that the need to quantify and compare individual events and phenomena according to a universal, numerical standard reached its apogee. This was a time when the mystical connotations of Pythagoreanism had been abandoned, and an image of number as the basis of all objective knowledge revived. Knowledge of number implied control over nature, for: 'A grasp of the numerical structure
in things conferred on man new powers over his surroundings. In a way, it made him more like God’ (Bertrand Russell, in Birren 1961, p11).

The abstract representation of numerical data in the form of graphs was a part of this spirit of accountancy, and it too was born in the womb of commerce. In the eighteenth century, A.F.W. Crome was the first to present information in this way, basing his calculations on the international balance of trade and on the import and export figures of Britain’s foreign markets. At the same time and with a similar impetus, Playfair applied geometry to accountancy, boasting ‘I was the first who applied the principles of geometry to matters of finance’ (in Royston 1970, p180).

Such a practical application of mathematics to the highly numerical world of commerce and accountancy was what had been missing in early Greek attempts to develop a theory of probability. When geometry was drawn into the problems of commerce in this way - and, more importantly, backed up by an advanced system of enumeration - the methods for solving problems of chances could finally begin to emerge. The growth of a speculative, arithmetical Weltanschauung created a climate in which events whose outcomes were uncertain could be observed and their natures calculated in terms of a scientific ‘doctrine of chances’. The level of numeracy necessary for the ‘arithmetical juggling’ required by probability theory was thus attained in the developing mercantile markets of the seventeenth century.

The newly-acquired calculative attitude extended over all avenues of life, and its symbiotic relation with games of chance was noted by one eighteenth century commentator on English customs: ‘The probability of life and the return of ships, are the objects of their arithmetic. The same habit of calculating they extend to games, wagers, and everything in which there is any hazard’ (Le Blanc, in Guttman 1978, p60).

At the same time, the intellectual changes outlined earlier were indicative of a milieu in which the study of a theory of chances could take place. The pursuit of the random was no longer considered an aberration, but had come into its own as a serious object of study.
‘Chance is Nothing’

‘Chance is nothing. It is fiction, a chimera bereft of possibility and existence. People attribute to chance effects whose causes they do not understand. But for God, knowing all causes and all effects, actual as well as potential, in the clearest detail, nothing can be an effect of chance’ (Diderot, in Kavanagh 1993, p 164).

Diderot’s entry for chance - *le hasard* - in the Encyclopedia reflects the spirit of the Enlightenment and the direction of the thought of the early probabilists. After Pascal’s wager and his correspondence with Fermat, a burst of interest and activity was initiated and in the ensuing debate, several writers excited responses to each others’ advances marked out the parameters of the new discipline of probability. Between the mid-seventeenth and the end of the eighteenth century, the ‘classical’ European probabilists - Huygens, Bernoulli, Laplace, Montmort and de Moivre - turned their attention to gambling as the paradigmatic *aleatory* contract. In the analysis of popular games they found empirical examples of randomness in action, and from the conclusions they drew and applied to the world in general we can see the embodiment of the dominant Enlightenment attitude to chance. Just as in earlier times games of chance had functioned as a stage upon which the favours of the gods were enacted, in the seventeenth century gambling games once again acted as a stage upon which this time *scientific*, rather than sacred, dramas were played out. Probability theory, then, made its début on the stage of gambling games.

The early probabilists were imbued with deep religious conviction and unbounded optimism in the infinite potential of human abilities, an alliance that resulted in an epistemological determinism from which only a specifically *subjectivist* notion of probability could develop. For Girgenzer et al., this position ‘maintained that all events were in principle predictable and that probabilities were therefore relative to our knowledge’ (Girgenzer et al. 1989, p11). Uncertainty was fundamentally a state of *mind*, not a state of the *world*.

The denial of the very possibility of chance or accident had stood at the heart of post-Reformation teaching (Girgenzer et al. 1989, p79) and contributed to the perception of
chance as a function of ignorance in Enlightenment thought. Since God was all-knowing, the reformed Church reasoned, 'chance' could have no meaning for him, and since nothing happened without his permission, it could have no real meaning in the world either. In literature, Voltaire's *Zadig* expressed this eighteenth century belief in meaning and purpose, with Providence declaring: 'But there is no such thing as chance. Everything is either a test or a punishment, a reward or a precaution' (Voltaire 1990, p191).

The belief in purposefulness dominated *all* Enlightenment thought; the agnostic mainstream as well as religious, post-Reformation currents: 'only the identity of the knowing and therefore chance-banishing subject changed' (Kavanagh 1993, p164). Rather than an omniscient God being the holder of all truth, it fell to the rational endeavour of man to extend the limits of knowledge and uncover the real nature of our existence. 'If there was one point in which the otherwise warring factions of church and Enlightenment agreed, it was on the absurdity of chance as an equal affront to the glory of God and the glory of man' (Kavanagh 1993, p164). In this relegation of chance to an epistemological category, we can see in the seventeenth century the recurrence of the classical concern with providential purpose and harmony. Representative of this preoccupation was Spinoza, in whose determined universe, world order was subject to an abstract and all-pervasive God. In Proposition 29 of the *Ethics*, he expressed this determinism: 'Nothing in nature is contingent but all things are from the necessity of the divine nature determined to exist and to act in a definite way' (Spinoza 1977, p528).

For Leibniz too, the structure of nature was animated by a providential order: 'God does nothing which is not orderly... for everything is in conformity with respect to the universal order' (Leibniz 1977, p578). These ideas were central to the writing of the classical probabilists whose conception of a Cartesian 'prime mover' who fully determined nature meant that everything had a cause, however hidden. In this scheme of things, the concept of probability functioned as a makeshift tool for human intellects too feeble to penetrate the real nature of the divine handiwork.

Huygens' exegesis of the notion of expectation in *De Rationis in Alea Ludo* (1657) was the first systematisation of earlier work by Pascal, and was further developed in 1708 by
Montmort's *Essai D'Analyse*. In the latter, Montmort defined *le hasard* as an index of our ignorance and through the analysis of contemporary card games demonstrated the workings of the Creator: 'To speak exactly, nothing depends on chance, when one studies nature one is soon convinced that its CREATOR moves in a smooth uniform way which bears the stamp of infinite wisdom and prescience' (Montmort, in David 1969, p150). For Montmort, as for the other classicists, the world is basically deterministic: '... it would be useful not only to gamesters but to all men in general to know that chance has rules which can be known...'. Chance thus fits into a larger worldview where 'all things are regulated according to certain laws, those which we think dependent on chance being those for which the natural cause is hidden from us' (Montmort, in David 1969, p150).

Bernoulli's *Ars Conjectandi* (1713) saw the articulation of an even stricter belief in efficient causes in a treatise whose principles were broadened to apply to civil, economic and moral affairs. In the following excerpt, Bernoulli articulated what would later be developed by Poisson as the 'law of large numbers': a means for deriving *certainty* from repetition: 'If thus all events through all eternity could be repeated, by which we could go from probability to certainty, one would find that everything in the world happens from definite causes and according to definite rules, and that we would be forced to assume amongst the most apparently fortuitous things a certain necessity or, so to say, FATE' (Bernoulli, in David 1969, p137). Bernoulli’s strict determinism is here conflated with the notion of fate. For him, both epistemological positions would provide absolute certainty, although this type of appeal to fate was not popular by 1713 in either the religious or determinist camps.

More standard at that time was a statement like de Moivre's, who, in his *Doctrine of Chances* (1718), put forward a similar argument for certainty out of repetition, but one expressed in more conventionally religious language: '... in all Cases, it will be found that, altho' chance produces irregularities, still the Odds will be infinitely great, that in process of Time, Those Irregularities will bear no proportion to the recurrency of that Order which naturally results from ORIGINAL DESIGN' (de Moivre, in David 1969, p264). Of all the writers considered so far, de Moivre most clearly expresses the goal and direction of the new science. Everything has a design and a purpose given to it by the
Creator, and it is possible for man both to understand the design of earthly phenomena, and the intention of God who made them. It can be shown that there exist ‘certain laws according to which Events happen... those laws serve to wise, useful and beneficent purposes ...’ amongst other things ‘to preserve the Steadfast Order of the Universe...’

The study of random phenomenon has a glorious reward: ‘And hence if we blind not ourselves with metaphysical dust, we shall be led, by a short and obvious way, to the acknowledgement of the great MAKER and GOVERNOUR of all, Himself all-wise, all-powerful and good’ (de Moivre, in David 1969, p265).

The result of these early studies of the Divine determination of all things was the swift removal of chance from the real world and its location firmly within the human mind. In the Age of Reason, everything had a cause, whether material or transcendental, and so chance had no place in the world. What the devout de Moivre condemned as atheistic, Hume dismissed as ‘a mere word’: ‘Chance, when strictly examined is a mere negative word and means not any real power which has anywhere a being in nature’ (Hume, in Hacking 1990, p13). Chance thus had no real being, and existed only in an epistemological sense as a deficit, a lack of knowledge. The presence of ‘so-called’ chance was significant only insofar as it was a misunderstood sign of metaphysical meaning. Diligent observation of random phenomena would reveal its illusory nature, for in collections of disparate events, the classical probabilists saw patterns indicative of order and purpose. In his Essay on Man, Pope expressed the widespread acceptance of the belief in universal order during this time:

‘All Nature is but Art, unknown to thee;
All Chance, Direction which thou canst not see;
All Discord, Harmony not understood’
(Pope 1963, p50)

The ability to perceive such regularity in randomness was a recent development. Before the seventeenth century each event was seen as an exceptional case; a perspective which had frustrated early attempts at probabilistic reasoning. Now the perception of patterns, aggregates and similar cases meant writers like Pascal and de Moivre could compare
events, and with the assimilation of such comparisons, grow to expect certain outcomes in certain situations. This intellectual development, new to the seventeenth century, would gather momentum until a veritable obsession with averages and regularities reached its apotheosis in the nineteenth century discipline of statistics.

**Chance in an Age of Reason**

The works of the classical probabilists have been described as 'the most important mutation in human thought since Aristotle', providing a 'mathematical protocol' for the action of the rational individuals it assumed as its audience (Kavanagh 1993, p21). Probability theory was an important contributor to the Enlightenment ideal of rational man, for by providing the tools necessary for the evaluation and measurement of alternatives, it facilitated the ultimate rationality of action. As the epitome of rationality, then, probability was the 'great success' of the Age of Reason, and the confidence of its bearers, who looked to the day when ignorance, chance and superstition would be banished from the world, was unbounded. 'The rational man, averting his eyes, could cover chaos with a veil of inexorable laws' and so convince himself that although the world may appear haphazard, a more profound and orderly structure lay underneath it (Hacking 1990, p1). In this climate, epistemologies which excluded the very consideration of 'irrationality' were appearing. For Spinoza, the rational being could not even contemplate the existence of chance, for 'it is not in the nature of reason to regard things as contingent, but as necessary' (Spinoza 1977, p564).

According to Kavanagh, the 'evacuation of chance' within the formulae of probability theory was at the vanguard of an emergent, modernising force in society, based on a vision of the individual as a consciousness freed from prejudice, superstition and the 'unexamined ballast' of tradition. Probability implied the existence of a new rational consciousness in which the self was located entirely within the present, in contrast to a self whose orientation derived from its links with tradition and the past. This shift of consciousness was paralleled in the social world by the emergence of the bourgeoisie and their gradual ascendance over a declining feudal nobility (Kavanagh 1993, p21-2). In the midst of this sea of reason stood the figure of the gambler, the personification of the subject of
probability theory and a maverick whose existence was an affront to the procrustean force of probability, a doctrine which had promised to tame all such free-ranging disorder in the service of Reason.

It was not that the Enlightenment condemned gambling per se, but rather that it feared the disequilibrium that could be brought about by excessive gambling. This attitude should be seen in the context of broader eighteenth century ideas about rational recreation. The valuation of productive work, often associated with the Protestant ethic, was also an important Enlightenment ideology, condoned by moralists and enshrined in the legislation of the period. However, the need for 'reasonable' rest and recreation was also recognised, and the balance between this and productive work admired as rational and godly (Dunkley 1985, p64, 5). As legitimate recreation then, games were not bad in themselves, but only when pursued to excess, and as an activity which could easily spill over into such excess, gambling represented a potential danger. Although it was deemed acceptable in moderation, the difficulty lay in avoiding the inflammation of passion which almost inevitably accompanied the pursuit of play. When this happened, the gambler's reason was eclipsed by extremes of emotion and he became, in a sense, dehumanised. According to medical opinion, such excitation disrupted the player's health by upsetting the balance of the humours and heating the blood (Dunkley 1985, p85). More importantly, it disrupted the social order, for by removing the principles of moderation and balance on which it was built, the entire edifice of ordered society was threatened by chaos. The catalyst of this collapse, embodied in the gambler's refusal to submit to the order of probability theory, is eloquently described by Kavanagh: 'To gamble was to render the self equally as unpredictable as the cards and the numbers on which one bet. Absorbed entirely within the impassioned present of the wager, the gambler lost all sense of past and future. Abstracted from the prevailing laws of cause and effect, beyond prudence, uninterested in foresight, the gambler became a figure of solipsistic idiosyncracy, closed to everything beyond the immediate present. That state, measured against the ideal of a rationality shared by all, could only be a self-inflicted madness which men of reason must refuse, condemn and extirpate from themselves and all around them' (Kavanagh 1993, p62).
Chance in Britain

In Britain, the approach to chance via mathematical quantification was taken from a different angle to that of the puzzles of *aleatory* games which so fascinated the rest of Europe. David declares that the English made no significant contribution to probability theory largely because a utilitarian view of mathematics and a lack of interest from Newton resulted in an orientation which saw little profit in discussing the falls of dice (David 1969, p125). However, Britons were not unaware of chance and their efforts to tabulate it took them in another direction, out of which the discipline of statistics arose. At the same time that thinkers in Europe were finding order and regularity in games of chance, British writers such as Graunt, Petty and de Witt were discovering it in the more mundane realm of births, marriages and deaths. According to Hacking 'Paris and London, in their very different ways were simultaneously starting the discipline we now call probability and statistics. Whether motivated by God, or by gaming, or by the law, the same kind of idea emerged simultaneously in many minds' (Hacking 1975, p103). John Graunt's *Natural and Political Observations on the Bills of Mortality* (1662) catalogued the causes of deaths from the parish records of individual county boroughs. Graunt constructed tables and calculated averages, listing the number of children christened each week, the course of various diseases across decades, and the number of inhabitants of various towns (Hacking 1975, p106), and, as his ingenious arithmetic was advanced enough to be able to cope with several variables at once, made the first reasoned estimate of the population of London (Hacking 1975, p106-7). The calculative outlook of Graunt, like that of the early probabilists, was rooted in commercial experience, for Graunt himself was described as a 'city tradesman' who became an 'opulent merchant' (Greenwood 1970 p48-9). Graunt's material was equivalent to the results of the dice throwers of the continental mathematicians and was an illustration that 'the empirical approach of the English to probability was not through the gaming table but through the raw material of experience' (David 1969, p109). Still, the conclusions drawn from study on either side of the Channel supported that overriding 'seventeenth century theme of order and coherence in the universe, evident in the ultimately meaningful nature of irregularity. One theologian was in no doubt as to the role of statistics in Britain: 'The true foundation of theology is to ascertain the character of God. It is by the aid of statistics that law in the social sphere can
be ascertained and codified, and certain aspects of the character of God thereby revealed
The study of statistics is thus a religious service' (in David 1969, p103).

This British development of statistics is important (and largely underrated) for its role as
the direct precursor of the subject of probability theory after the dramatic 'epistemological
shift' of the nineteenth century. This shift changed the subject and direction of probability
theory and consequently revolutionised the understanding of chance.

**Caveat: The Paradox of Probability**

Although probability is described as the victorious tamer of chance, in a sense it represents
a hollow victory, for as Kavanagh points out, it did not tackle the pure form of chance but
instead redefined the parameters of the debate into a form which could be made sense of
by rational mathematics.

Probability dealt with chance by abstracting reality to such an extent that it no longer had
'pertinence to any specific moment or situation' (Kavanagh 1993, p15). In the law of large
numbers it could safely make pronouncements as to what should happen in the long term,
but never what would happen next. The outcome of a single event could never disprove
such a level of generalisation, and in this way probability offered no new knowledge of any
specific event. As Kavanagh, points out, the coup of probability was to change the focus
of the debate altogether: 'To the question, what will happen it offer[ed] an exquisitely
refined understanding of what may happen' (Kavanagh 1993, p15).

The law of large numbers, articulated first by Bernouilli and later by Poisson was
'endowed with the convenient power to guarantee that, properly understood, the
pronouncements of probability theory would always be correct' (Kavanagh 1993, p16). If
the number of occurrences in a sample was sufficiently large, the frequency of events - in
the long term - would always conform to the mean of their probabilities, and so the
theorems of probability were necessarily true. It was impossible to predict what the
outcome of a single event in a specific instance would be - whether the result of tossing a
coin would be heads or tails, or whether a roulette ball would land on black or red - but,
as the number of tosses and spins were increased towards infinity, the law of large numbers would spring into action and predict that the outcome over the long run would be spread evenly - 50:50. In this way, probability was extremely vocal with respect to the general and the long term, but had nothing at all to say about what was most crucial: the specific instance. As to what would actually happen next, it remained 'forever mute' (Kavanagh 1993, p15). Kavanagh's criticism of probability theory is mitigated only by his reluctant admiration, for, as he explains: 'Probability theory has in fact carried off an enormously seductive sleight of hand... There where we feel most acutely the limits of our knowledge... the calculus of probabilities offers a demanding and rigorously mathematised discourse bristling with apparent proofs of our mastery over a situation that in fact escapes completely' (Kavanagh 1993, p16).

Outside the large number and the extended period of time, probability theory dared not venture. The specific could only be considered at all as an average, as an instance of a more valid, generalised whole, a limitation which meant that probability tamed chance only insofar as it excluded it from its models.

As an abstraction, probability had internal logic and predictive power, but applied to the real world, it frustrated the real person with its inability to speak of this event at this moment. These limitations were most evident in the field of the aleatory and in the figure of the gambler, the individual to whom the particular event, the specific moment, mattered most. The theory could only speak to him if he submitted himself to an average: 'When the players forget themselves as individuals subject to the unpredictable present of the wager and instead imagine themselves as interchangeable instances of the game's mathematical structure, the average can and will tell them everything they need to know' (Kavanagh 1993, p65). But the gambler could not do this, for it opposed the very nature of play. He entered the game, above all, as an individual concerned at every instance with the specific event occurring at that moment. Probability theory replaced the individual with the average, the unique with the general and the present with the long term. In this way it transformed chance into predictability, but only by changing its subject to such an extent that it was rendered unrecognisable to the gambler.
CHANCE AND MODERNITY

In the nineteenth century, an 'epistemological shift' no less momentous than the birth of probability two centuries earlier radically altered human understanding of chance and resulted in the erosion of determinism, the clearing of a 'space for chance' (Hacking 1990).

The Birth of the Average

In the early part of the century, the intellectual and social hegemony that had made the classical interpretation of probability possible dissolved. Contemporary observers watched the breakdown of a sense of cosmic order and social 'wholeness' and the replacement of stability and meaning with what was to become the distinctive feature of the modern age, what de Jong calls the state of 'ontological insecurity' (de Jong 1975, p14). The French Revolution and its surrounding social tensions 'shook the confidence of the probabilists in the existence of a single, shared standard of reasonableness... The reasonable man fragmented and disappeared altogether... The classical interpretation had lost its subject matter' (Girgenzer et al. 1989, p35). The focus of probability changed from \( \text{l'homme éclairé} \) to \( \text{l'homme moyen} \) as probabilists 'turned from the rationality of the few to the irrationality of the many' (Girgenzer et al. 1989, p36). The object of their analysis was mean values; its most important field of application, statistics.

As a nineteenth philosopher poised on the brink of the twentieth century, Nietzsche expressed the ontological insecurity of the age in his celebration of a world devoid of God and meaning. His assault on rationalism is articulated by Zarathustra, who described the 'celestial cheerfulness that came over all things when I told them that no eternal will acts over them and through them' (Nietzsche 1969, p186). Nietzsche provided perhaps the most radical articulation of the nineteenth century disaffection with rationality: 'In the great whirlpool of forces man stands with the conceit that this whirlpool is rational and has a rational aim; an error! The only rational thing we know is what little reason man has therefore' (Nietzsche 1968, p50).
For Hacking, the nineteenth century was characterised by an 'avalanche of numbers', an expression of industrial nation states' desire to classify, count and tabulate their subjects (Hacking 1990, p2). Although statistical data had been collected prior to the nineteenth century, such activity had been limited and unsystematic. After the Napoleonic wars, however, the European states established offices to collect and publish statistics about 'all manner of life and administration' and it was these that made possible the avalanche of printed numbers between 1820 and 1840. The realm of statistics became ever more ambitious - from births and deaths it moved on to count diseases, suicides and deviance, and so formulate statistical laws of human behaviour. These applications brought new objects of study into being, established new claims to authority and new standards of rationality. Girgenzer et al. point out that it was 'part of the Pythagorean creed' to believe that with numbers came certainty, and so in the nineteenth century, the enumeration and tabulation of the world, whilst creating a space for chance, also tamed it by anchoring it to statistical laws (Girgenzer et al. 1989, p270). Kavanagh believes the 'mutation' of probability theory into statistics inevitable given the reliance of the former on the doctrine of large numbers. The necessity of large samples meant that probability, in the service of a 'progressively more centralised state... found its most ambitious application in the development of statistics' (Kavanagh 1993, p20).

In 1835, Poisson proved an important limiting theorem which, by providing a basis for the application of probability to social matters, explained how there could be statistical stability in social affairs: 'Paris, 16 November, 1835. Things of every kind are subject to a universal law that we may call the law of large numbers. It consists in this: if one observes a very considerable number of events of the same kind, depending on causes that vary irregularly, that is to say, without any systematic variation in one direction, then one finds that the ratios between the numbers of events are very nearly constant' (in Hacking 1990, p95). The law was a mathematical demonstration that the indefinite repetition of events led to stable, mean values and made statisticians exalt in their ability to find order wherever they looked. If individuals appeared too variable and inconstant to pin down, the law of large numbers advised they look to the aggregate instead - to society - 'for chance disappeared in large numbers' (Girgenzer et al. 1989, p38).
For Kavanagh, the shifting orientation of probability theory into statistics created a new consciousness of the self, away from the Enlightenment ideal of a 'single rational consciousness confronting and mastering the uncertainties of the present' to a measuring of the self 'against a potentially infinite series of averages and means' (Kavanagh 1993, p23). The growth of concepts such as 'normal' and 'average' created an individual in no way privileged above any other whose self knowledge came from comparison and valuation against others. The duty of the statisticians' average man was to compare himself to the universal standard. Thus was one of the fundamental paradoxes of modern democracy consolidated, for 'all could now be equal because all risked an equal insignificance should they cease to refer themselves to an exalted average that could, at the same time, claim to be nothing other than the mathematical summation of each as an individual' (Kavanagh 1993, p24). In this climate, the consciousness implied by statistical thinking was no longer the 'practical applied rationality of the early doctrine of chances' but the new thinking of a 'mass man', engaged in the constant averaging of the one with the many. Put more succinctly, Kavanagh describes the change: 'Probability theory offered the paradise of a purely present rationality freeing us from the burdens of history, family and class. Its mutation into the imperial discipline of statistics redefined the individual as one unit cosubstantial with and quantifiable in terms of all others' (Kavanagh 1993, p24).

Even God could not avoid redefinition in the midst of this new perception of regularity and uniformity. By the nineteenth century, the culmination of post-Reformation unease at a miracle-working Divinity finally gave way to 'a new vision of a God more revered for rules than for exceptions' (Girgenzer et al. 1989, p27). A growing body of Protestants declared the age of miracles past, articulating an opinion that had begun to emerge a century earlier. In his Philosophical Dictionary (1764) Voltaire had written that a miracle was a 'violation of divine and eternal laws'. Because the world God made was perfect, he could have no reason to disturb it by altering any part of his divine plan. Therefore, it would be an insult to attribute miracles to God, for it would be to say, in effect: 'You are a weak and inconsistent being' (Voltaire 1971, p313). In the nineteenth century this nascent conception of God developed into an image of a great statistician who dealt in averages and regularities, the earthly observance of which provided proof of his working. The very
The continued use of the lot can be seen as an illustration of this new orientation to chance. From being a hierophany of divine will, in the nineteenth century the outcome of the lot came to be regarded as efficacious precisely because it signified nothing. When viewed in a secular light, the arbitrary nature of the lot made it a suitably democratic tool for the resolution of dilemmas, one whose selection would guarantee, not an individual
who was special or ‘chosen’ in any way, but on the contrary, one who was particularly average.

The most important facet of the nineteenth century epistemological shift was this evacuation of meaning from determinism and the consequent development of the ‘ontological insecurity’ of the age. Once God’s presence had retreated, and determinism was secularised, a hiatus appeared, in which chance a meaningful entity could flourish. For the first time, an opportunity existed for chance to appear, not as a figment of our ignorance which nevertheless signified higher meaning, but as a neutral phenomenon in its own right.

As a consequence of its loss of religious meaning, the parameters of determinism opened up to encompass contributions from all avenues of knowledge to such an extent that the notion of indeterminism itself was considered. The possibility that the world might not be subject to universal laws would lead to the most decisive conceptual event of twentieth century physics - the discovery that the world was not deterministic. Precipitating this great event, the debate around indeterminism in the nineteenth century in Hacking’s phrase, ‘cleared a space for chance’ (Hacking 1990, p1).

**Chance is First**

Girgenzer et al. describe the ‘remarkable shift of perspective’ that occurred when James Clerk Maxwell identified statistics with imperfect knowledge (Girgenzer et al. 1989, p62). Until this time, it had always been associated with certainty: however, when Maxwell argued that most of our knowledge of the world was statistical, what he meant was that it was incomplete and liable to fluctuation and uncertainty. In other spheres similar ideas were being developed: Renouvier, for example, undermined determinism by declaring that historical change was the result of free individual decisions and not great historical laws (Girgenzer et al. 1989, p64).

Perhaps the most famous explication of the new status afforded to chance in the nineteenth century came from Darwin. In his mechanical account of the forms and patterns of nature,
Darwin evoked chance to explain the origin of variation. In opposition to the then dominant 'use and disuse' theory propounded by Lamarck, Darwin stated that biological variation was a matter of chance, not adaptive necessity. It was thus a matter of chance that an organism was born with a variation that promoted survival. The evolutionary fate of that variation, on the other hand, depended on whether it served survival needs, on what he called natural selection. Thus: 'Evolution by natural selection absolutely depends on what we in our ignorance call spontaneous or accidental variability... the variations of each creature are determined by fixed innumerable laws; but these bear no relation to the living structure which is slowly built up through the power of selection' (Darwin, in Girgenzer et al. 1989, p236). Such a radical utilisation of chance was not immediately accepted, and Darwin's formulations were widely criticised, especially by the scientist and philosopher John Hershal who decried notions like accidental variability as the 'law of higgledy piggledy' (Girgenzer et al. 1989, p152). At this time a debate raged between teleologists and mechanists in biology. The former viewed chance as an absence of design, and in this sense can be seen as descendants of the classical probabilists. The mechanists both opposed and appreciated the importance of chance, and in this, Darwin was typical. Their opposition stemmed from a view of chance as an ignorance of prevailing conditions, their appreciation from consideration of it as an absence of non-mechanical purpose in nature. Darwin's account of variation fell under this latter aspect of the mechanist position, and it was this position that was to gather momentum throughout the nineteenth century, until finally, the twentieth century 'erosion of determinism' was complete.

The implications of Darwin's work were recognised by C.S Pierce, who wrote: 'the idea that chance begets order... which is at the cornerstone of modern physics, ... was at that time put into its clearest light' (Pierce, in Hacking 1990, p183). Its fundamental insight made possible the notion of random mutation as a vital stochastic force, which is today widely accepted by evolutionary biologists such as Jacques Monod and Richard Dawkins. For Monod, the two properties characteristic of all living beings are invariance and teleonomy; or chance and necessity (Monod 1971). The genetic transmission of information in the process of evolution is characterised by the reproduction of randomness, thus the principle behind the process of evolution itself is based on chance: 'chance alone is at the source of every innovation and all creation in the biosphere', and yet formed of
necessity: 'once incorporated into the DNA structure, the accident... will be mechanically and faithfully replicated and translated... Drawn from the realm of pure chance, the accident enters into that of necessity, of the most implacable certainties' (Monod 1971, p114).

Pierce is the hero of Hacking's second book on probability, *The Taming of Chance*. A nineteenth century scientist and philosopher, he anticipated the role chance would come to play in the next hundred years and in this, Hacking sees not a man ahead of his time, but a man peculiarly of his time. Pierce was the incarnation of indeterminism for he believed in a universe of absolute and irreducible chance: 'Chance itself pours in at every avenue of sense: it is of all things the most obtrusive. That it is absolute is the most manifest of all intellectual perceptions. That it is a being, loving and conscious, is what all the dullness that belongs to ratiocination's self can scarce muster the hardihood to deny' (Pierce, in Hacking 1990, p200). Here was the scientific counterpart to Nietzsche who was already declaring the role of chance in the world through Zarathustra: 'I have found this happy certainty in all things: that they prefer to dance on the feet of chance' (Nietzsche 1969, p186). With this in mind, the only response available to the individual was the possibility of self-overcoming in the will to power. The chaos of life could be transmuted by an overcoming of life, and the way to do this was to 'live dangerously' - in effect, to plunge into chance. As demanded by Zarathustra: 'Live dangerously! Build your cities on the slopes of Vesuvius!' (Nietzsche 1969, p18).

In experimentation, Pierce deliberately used the properties of chance devices to introduce a new level of control - a control that worked not by eliminating chance fluctuations but by adding more! (Hacking 1990, p205) Here is a Nietzschean attitude to chance in action, a practical plunging into a universe of stochastic processes! For Pierce, chance was more powerful than any law. He was fond of trios, which he called Firsts, Seconds and Thirds: 'Chance is First, Law is Second, the tendency to take habits is Third'. Against the reassurance of the order supposed by the law of large numbers, chance always prevailed: 'Even when the dice are cast in circumstances of eternity... chance pours in at every avenue of sense' (Hacking 1990, p215). For Hacking, Pierce's denial of the doctrine of necessity was incidental to a life permeated by statistics and probabilities, and so his conception of
chance was 'oddly inevitable' (Hacking 1990, p9). Pierce made the 'first leap into indeterminism'- straight into the twentieth century. 'He opened his eyes and chance poured in - from a world which, in all its small details, he was seeing in a probabilistic way' (Hacking 1990, p201). In this respect, although he was a nineteenth century man, Pierce was already living in a twentieth century environment, in a world full of probabilities.

**Chance As Explanation**

By the twentieth century, the Empire of Chance was consolidated. The erosion of determinism over the previous hundred years meant that chance 'had attained the respectability of a Victorian valet, ready to be the loyal servant of the natural, biological and social sciences' (Hacking 1990, p22). Indeterminism became the guiding principle of vast conceptual continents, most importantly, physics.

The mechanistic Newtonian model of the world was fundamentally a model of *certainty*. Its basic categories of space, time and solid matter existed as properties with fixed identities which acted in definite, predictable ways. In principle, and given a certain amount of information, causal laws could predict any number of these properties. However, as quantum physics overtook the classical model, the inherent uncertainty of quantum reality replaced the familiar fixedness of the mechanistic world. The monumental discoveries of scientists such as Planck, Bohr, Heisenberg, Einstein and Schrödinger at the beginning of the century meant that probability in physics became 'irreducible and uneliminable in principle, [and] so classical determinism was finally overthrown' (Girgenzer et al. 1989, p175).

It was Planck who first coined the term 'quantum' by showing that energy is radiated in tiny, discrete quantum units rather than smoothly and continuously as classical physics had thought. A few years later Niels Bohr demonstrated that electrons jump from one energy state to another in discontinuous 'quantum leaps'. These jumps were unpredictable and indeterminate; there were no causes or explanations for why an electron moved at a certain time in a certain way, it simply 'happened'.

Traditional notions of properties, measurements and the identity of things were blown apart by discoveries like 'contextualism', whereby quantum reality shifts its nature according to its surroundings. Zohar and Marshall liken the activity of electrons or protons to homonyms - words that look the same but have different senses depending on context. The actions of elementary particles also change, and are in 'constant creative dialogue' with the environment (Zohar and Marshall 1993, p21). The idea that light can be both a wave and a particle at the same time is one of the most revolutionary concepts of quantum physics. Far from the notion, in classical physics, that light must be permanently identified with one or the other, in the new physics, both properties complement each other and are necessary for a description of what light actually is. The fact that such duality cannot be measured was set out in 1927 in Heisenberg's Uncertainty Principle, a theorem which destroyed the bastion of classical physics by proving the impossibility of ascribing precise values to both position and momentum simultaneously. Measuring the position of, for example, light, as a particle gives an indistinct reading of its momentum, while measuring its momentum as a wave gives a similarly indistinct reading of its position. Such measurements, Heisenberg showed, could only ever be probable (Girgenzer et al. 1989, p199-202).

The concrete either/or way of thinking in the classical mould was replaced by quantum physics' more fluid both/and dichotomy (Zohar and Marshall 1993, p20), an orientation demonstrated by Schrödinger's famous quantum cat. In this example, a cat is hidden in a box which also contains a device that will randomly feed it either poison or normal food. Using mechanistic logic we would expect the cat either to be dead (if fed poison) or alive (if not). But in quantum reality, so long as it is not observed the cat exists in superimposition - alive and dead at the same time. It is only when we open the box to see it that the cat's state must collapse into a choice.

Probabilistic thinking also influenced theories of atomic movement, with the discovery of Brownian motion in 1827 providing the earliest evidence for the random motion of molecules. As an example of a stochastic process, such motion became 'one of the main tools for creating models of phenomena dependent on time and chance' (Ekeland 1993,
Not only was atomic motion not guided by divine purpose, but, as 'a movement totally devoid of memory' (Ekeland 1993, p160) it was not compelled by any form of purposefulness whatsoever, and so existed as an example of pure, secular indeterminism in action.

Within this framework, Einstein appears as a scientist of the classical mould, contributing reluctantly to the probabilistic revolution. The probabilistic implications of his work on radioactivity and non-locality posed problems for the Theory of Relativity, and he uneasily referred to chance in inverted commas, while arguing against non-locality, as 'ghostly' and 'absurd' (Zohar and Marshall 1993, p35). His famous aphorism 'God does not play dice' is evocative of a Newtonian God winding up a clockwork universe; an image already anachronistically out of place in the stochastic universe of the twentieth century.

By mid-century, further evidence of the non-continuous nature of reality was emerging in the form of chaos theory. The discovery that a modification of the initial conditions of a system could multiply at an exponential rate, resulting in a state out of all proportion to the magnitude of the starting condition, was labelled 'chaotic behaviour', and signalled a move towards the construction of non-linear systems. (Waldrop 1992, p66). Because tiny perturbations could escalate until a system's future became utterly chaotic, prediction of that future would have to take such a vast amount of information into account that the calculation, in practise, would be impossible. The famous example of such unpredictability is of a butterfly flapping its wings and generating a change in starting conditions which, by the end of the year, has multiplied exponentially to trigger a hurricane in another part of the world. The game of roulette is a similar instance of how tiny changes of initial conditions can influence the final trajectory of a ball (Waldrop 1992, p287).

After their discovery in physical, chemical structures, chaotic systems were found to be inherent in larger structures, including economic and ecological systems and were widely used to 'analyse and predict the gyrations of stock market prices, weather records and other such random-seeming phenomena' (Waldrop 1992, p95).
In the midst of all this complexity, we find the appearance of a fundamental - albeit incredibly complex - order. The laws of entropy and attraction provide stability, and lead to spectacular geometric constructions, such as the fractals of Benoît Mandelbrot. Predicting the outcomes of these processes can defeat even the most sophisticated computers but, as Zohar and Marshall point out, this is because they are limited, not because the processes themselves are truly indeterminate. Unlike quantum reality, where indeterminacy is an inherent feature of the world, chaotic systems are simply incredibly complex (Zohar and Marshall 25).

The complexity of the order behind chaos theory, and the indeterminacy inherent in quantum theories of reality means that traditional causation and linear systems are not applicable to modern physics. The unpredictability of phenomena (whether through complexity or inherent indeterminacy), far from being shortcomings of theoretical models, are now features of scientific models themselves, and their metaphysical implications are vast. As a scientist at the vanguard of the formation of complexity theory describes it: 'the world has to adapt itself to a condition of perpetual novelty, at the edge of chaos' (in Waldrop 1992, p356).

At the end of the twentieth century, the irreducible indeterminism of the world appears as a fundamental tenet not only of modern physics, but of modern thought. It is a feature which has even come to be reflected in culture, in the atonal and random noise symphonies of composers like Schönberg and John Cage, and the apparently haphazard lines of modern painters like Jackson Pollock and Wassily Kandinsky.

For Girgenzer et al., indeterminism's conquest of 'vast conceptual continents' constitutes the 'bridgehead of the empire of chance'. Today: 'The empire of chance seems to be

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6 The formation of order - however complicated - in such models has been the subject of a number of recent studies exploring the possibility of overall coherence in the apparently haphazard and diverse. Lowry considers the consistent creation of 'structure, order and regularity' in multiplicity, and the production of 'predictable structures' whose principle is 'distinctly archetronic' out of theories of chaos and complexity (Lowry 1989, p8). In a similar vein, Harris looks to the larger picture in his quest for a new metaphysics for the new physics, outlining the order and coherence underlying apparent chaos and indeterminacy. Adopting a neo-Darwinian approach he argues for the widespread recognition of 'the possibility of seemingly teleological order coming into being by chance variation and natural selection' (Harris 1991, p4).
rooted not only in the human mind, but also in the constitution of the universe' (Girgenzer et al. 1989, p202).

In this conquest, the transition of chance from an *epistemological* to an *ontological* category is complete.

**Risk**

As part of the erosion of determinism, the notion of risk has come to occupy a central position in the explanation of the social world. As distinct from its original seventeenth century meaning of hazard or danger, and especially exposure to commercial danger, our modern usage of risk has come to express the probabilistic nature of reality. In the twentieth century, the calculation of risk is an articulation of our probabilistic *Lebensgefühl*, and provides 'a theoretical base for decision-making' (Douglas 1992, p23). This concept is distinct from - albeit connected to - that of chance. Whereas the latter exists as a building block of the world, and a testimony to genuine stochasticity in life, the former is an expression of the calculation of possible outcomes based on the knowledge of the effect of this chance on the world. While chance is neutral in this respect, risk retains its seventeenth century connotations of danger and generally implies the possibility of loss. Furthermore, it is a loss that can be *estimated*. Risk then, deals with knowledge. It represents an acknowledgement of the irreducible existence of chance in the world, and the formation of a new kind of inquiry based on this fact. This is an order of knowledge that does not aspire to absolute certainty, but one that deals instead with *degrees* of certainty, hence Knight's description of risk as 'determinate uncertainty' (Knight 1921, p46).

In the concept of risk then, we find a modern, probabilistic type of knowledge, whose main applications in the social sciences have been in the field from which it originally emerged - economics, and, more recently, in the sociological analysis of modernity.

In the work of writers such as von Neumann and Morgenstern, Knight and von Mises, the role of risk as well as that of uncertainty and unpredictability, is central to modern economic systems. Contrary to the classical economists' depiction of economic man as an
individual acting rationally from perfect knowledge of certain conditions, in these systems, actors make decisions based only on *partial* knowledge. The uncertainty engendered by such ignorance is endemic in economic life, and: 'Once we admit the presence of ignorance in an economic world, we leave the comfortable confines of certainty and find ourselves in the wilderness of risk, or the swamp of uncertainty' (Tsukahara and Brumm 1976, p92).

That this uncertainty was a reflection of genuine stochasticity in the world had been recognised earlier when, at the end of the nineteenth century the mathematician J Bachelier proposed a model based on Brownian motion to explain the fluctuations of the stock exchange. His model did not rise to prominence until 1973, however, when Fischer Black and Myron Scholes demonstrated a ‘formula’ for the stockmarket based on stochastic calculus - 'the modern outgrowth of Brownian motion' (Ekeland 1993, p162). A similar application of mathematics to economic uncertainty later formed the subject of von Neumann and Morgenstern's seminal *Theory of Games and Economic Behaviour* (1944). Their insight was that, since in situations where an individual's course of action depends on what his colleagues or competitors are likely to do, absolute certainty concerning the future is impossible. Thus, since risk cannot be eliminated, the option with the highest probability of success is simply risk *minimisation*. The possible courses of action that arose from this resolution have since formed the basis of rational risk-minimising action in uncertainty.

The unpredictable and hence risky nature of action implied by such stochastic systems were regarded by some modern economists as vital preconditions for any kind of action at all. So, for von Mises: 'If man knew the future, he wouldn't have to choose and would not act. He would be like an automaton, reacting to stimulus without any will of his own' (von Mises, in Kirzner 1985, p49-50). This kind of view finds even more radical support in writers like Knight for whom the system of free enterprise arises as a reaction to risk, and, for whom, according to some authors, consciousness itself would disappear in the absence of uncertainty (Arrow 1970, p1). Risk for Knight is objective, measurable uncertainty (as distinct from uncertainty, which is not measurable), and is *always* present in economic action because ultimately, the latter can only ever be guided by opinion: 'neither entire ignorance, nor complete and perfect information, but partial knowledge' (Knight 1921,
In Knight, we see a strand of radical doubt which is beginning to question just how much we can ever understand the world - and not just the economic world. According to Knight himself, this is not a questioning of the validity of logical processes, but a more profound query 'as to how far the world is intelligible at all' (Knight 1921, p209). 'Are we then to assume real indeterminism in the cosmos itself?' he asks uneasily, and, two pages of prevarication later, is forced to answer in the affirmative (Knight 1921, p220 and 222).

Elsewhere in the social sciences we find a number of authors attempting to construct a theory of risk as a paradigm for modern society. According to Giddens, 'secular risk culture' is synonymous with modernity, since 'To live in the universe of high modernity is to live in an environment of chance and risk' (Giddens 1991, p109). This is not to say that pre-modern societies did not encounter risks, but only that our perception of them as such is distinctive; for today 'thinking in terms of risk and risk-assessment is a more or less ever-present exercise' (Giddens 1991, p124). Additionally, and unlike in pre-industrial society, through the institutions of economic markets, labour power and investments, modern society can be said to be constituted by risks, rather than risk being incidental to them (Giddens 1991, p117-8). Beck regards risk as a definitive feature of modern life, and part of a lengthy historical process in which 'reflexive modernisation' has displaced industrial society and brought about the 'risk society' (Beck 1992).

Characteristic of this society is the increasing prevalence of the state of 'ontological insecurity' first experienced in the nineteenth century as the breakdown of a sense of order, of wholeness and of meaning. By the late twentieth century, such insecurity has grown into a 'radical doubt' about all forms of critical reason (Giddens 1991, p3). Symptomatic of this insecurity are works of postmodern depression by writers like Francis Fukuyama, who claims that since there is nothing left to know, there will be no more progress, and we have thus reached the 'end of history' (Fukuyama 1992).

7 See Smith (1993) for an overview of changing sociological perspectives on chance, where the author describes how, until the undermining of the 'orthodox consensus' of structural-functionalism, in the 1960s, a determinist paradigm excluded the consideration of chance. This useful summary is marred when Smith fails to notice that, in the general move towards the increasing status of indeterminism, his analysis of chance slides into a consideration of risk.
The risk society, then, oversees the breakdown of certainty and the erosion of metaphysical meaning, for in the Empire of Chance, the pursuit of knowledge takes the form of the calculation of risks. As the universe of possibilities opens up, cultural pluralism overtakes cultural hegemony and certain knowledge fragments and dissolves into a myriad of subjective viewpoints. In a probabilistic world of risk, the idea of objective truth becomes anachronistic and every claim to 'knowledge' must be fought for. As Douglas puts it 'Knowledge has to be defended at every point; the open society guarantees nothing' (Douglas 1992, p32). With the erosion of certainty in knowledge comes the perennial insecurity of modern life, described by Beck in tones redolent of Durkheimian anomie: 'People are set free from the certainties and modes of living of the industrial epoch... The shocks unleashed by this constitute the other side of the risk society. The system of co-ordinates in which life and thinking are fastened in industrial modernity - the axes of gender, family and occupation, the belief in science and progress - begins to shake and a new twilight of opportunities and hazards comes into existence - the contours of the risk society' (Beck 1992, p15). With the co-ordinates of social meaning torn asunder, it is clear that 'there is no risk free behaviour... There is no absolute safety or security' (Luhmann 1992, p28). Moreover, we must abandon the hope that greater knowledge will lead to greater security. Contrary to the optimistic Enlightenment belief that perfect knowledge would reveal the divine and absolute order of the world, now quite the opposite is true - the more we know, the less certain we become. For the classical probabilists, the pursuit of knowledge was synonymous with the pursuit of certainty, the risk theorists of the modern age, however, have uncertainty as their subject.

For all these authors, the creation of risk is inherent in the capitalist system of production, and (with the exception perhaps of Giddens), the assumption that it has overtaken class as the dynamic of that system is implicit in their work. In fact, an actual antipathy to the notion of class is evident from their endless discussion of eco-politics and corresponding lack of debate about the kind of politics that effect the differential distribution of risks in a stratified society. The kind of risks the authors insist could effect everyone - nuclear holocaust, environmental disaster - are the very ones that have in fact so far affected no-one. Beck writes that 'In advanced modernity, the social production of wealth is
systematically accompanied by the social production of risks' (Beck 1992, p19). Although he admits that risks adhere inversely to class, with wealth accumulating at the top and risks at the bottom of the social hierarchy, he insists that the 'globalisation of risks' affects everyone equally (Beck 1992, p35). Thus, unlike class positions, risk positions are universal and unspecific: 'In class positions, being determines consciousness, while in risk positions, conversely, consciousness (knowledge) determines being' (Beck 1992, p53).

Luhmann makes a stronger statement of this view when he declares that technological and ecological risks have become the new object of sociology now that old 'prejudices' (presumably Marxism) are no longer of interest in our brave new postmodern world: 'Following the ebb of anticapitalist prejudice, it [sociology] now finds a new opportunity to fill its old role with new content, namely to warn society (Luhmann 1992, p5).

If this is the case, then readers of the 'new' sociology will find much to warn them off it, for we come to a second theme of the new discipline: the attempt to find some sort of analogy between medieval notions of fate and modern ones of risk. On the basis of the declared ubiquity of risk in modern society, Beck concludes that the latter is comprised of 'a kind of risk-fate... into which we are born and cannot escape... i.e. we are all confronted similarly by that fate' (Beck 1992, p41). Not content with such a fantastic comparison, he goes on to ascribe to contemporary poisons the role of malicious spirits in the middle ages: 'Everywhere, pollutants and toxins laugh and play their tricks like devils in the middle ages' (Beck 1992, p73).

Luhmann and Douglas also seek some kind of theoretical continuity between what they take to be medieval and modern notions of danger. For Douglas, the language of risk takes over from the language of sin as a means of moralising and politicising danger (Douglas 1992, p25), while Luhmann claims that the two are 'functionally equivalent' insofar as they 'serve to explain how misfortune comes about' (Luhmann 1992, p8). At one point he goes so far as to make the astounding claim that risk calculation 'is clearly the secular counterpart to a repentance - minimisation programme' (Luhmann 1992, p11). At the vanguard of the new sociology, Luhmann is in the interesting position of believing that 'in

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8 Again, with the exception of Giddens (1991, p130-1, 141,183), who identifies providential beliefs in notions of fate as 'residual' and existing alongside but separate from, other modern ideas about risk and pragmatism.
the real world there is no such thing as chance' (Luhmann 1992, p. 182). He should know better, for as well as the mass of evidence to the contrary, his own analysis of risk is based on the premise that chance exists as an irreducible part of the world.

Criticism of the specious parallels outlined above could be extended: for our purposes it is sufficient to note that modern risk is simply not synonymous with medieval sin and/or fate. The two represent entirely different world views - one religious, concerned with notions of divine will and predestination, the other scientific, arising in seventeenth century commerce and concerned with the calculation of uncertainty in a probabilistic universe.

However, despite their shortcomings, these works are in fact representative of the risk society: not because their imagined paradigm of postmodernity, in which risk has overtaken class as a dynamic of social action, bears any relation to reality, but because it is now possible to conceive of such a model. In this sense, they are more symptomatic of the risk society than they are its impartial observers. As Giddens has pointed out, it is not the case that risk is now paramount in social life: what is important is that the perception of these risks is now paramount. This perception should be seen as the product, not of a society that has suddenly become full of risks, but of a long historical process that gave ontological status to chance, and to us a probabilistic Lebensgefühl.
CHAPTER TWO : THE PURSUIT OF CHANCE

GAMBLING AND DIVINATION

Sacred Play
Dice
Cards
Lots

THE SEVENTEENTH CENTURY EXPLOSION

Speculation
Betting
Gambling

THE NINETEENTH CENTURY : PLAYING WITH NUMBERS

POSTSCRIPT : THE VORTEX OF VICE
THE PURSUIT OF CHANCE

GAMBLING AND DIVINATION

Sacred Play

As the correspondence between ancient divinatory ritual and some of the formal characteristics of gambling practice has been established, we can now turn to a closer examination of the historical development of the formal and social characteristics of specific types of games. In this Chapter it will be seen that the conflation of chance and determinism reviewed in Chapter One is matched by a corresponding conflation of early games of chance and divination. Their gradual historical separation (though never entirely completed) can be regarded as a process propelled by the same dynamic as that which saw the separation of chance from notions of divine providence and fate.

Most of our modern, commercial gambling games derive from the manipulation of cards or dice, both of which have their origin in the ancient casting of lots. This is not intended to imply, however, as some have (e.g. Martinez, David, Cohen, Tylor), that modern games are merely the secularisation of what was once sacred. There exists no evidence that one form ‘grew out’ of the other as one was discarded. On the contrary, there is much to suggest that the two practices were coterminous, for the form, the content and even the purpose of certain activities brought play and ritual, sacred and profane, together into the same sphere. Both gambling and divination utilised the same implements in rituals which were pursued with varying degrees of seriousness, and characterised by a certain attitude of irreverence. As we saw in Chapter One, social life is seldom demarcated into clear cut areas of action and belief, and nowhere is this more evident than in the dynamic of frivolity and seriousness that characterised these game-rituals. Levi-Strauss has described the formal identity of games and ritual, writing: ‘there are relations of the same type between games and rites’ (Levi-Strauss 1989, p30), while Csikszentmihalyi and Bennett have established that games of chance ‘were first played in a context of religious ceremonial activities’. In this way, ‘divination is play before it becomes a game’, although, the authors
admit, it is impossible to know the process by which religious ceremony becomes 'mere' game. What is certain however, is that even when such activities have become pastimes, a relation to 'genuine divination' still exists (Csikszentmihalyi and Bennett 1971, p 47).

Within certain activities then, the boundary we generally expect to find separating ritual from play simply did not exist. At these points in the social fabric the categories of sacred and profane blurred and ran into one another. It was Plato who first pointed to this conjunction of play and ritual, suggesting the sacred nature of the former, when he said 'man is made God's plaything, and that is the best part of him. Therefore every man and woman should live life accordingly, and play the noblest games... Life must be lived as play... and then a man will be able to propitiate the gods, defend himself against his enemies, and win in the contest' (Plato 1934, p182). In this Platonic tradition, Huizinga identified the 'essential and original identity' of play and ritual. Consciousness of the sacred unites both, he wrote, for in play 'man's consciousness that he is embedded in a sacred order of things finds its first, highest and holiest expression. Gradually the significance of a sacred act permeates the playing. Ritual grafts itself upon it but the primary thing is and remains play' (Huizinga 1957, p18). For Huizinga, this identity renders explanations of causal primacy irrelevant, for both are of the same essence and grow out of one another: 'just as there is no formal difference between play and ritual, so the consecrated spot cannot be formally distinguished from the play ground. The arena, the card table, the magic circle, the temple, the stage, the screen, the tennis court, the court of justice etc, are all in form and function play grounds; i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain. All are temporary worlds within the ordinary world, dedicated to the performance of an act apart' (Huizinga 1957, p10).

Instances of such sacred games occur frequently in historical and anthropological literature, for example amongst the early American Indians, who believed that their gods both created and oversaw their gambling games, and that they determined the outcome (Brenner and Brenner 1990, p3). The oblong court in which the game known as tlachti

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1 The correspondence between games of chance and religious belief has been widely recognised (Otto, Culin, David, Csikszentmihalyi and Bennett) with Roberts et al. arguing that the former are 'exercises in relationships with the supernatural' (Roberts et al. 1959, p602). According to Martinez, the earliest games were not 'performed independently of a belief in some sort of spiritual power'. Dice and cards were 'important components of natural religious rituals, seeking to foretell the future' (Martinez 1976, p16).
among the Aztecs and *pok-a-tok* among the Mayas was played was a sacred enclosure - a 'magic circle' or 'consecrated spot' - in which the spirits of the dead resided. The game, whose object was to put a rubber ball through a ring without the use of the hands, was performed before the holy rulers of the Aztec and Maya tribes as early as 500 B.C. Enormous bets of gold, slaves, houses and cornfields were wagered by both spectators and participants alike on which player would direct the ball into the ring most skilfully (von Hagen 1962, p61). The game also had a more serious side, whereby its outcome revealed the will of the gods: 'a question was asked of the gods and one side represented the answer 'yes', the other the answer 'no' and the outcome was settled by whichever side won' (Adams, in Moore and Myerhoff 1977, p238). This popular gambling game was thus both game and ritual; its 'ritualistic and magical' form reflecting its character as 'essentially a religious game' (von Hagen 1962, p61). The court of *tlachtli* and *pok-a-tok* were places of worship as well as stadiums for play, so that in these spectacular performances were combined the devotion of religious ritual with all the excitement of gambling.

The game of *huayru* played by the Canelo of Ecuador further demonstrates the confluence of secular drama with religious ritual. The Canelo play *huayru* at the death vigil of the master of the house, ranging themselves in two rows on either side of the corpse. Players take it in turn to throw the die across the body of the dead man so that during the course of the game all the goods and livestock of the deceased are gambled away to the participants. This game-ritual is imbued with religious significance, and Jensen writes that 'the ceremony, formally identical with our games of chance, is inseparably part of the death cult' (Jensen 1963, p61). The outcome of the game is interpreted according to ritualistic criterion: a particularly lucky player is believed to be favoured by the dead man while a chronic loser is thought to be disliked by him and a long run of unfavourable throws is attributed to the displeasure of the deceased. Jensen explains how the game illuminates a common trend, for: 'so frequently are games encountered as essential parts of a cult and as vivid expressions of central religious concepts that even the sceptic must be persuaded [of their affinity]' (Jensen 1963, p61). Levi-Strauss found that the mythological function of all such North American games of chance was to enable the soul of the deceased to enter the spirit world, and in this function, ritual and play were often rendered indistinguishable: 'Ritual, which is also played is...like...a game' (Levi-Strauss 1989, p30).
The intense ceremonial activity which preceded divination ritual was often observed before engagement in gambling games. Fasting, sexual continence, incantations, exorcisms and the emphasis on dreams and other omens of good luck were as important to gamblers before a game as they were to shamans about to undertake divination. In some societies, divination itself could precede a game, and was carried out in order to determine the outcome of the latter. Levy-Bruhl quoted a missionary describing just such a tradition among the Huron:

'Before playing games of chance, the natives have recourse to... divination. There are some who always fast for days before playing; the previous evening they all meet in a hut and make a feast for the purpose of finding out what the issue of the game will be... They used to choose someone who dreamt he would win to pass the [dice] dish...' (in Levy-Bruhl 1923, p163).

It can be seen then, that early gambling games could possess the character of sacred ritual. 'Secular' drama and religious ritual were profoundly entwined, sharing the same implements, the same formal structure and the same orientation of participants. the latter of which was tinged by both a respect for all that was holy in the world of the gods, as well as an irreverence for all that was absurd in the human world. These two attitudes were conjoined in the sacred game - sacer ludus - the encounter of man and God (van der Leeuw 1967, p376). Play was not merely incidental to the business of ritual, on the contrary it was an integral feature of the encounter, and it is on this basis that Huizinga criticised Tacitus' astonishment on seeing the Germans 'casting dice in earnest as a serious occupation'. Such a disposition was entirely natural, he argued, for it is 'precisely the play character of dicing that gives it so important a place in ritual' (Huizinga 1957, p58).

The Wager

Within the same divination ritual that served as a forum for the expression of the divine voice existed gambling ritual, serving the expression of the human voice. The outcome of a chance event was the medium through which the divinity spoke, and the wager the medium through which the individual spoke. In this sense the wager can be seen as a kind of pact with the divine: a token of man's involvement in sacred ritual, through which his
opinion on the proceedings could be demonstrated. As such a measure of involvement, the wager had to be something of value, worthy of representing the participant’s opinion.

With the individual included in the ritual, the nature of the ceremony itself was changed from a straightforward case of divination to a more interactive game of chance. It was still a sacred encounter, but one in which the individual no longer passively awaited divine pronouncement, instead challenging the deity to reveal its intentions. Like the stake in modern games of chance, the wager in ritual brought together the propitiate and the propitiated in *sacer ludus*. In the words of Baudrillard: ‘The stake is a summons, the game a duel: chance is summoned to respond, obliged by the player’s wager to declare itself either favourable or hostile’. In this way ‘Chance is never neutral, the game transforms it into a player and agonistic figure’ (Baudrillard 1990, p.143). Within the sacred circle the player boldly demonstrated his personal opinion through the medium of his wager. By anticipating the result of the ritual, the individual was attempting to demonstrate his understanding of the divinity. A correct guess indicated his personal opinion was consonant with that of the divinity, and, thus vindicated, he felt momentarily as though he belonged to the realm of the sacred. A wrong guess demonstrated his lack of harmony with the sphere of the divine and was reinforced by the prompt removal of his wager, his representative of himself.

**Dice**

Dice are the oldest gaming instruments of human civilisation, occurring more or less ubiquitously throughout history in the ancient, primitive and classical worlds. Sophocles reputedly claimed that they were invented by Palamedes during the siege of Troy, while Herodotus pointed to a Lydian invention in the days of King Atys (Scarne 1974). Both ‘inventions’ however have been discredited by archaeological finds which indicates the existence of dice long before the appearance of the classical or pre-classical eras. Archaeological excavations from prehistoric graves in North and South America, Africa and the Orient, have uncovered primitive, four-sided gaming sticks from 6000 B.C., whilst similar finds in the Egyptian tomb of Osiris date from 2000 B.C. (Sifakis 1990). These early civilisations gambled with dice made of many materials - plum and peach stones,
pebbles and the knucklebones of cows and sheep, known as astragali. These astragali would come to rest when rolled and were used in this manner in both games of chance (where today dice still retain the slang term ‘bones’) and primitive divination ritual, especially in the casting of lots. (Sifakis, Scarne, Loewe and Blacker).

Some of the earliest dice games involved the tossing of bones or marked stones, with winning combinations deduced from the way they landed. In more complex games, like the Egyptian tab and the ancient Indian chaturanga (later chess), the throw of a die controlled the movement of counters on a marked playing surface, as in the backgammon of today (Scarne 1974, p37). Similarly, the dramatic Aztec games of totoloque and patolli used marked boards and counters, upon which golden dice were tossed in high stakes gambling games (von Hagen, 1962, p64).

In other types of game, the concurrence between the sacred and the recreational was more marked. The White Dog Feast of the Onodagas inextricably linked the two in a game in which points were given for the combinations eight rectangular plum stones, marked half black and half white, fell in. On their White Dog Feast the game was carried out to predict the next year’s harvest, using the same moves ‘on which they bet their possessions in gambling sessions during the rest of the year’ (Chafetz 1960, p8). In India, dice known as coupon (Steinmetz 1870, p27) were used as a means of divination in the practise of Ramala at the same time they were used for gambling. The latter was recorded in the Indian epic, The Mahabharata, where Sakuni challenged Yudhisthiva to a contest, saying ‘the dice are my bows and arrows, the heart of the dice my string, the dicing rug my chariot!’ (The Mahabharata 1975, p122). The sacred significance of the game was apparent in Duryodhama’s assertion that ‘if we gamble, the heavenly gate will be nearer’, and in the divine hall which was specially erected to contain the contest (The Mahabharata 1975, p123).

The Greeks and Romans frequently used astragali and tesserae (six sided dice made of ivory, porcelain, or marble) in both games and rituals. The Greek custom of astragalomancy utilised the astralagus for fortune-telling as well as gambling (Scarne 1974, p30), while the Romans used the same implements for casting lots, lottery draws
and gaming alike. Inveterate gamblers, they enjoyed the quick results of dice games and chariot races which they saw as a demonstration of character. The reckless gambling of the Roman Empire was highlighted at the racetrack, where the main attraction was the possibility of making rash bets - *audax sponsio* - on the spur of the moment, instead of those based on sensible observation of the Racing Calendar (Harris 1972, p 226). The Romans called their bets *pignus*, and regarded them as a pledge of the gamblers confidence in his own opinion (Harris 1972, p224). According to Steinmetz, Augustus ‘gambled to excess’, Claudius ‘played like an imbecile’ and Nero ‘like a madman’ (Steinmetz 1870, p64,5). Suetonius’s remark that ‘Claudius’ s reputation for stupidity was further enhanced by stories of his drunkenness and love of gambling’ (Suetonius 1958, p 185), is evidence of the low esteem with which gambling was officially held in the Roman Empire. However, even severe laws condemning players as ‘robbers and thieves’ could not quell the passion for play which Juvenel describes in his *Satires*:

“When was gambling more frantic
Than it is today? Men face the tables
Not with their purse but with their strong box open beside them
Here you will see notable battles with the croupier for squire
Holding stakes instead of a shield. Is it not plain lunacy
To lose ten thousand on the turn of a dice, yet grudge
A shirt to your shivering slave”

(Juvenal 1988, p68)

The culture of the classical and pre-classical worlds was imbued with images of dicing: excavations of porticos and basilicas have revealed etchings of gaming tables, for any flat surface was regarded as a potential place to play and the appropriate markings quickly made. These tables would be used for simple throwing and guessing games such as ‘odds and evens’, as well as games like ‘tabula’ which were played for stakes of thousands of *sestertii* by moving counters and throwing dice. This favourite game of the later Roman Empire later developed and spread westwards as backgammon (Sifakis 1990, p15). The popularity of ‘ten’ was undisputed, and is believed to have been played for Christ’s garments at his execution: ‘When the soldiers had crucified Jesus they took his garments...
and said... "let us not tear it, but cast lots to see whose it shall be" (John 19:23-24) In this three-dice game, all players lose their wagers if the player throwing the dice scores less than ten, more than ten, and they win. Such a betting system bears some resemblance to the game of 'hazard', which was widespread throughout Europe from the middle ages, and by the nineteenth century had developed into the modern casino game of craps.

It is in Seneca that we find the most vivid portrayal of the Roman fascination with dicing, and its perceived link with the Divine. In *The Apocoloccyntosis*, the gods' punishment for the dice playing emperor Claudius is to force him to throw dice from a bottomless cup forever. In the description of such an exquisite torture, we see a reluctant admiration of so ingenious a punishment, symptomatic of a wider ambivalence toward dicing and its continued correspondence with divination in the classical world:

> 'When from the rattling cup he seeks to throw<br>   The die they trickle through the hole below<br>   And when he tries the recovered bones to roll -<br>   A gambler fooled by the eternal goal -<br>   Again they fool him; through his finger tips<br>   Each time each cunning die as cruelly slips<br>   A Sisphus' rocks, before they reach the crest<br>   Slip from his neck and roll back to their rest'<  
  (Seneca 1986, p232-3)

Although bearbating and cockfighting involved heavy betting, from the advent of the Saxons, Danes and Romans in Europe, dicing became 'the classic gambling game of the entire medieval period' (Strayer 1982, p350). The earliest recorded references to gambling with dice come from Ordevicus Viticus (1075-1143) who tells us that 'the clergymen and bishops are fond of dice playing', and from John of Salisbury, (1100-1182), writing of 'the damnable art of dice-playing' (in Ashton 1898, p13). More generously, Alfonso X of Castile, the enlightened thirteenth century monarch, wrote in his *Libros acedrex dados e tables* (*Book of chess, dice and board games*) that gambling was a harmless distraction,
since 'God has intended that mankind should enjoy themselves with playing' (in Strayer 1982, p352).

Simple guessing games with dice were popular, as were variations on a 'hunt' game played with counters on a square or cross shaped grid (Strayer 1982, p350). Representative of the agrarian society in which it was played, the game, known as gwyydeuyl in Wales, and alquerque in Spain, portrayed a kind of farmland battle. The aim was for the fifteen pieces - the geese - to corner the single piece - the fox - of the opponent, without the fox taking the geese by jumping over them. A variation of the theme was known to the Vikings by the name of hneftaff, while a similar game combining dice throws and placing of men - like the 'tables' played by the Romans - was called taefal - a 'kind of backgammon' (Traill and Mann 1893, p313). The game of 'hazard' (the forerunner of modern casino craps) was perhaps the most engrossing medieval dice game, especially favoured amongst soldiers. It involved a player throwing two dice, and the others betting on whether or not he would achieve certain numbers with them.

Dicing played an important role in the everyday life of the middle ages and was assiduously pursued by all classes of society. However, not everyone had the capital of players like Yudhisthiva in The Mahabharata, who staked a hundred thousand gold pieces, a thousand elephants, his slaves, his army and all his wealth in a single game. Finally he staked the liberty of his brothers, his wife and even himself (The Mahabharata 1975, p128-137): a practice which, while unusual among the wealthy, was not uncommon amongst the poorer classes of society in an age when the vast majority of the population possessed little of value to stake in a game. While the wealthy could wager land and gold, the poor frequently had nothing to lose but their liberty. Describing the ancient German practice of 'vicious dicing', Tacitus records how slaves were frequently made from gambling sessions: 'They play at dice... making a serious business of it; and they are so reckless in their anxiety to win... that when everything else is gone they will stake their personal liberty on a last decisive throw. A loser willingly discharges his debt by becoming a slave... [and] allows himself to be bound and sold by the winner' (Tacitus 1982, p122). Often, their meagre stakes were virtually indistinguishable from the gamblers themselves, as was in the case with the Indians 'who stake their fingers and cut them off themselves to pay the debt
of honour', and the Englishmen who 'cut off their ears, both as a 'security' for a gambling loan and as a stake...' (Steinmetz 1870, p11).

It is during the middle ages that we find, in innumerable bans and prohibitions, attempts to suppress the gambling activities of the working population. In what was an essentially pragmatic position, the Catholic Church recommended individuals indulge themselves in moderate recreation just sufficient to improve their health, so fortifying them for the resumption of work. Field games, walks and serious conversation were regarded as fit for this purpose, while gambling games, having little to offer in the way of fresh air and exercise, and much to encourage idleness and usury, were generally disapproved of (Dunkley 1985, p37). Those activities condoned by the Church had the added advantage of maintaining a fit workforce in an era whose violence made the existence of a reserve population who could quickly be rallied into an indigent army, very attractive. It was thus practical considerations which led to the encouragement of outdoor sports like archery, and the suppression of pastimes which might detract from them, like gambling. Although gaming was ostensibly prohibited to protect the noble practice of archery 'to the terrible dread and fear of all strange nations' (Steinmetz 1870, p418), underlying the medieval statutes was also the fear (which would become increasingly pervasive) of the disorderly effects of such practices. To control the activities of soldiers, an edict was established 'for the regulation of the Christian army under the command of Richard I of England during the Crusade'. Anyone below the rank of knight was forbidden to play dice for money. Knights and clergymen were allowed to play, but not to lose more than twenty shillings in a day, 'under a penalty of one hundred shillings to be paid to the archbishops in the army'. The monarchs could play as they wished 'but their attendants were restricted to the sum of twenty shillings and if they exceeded they were to be whipped naked throughout the army for three days'. Thus, a kind of 'sliding scale' of prohibition regulated the army, while, in succeeding statutes for the population at large, 'dicing [was] particularly and expressly forbidden' (in Ashton 1898, p13).

In Chaucer we find the articulation of a strand of late medieval thought which would grow more vocal over the centuries, and which condemned gambling expressly for its
squandering of time and money, particularly amongst the higher ranks. In the *Canterbury Tales*, he wrote:

> And now that I have spoken of gluttony,
> Now wol I yow deffenden hasardrye. [forbid gambling]
> Hasard is verry mooder of lesynges [lies]
> And of deceite, and cursed forswerynges, [perjury]
> Blaspheme of Crist, manslaughtre, and wast also [blasphemy]
> Of catel and of tyme ... [property]

Unusually in medieval thought, Chaucer believed the higher the station of the gambler, the greater the magnitude of the sin:

> And ever the hyer he is of estaat, [rank]
> The moore is he yholden desolaat. [considered abandoned]

(Chaucer 1966, p351-2)

**Cards**

In the same way that dice came into existence with divinatory practice, cards appeared alongside the divinatory use of the arrow around the twelfth century. The etymology of the word belies this heritage; in Italy, cards are known as *naibs*, in Spain *naypes*, both of which are corruptions of the Arabic *nabi*, which means ‘prophet’ or ‘predict’ (Taylor 1865, p32). Casting rods and feathered sticks marked with four different symbols were used by the American Indians and also in the ancient Orient in rituals in which priests and other sacred figures interpreted the commands of the gods according to the direction in which the sticks fell. Contrary to Sifakis’ assertion that the design of these throwing sticks was a gradual historical development, with decorative images and a general flattening of the sticks being added over the centuries (Sifakis 1990, vii), evidence from as early as 4000 B.C. shows that in fact such a design probably existed coeval with the most ancient
sticks themselves. Ivory rods from Babylon and Egypt have been found, bearing figures of father, mother and child that are similar in function to the tribal divisions of bear, tortoise and eagle marked on the sticks of the Alaskan and Haida Indians. The designs of these rods gave them specific values in divination practices as well as in games of chance, for as emblems of 'mystic power and authority' they were used in both types of ritual (van Renssalaer 1912, p42). In his Korean Games, Stewart Culin conflated the activities of gamblers and diviners as they were conflated in reality: 'In Chinese fortune-telling, the gamblers... throw numbered arrows or sticks to divine the wishes of the gods...'. The markings on these sticks represented social groups and individuals within them, and this 'enabled a man to ask queries of the gods in a most particular way' (Culin 1896, p181). To ask a question as a father, or a fighter, or a member of the Bear tribe, he would select an appropriate emblem to represent him, and interpret the meaning of the sticks surrounding it when it fell.

The recurrent four-fold division of these early cards is an aspect of the tendency to regard the world as an entity composed of four units, and, according to Cassirer, is a basic schema of religious thought. Describing its establishment within divinatory ritual, he writes: 'In searching the sky for omens of man's undertakings on earth, the augur began by dividing it into definite sectors'. An east-west line represented the course of the sun and was bisected by a vertical north-south line, and so 'With intersection of the decumans and the cards, religious thinking created its first basic schema of co-ordinates' (Cassirer 1953, p100). It is this cosmic order that was represented by the symbols and markings that decorated divining arrows, and which the design of playing cards continued with their distinction between four suits.

Our modern cards are descended from strips of oiled paper from twelfth century Korea known as Htou-Tjen, or 'fighting arrows' (van Renssalaer 1912, p32). Bearing the image of an arrow on their backs, these primitive cards 'flaunted their lineage from the ancient rites of the feathered arrow and the magic ring' (Hargrave 1966, p7). In the twelfth

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Similarly, Martinez's evolutionist notion that 'the massification of divination objects for gambling purposes represents a secularisation and vulgarisation of religious magic' is an oversimplification. However, his statement that the need for priests or shaman would have been diminished 'when easily readable symbols were placed on dice and cards' probably has some (unsubstantiable) degree of truth (Martinez 1976, p17).
century, Chinese cards, influenced by these Korean ones and by Chinese paper money, appeared. A pack consisted of four sets - coins, strings, myriads and tens of myriads - each with thirty-eight cards bearing pictorial representations of their value. The latter two suits were believed to be imbued with powerful magical properties and were placed on the coffins of the dead (Hargrave 1966, p9). The development of games was probably coeval with the appearance of cards themselves. The Chinese played two main types of game, with cards either forming winning combinations, or high cards capturing low ones, a formulation which still forms the basis of all modern gambling games.

The number and variation of the design of cards makes a pack a compact and ingenious system for play, with the maximum number of variables handled in a neat, economical way. In this sense, cards are a more creative means of gambling than dice, with greater potential for manipulation and an enormous possible number of games. As a result of such complexity, they can be viewed as a symbolic system, with packs and games depicting an image of the society in which they are created and played.

In her beautifully illustrated History of Playing Cards, Hargrave examines the cards of Asia and Europe, building up a picture of these tablets as miniature pieces of artwork, the social and cultural life of their country of origin embodied in the exquisite detail of their design. They were, she writes, 'as individual and faithful a mirror of the taste and temperament and traditions of the people as other branches of their arts' (Hargrave 1966, p170). Early cards were crafted by hand on wood, copper and ivory as well as card and paper. The individual who wanted a set would commission a painter who would then design the pack according to the wishes of the purchaser; usually designs were images of the purchaser himself, his family or his hunting lands. The process of creating an entire set of cards by hand was painstakingly slow, but, with painters like Andrea Mantegna, Martin Schongauer and Botticelli employed at the task, the resulting set was a unique and fragile work of art.

In Plate One, we can see this variation in card design. On the top left are ancient Chinese 'domino cards' used for fortune-telling as well as gambling; top right are Indian eight-suit
cards, on the bottom left is a card painted for Charles VI of France in 1392, and bottom right are cards from the Japanese game *hana awase*, or 'flower game' (in Hargrave 1966).

The hand-crafting of cards made their cost prohibitive to all but the nobility, and, although popular demand encouraged their creation with stencils and wood blocks, the price of the resulting set put them out of reach of the majority of the population. It was not until the momentous invention of the printing press in the fifteenth century that cards came into mass everyday use and became widely disseminated throughout Europe (Sifakis 1990, p56). As well as increasing their number and availability, the printing of cards on mechanical presses encouraged the standardisation of design, so that by the end of the century, the luscious images in Hargrave's visual history were becoming less idiosyncratic and less varied and beginning to look more like each other.

From their inception in the East, cards were introduced to Europe in the late thirteenth and early fourteenth centuries, probably first into Italy by explorers such as Marco Polo, who had witnessed their use in ancient Eastern lands such as Cathay, where gambling was 'more prevalent than anywhere else in the world' (Polo 1968, p161) These Italian cards, known as tarots, were highly decorative, and were used 'possibly as a means of divination' (Hargrave 1966, p223). As well as picture cards and numbers, the tarot had a third set, the *trionfi* which played an important role in the cards' fortune-telling function. The images on these *trionfi* have been the subject of mystical association since the eighteenth century when a tract by de Gebelin, fuelled by the centuries' revival of eastern wisdom, interpreted them in terms of occult Egyptian mysticism. The images are of Italian origin, however, and represent the stages that make up the semireligious pre-Lenten carnival processions in fourteenth century Italy (Strayer 1982, p352). Nor is the fortune-telling function of the cards peculiarly 'eastern', but typical of the continued association of all cards with their divinatory origin.

Originally, the tarot were used for the amusement of children and for forms of divination like fortune-telling, but as their 'heathen' symbols were christianised, they began to be used in games of chance. After the Chinese tradition of the four suits, the Venetians developed their own which represented the contemporary Italian social order. Long curved swords
symbolised the nobility, cups the church, money the merchants and clubs the peasantry. (Hargrave 1966, p224). In agrarian German culture the design was slightly different, with suit signs of acorns for the peasantry, linden leaves for the nobility, hearts the clergy and hawk bells (an old medium of trade and exchange), for the merchants (Olmstead 1967, p138). These suits were ranked in a microcosm of hierarchical medieval society with cups at the apex, swords next (later these were reversed), followed by money, and finally clubs (Olmsted 1967, p138). The internal organisation of the suits corresponded to the divisions in the medieval army, headed by the King, followed by the Knight (later replaced by the Queen), valet and lastly the faceless foot soldiers - the number cards (Strayer 1982, p352). The number cards occasionally carried roman numerals, but most often their value was simply depicted by the amount of representatives of their suit sign. The joker carried on its status from the tarot. Having no suit or number it existed in a class of its own, and symbolised fate and chance; ‘the unforeseen, the unexpected, uncertainty or uncontrollable fate and the destiny that presides over every walk of life’ (van Renssalaer 1912, p55).

Over the following three hundred years the design of European playing cards was modified to reflect their social and political milieu. The idiosyncratic designs which proliferated as a result of the individual crafting of every pack created a corresponding diversity of suit designs. Sometimes figures from legend or myth were represented, sometimes contemporary heroes. In Germany, astronomical cards depicted the Copernican universe, while more terrestrial ones bore the images of national poets (Hargrave 1962, p102-9). Most common however were heraldic series - cards carrying portraits of the reigning families of the land. It was in this heraldic tradition that a knight by the name of Lahire designed a new suit, replacing the Italian one with images more representative of the chivalric order he came from. *Coers* (hearts ♣️) were the church, *carreaux* (arrowheads or diamonds ⚔️), the vassals, *tréfles* (clubs ♣️), the husbandmen and *piques* (spades ♠️), the knights. The face cards showed the old European family system - father, mother and eldest son, rather than king, knight and valet. This new design served as a model for cards in the similarly courtly society of fifteenth century England, where the first record of their recreational use appeared in a letter from Margaret Paston to her husband in December 1459. She wrote that the Christmas activities of a neighbouring noble household were ‘none disguising, nor harping, nor luting, nor singing, nor no loud disports, but playing at
the tables and chess and cards... (Margaret Paston 1991, p54). After this, early references to cards in England are prohibitory. The History of the Order of the Garter (1278) discusses 'the Plays forbidden by the Clergy ... which might be cards, chesse ....' (in Ashton 1898, p35), and in 1397 cards were sufficiently common to elicit a law forbidding them on work days (Strayer 1982, p352).

In Plate Two we see the beautifully painted, but indistinct suit signs of hand painted cards, contrasted with more standardised ones made on printing presses. In the top left is the valet of cups from 1644; top right, a valet of swords, modelled on a member of a noble eighteenth century Italian household. In the bottom right we have an English court card made by a London card maker in 1678; while the bottom left is a recognisably modern Russian card from 1840 (in Hargrave 1966).

As well as the cards themselves, the games played with them were representative of their social milieu. Games and cards existed in a dynamic relation with each other and with the social world in general. The affinity of card games (and, indeed, of games in general) with the social body reflect 'on the one hand, the tendencies, tastes and ways of thought that are prevalent, while at the same time, in educating and training the players in these very virtues and eccentricities ... subtly confirm them in their habits and preferences' (Caillois 1962, p83). In the light of such reciprocity, cards became a microcosm of the society that played with them. Games were continually modified and altered, following the configurations of the world around them, with the result that those played in the fifteenth century, such as primero, pair, brelan and gleek, were very different from those of the seventeenth and nineteenth centuries.

The principle behind medieval card games was the acquisition of combinations, or murnivals and melds (Taylor 1865, p313). Certain cards have a prescribed value when grouped with others which they 'match', such as four of a kind - a murnival. Examples of melds are a marriage - a king and queen of the same suit, a flush - three or more cards of the same suit, a sequence - three or more cards in ranking order, and a pair - two cards of the same rank. In games like primero, instead of each deal ranking as a separate event, play is continuous. In such an ongoing process, scoring follows the principle that cards not
Plate Two
melded in significant groupings are penalties (Parlett 1979). In such games, it is assumed that all cards 'go together' with specific others in sequences, groups and combinations. Each card has a definite *place* in relation to a larger whole, and it is only in these configurations that their properties emerge and they are ascribed a value. Individual cards have no value, and are actively penalised in such a cohesive system. In these medieval games, individual properties such as number, suit and rank are less important than the overall picture given by the cards' *place* in relation to significant others. Such principles demonstrate a clear correspondence with the densely hierarchical society in which the games were played. Like the cards in their melds, the properties of people are predetermined by their position in social groups. Individual cards have no value because their 'nature' is only realised as part of a larger unit, and single cards thus carry a penalty. Similarly, the individual was treated with suspicion in medieval society for, in a world where everyone had a place in a fixed 'chain of being', character and lifestyle were to be found in conjunction with others. There was literally no *place* for solitude. This correspondence between cards and society is particularly marked in the change of the rules of *triomphe* (later whist). The identity of the trump suit was originally determined by turning over a card, so that, consonant with a society of hereditary ranking in which both status and suit are 'seen as fixed, not to be altered, a variable not under the control of the player' (Olmsted 1967, p 143), the most important suit was chosen by chance. In the later development of auction whist, it is possible for a player to bid for trumps with whichever suit he had the most of, or, if no-one had the necessary cards, have no trumps at all. In the more mobile society of the nineteenth century, status is no longer fixed and determined by chance. The game is more competitive and individualistic; a player with sufficiently strong cards and enough nerve to bid for them, can chose trumps.

The gradual dissolution of the rigid medieval system by the seventeenth century meant that rank, suit and number started to become more important than place in games, and, by the nineteenth century, the rise of individualism saw a corresponding emphasis on the numerical values of single cards.

Throughout their history, the separation between the recreational and the divinatory use of cards (like that of dice) was often non-existent: all the while they were being played in
games of chance, they were also being used to predict the future. The earliest work on
cartomancy, by Francesco Mariolini, came from Venice in 1540, while in 1634 *Le
Passatempts de la Fortune des Rez*, explaining the supernatural significance of various cards
and their combinations, was popular. There was no shortage of such material in England
either, where a multitude of divinatory series' with explanatory leaflets such as *The
Dreamers Oracle*, *Fortune-Telling by Cards*, and *Napoleon's Book of Fate* were printed
(Steimetz 1870, p391).

At the same time that tracts on the mystical quasi-religious function of cards were being
printed, and cards themselves being used for fortune-telling, another type of card-related
literature was flourishing. By the seventeenth century, card games were so numerous and
popular that a need to codify and record the rules developed, giving rise to a group of self
styled 'experts', who explained and formulated the rules and strategies of specific games.
In a rational, scientific manner, such writers utilised the insights of probability theory and
applied them to increasingly popular games of chance. In a time when books were still
relatively scarce, 'rows upon rows of volumes' on gaming existed (Hargrave 1966, p205),
scientific formulations on strategy sitting side by side with mystical directions for
divinatory ritual. At times it may have appeared that the scientific had supplanted the
religious worldview in the world of games, for, as von Renssalaer informs us: 'when any
dispute arose, [Hoyle's] book was consulted and instead of the players saying 'It is the
wish (or the voice) of the gods... it became customary to say 'It is according to Hoyle'"
(Hargrave 1966, p276).

Lots

We have already seen the ubiquity of lot casting in Chapter One, a practise which was used
to ascertain the preference of the Divine Will, especially with regard to the appropriation
of material goods. It is from this function that our modern lottery, and all games of chance
whereby winning is simply dependent on the possession of the correct ticket, derives.

The word 'lot' is of Teutonic origin (Sullivan 1972, p4), and comes from *hleut* which
designated a bean or pebble or some other token used to settle disputes. The term has
similar meanings and sounds in other languages - in Anglo-Saxon, 'to cast lots' is *Illew-mu*, in Dutch it is *Lotten* and in Swedish *Lotta* (Ashton 1898, p222).

The conflation of game and ritual, found over and over again in the use of cards and dice is perhaps clearest in the drawing of lots - an activity easily viewed as either sacred practise or secular game, depending on the occasion. In his explanatory note on the translation of the Koran, Sale articulates this conflation in sixteenth century Arabia: 'Lots. The original word *al Meiser* properly signifies a particular game played with arrows and much in use with the pagan Arabs. But by lots we are here to understand *all games whatsoever which are subject to chance or hazard*... ' (in Ashton 1898, p10; my italics). The Koran denounced the pre-Islamic practice of *maysir*, the drawing of lots with arrows, and, recognising the continuation of the principle in 'secular' gambling on games of chance, extended the prohibition to those as well. Still, Strayer tells us, the practice of *maysir* nevertheless 'flourished at all times in the forms of betting, guessing and casting of lots' (Strayer 1982, p353).

The origin of the lottery itself has been traced to the Roman Apophoreta (Steinmetz, Sullivan, Sifakis), where gifts were given to guests upon leaving banquets. Augustus Caesar was the first to sell lots to his guests, establishing a practice where he would 'auction tickets for prizes of most unequal value, and paintings with their faces turned to the wall, for which every guest present was expected to bid blindly, taking his chance like the rest' (Suetonius 1958, p93). Nero awarded prizes of villas and slaves to his revellers, while the eccentric Heliogabalus presented 'gifts' of dead dogs, flies and ostriches! An incipient form of lottery was practiced by Caligula, who, at the Games 'would scatter vouchers among the audience entitling them to all sorts of gifts' (Suetonius 1958, p158), and Nero, who used lots to dispose of goods he had stolen from shops (Suetonius 1958, p222). After the fall of Rome, feudal princes continued the tradition at banquets, finding the indiscriminate appropriation of tickets an ideal way of distributing gifts without exciting jealousy (Sullivan 1972, p4). The device of the lottery found willing patrons in the traders of a nascent system of commercial exchange. Sixteenth century Venetian and Genoese merchants used the 'Lotto' as a means of disposing of their wares, selling tickets to their customers and holding drawings to determine the winners in a practice which was
soon found to return profits at least as large as from conventional methods of enterprise (Ashton 1898, p222). Lotteries were also used when an individual wanted to dispose of household goods or land - items which might be too expensive to find a single buyer. For example, the advertisements in The Tatler newspaper September 14 1779 read: 'Mr Stockton's sale of jewels, Plate and C, will be drawn on Michelmas Day... The Sale of Goods to be seen at Mrs Butlers and C - will certainly be drawn on Tuesday the 17th inst ... Mrs Guthridge's Sixpenny Sale of Goods and C, continues to be drawn every day' (in Ashton 1898, p229).

Sifakis dates the first recorded European lottery to Burgundy in 1420, the proceeds from which were used for the fortification of the town (Sifakis 1990, p187), while Ashton finds it later in 1446 when the widow of the Flemish painter Jan van Eyck held a lottery in Bruges to raise funds for the poor (Ashton 1898, p222). Whichever is the more accurate, the utility of these small scale lotteries to individuals, merchants and towns was obvious, and was soon grasped by the politicians and monarchs of the emergent European nation states. From then, the development of lotteries increased in rapid and uneasy symbiotic relation to the development of a capitalist system of production. On the one hand, as an alternative to unpopular taxation, the revenue-raising potential of a lottery offered obvious attractions to the leaders of new states; on the other, however, its 'pagan' ancestry in lot casting appeared sacrilegious to the defenders of the new religious order established by the Reformation, while defenders of the secular political order worried that its appeal to Fate over the virtues of work was a disruptive (if not incendiary) force encouraging idleness and violence in the population.

Such ambivalence can be seen in legislation which vacillates between outright condemnation and tacit encouragement of lottery schemes.

The principality of Germany established a national lottery in 1521, Francis I began the French loterie in 1539, while Florence's first government lottery, La Lotto de Firenze, was held in 1528, with other city-states following suit. Such schemes raised vital funds for

\[\textsuperscript{3}\] The French Lottery was known as Blanques, from the Italian term blanca carta - white tickets - since all the losing tickers were considered blanks. Hence the derivation of the phrase 'to draw a blank' (Neville 1909, p296).
public projects and in fact French fiscal policy depended almost entirely on its *loterie* during the period when its citizens refused to pay their taxes (Sullivan 1972, p4).

In Britain, the first public lottery was projected in 1566 by Queen Elizabeth, but not drawn until 1569. It was 'A verie rich Lotterie Generall... containing a number of prices, as wel of redy money as of plate, and certaine sorts of marchandizes, having been valued and priced by the comamandment of the Queen's most excellent majestie... The number of lots shall be foure hundrett thousand... and every lot shall be the summe of tenne shillings sterling only and no more' (Ashton 1898, p223). Participation in the lottery was presented as a patriotic undertaking, for 'the Lotterie is erected by her majestie's order, to the intent that such commoditie as may chaunce to arise thereof, after the charges borne, may be converted towards the reparation of the havens and strength of the Realme, and towards such other publique good workes' (Ashton 1898, p223). Revenue from this lottery and the ones following it did indeed benefit the realm, paying for the supply of water to London, the building of the first Westminster Bridge and the creation of public libraries. The interests of the realm abroad were also greatly advanced by the lottery: as British colonists struggled to create the New World, British subjects in the old helped to ameliorate economic hardship through participation in lotteries specifically designed to support the colonial venture. Here, buying a lot served to further the glory of the British Kingdom abroad and this time the appeal was taken up mostly by the gentry. Having already invested in the Virginia Company, they played the lottery, not to increase their fortunes, 'but to enhance their status by following the example of great noblemen and government leaders already committed to financing overseas colonies' (Findlay 1986, p13). *These 'gamblers' played to establish rank and status, less concerned with the possibility of profit than with the honour and dignity of the British Empire. The colonies became the public work of the lottery *par excellence* and both were equated with the greater glory of the country by promising that 'so worthie an enterprise would enhance the Christian truth, the honor of our nation, and benefite of English people' (Findlay 1986, p13).

Since they played an integral part of foreign and domestic policy, seventeenth century Britain was 'awash with Lotteries' both private and state. Tickets were sold everywhere - in barbers, bakers, newstand proprietors and shoemakers (Sullivan 1972, p14) - as lottery
fever gripped the nation. In 1698 The London Spy decried the situation: ‘The Gazette and Post-Papers lay by neglected, and nothing was Pur’d over in the Coffee Houses, but the Ticket Catalogues; People running up and down the Streets in Crowds and Numbers, as if one end of the Town was on Fire, and the other were running to help 'em off with their Goods...’ (in Ashton 1898, p227).

In 1694 £1,000,000 was raised by lotteries, in 1697, £1,400,000, and then, in 1699, at the height of their popularity, it was all over; an Act declaring: ‘That all such Lotteries, and all other Lotteries, are common and publick nuisances, and that all grants, patents and licenses for such Lotteries, or any other Lotteries, are void and against the Law’ (Ashton 1898, p227).

Ashton offers no explanation for this political volte-face, moving straight on to the reintroduction of the lottery in the reign of Queen Ann. It is in this Act of 1710 however, that a clue to the cessation of the Lottery in the seventeenth century lies. In the new state lottery, 150,000 tickets were to be sold at £10 each, with prizes paid in annuities (Ashton 1898, p228). Such ticket prices would have put the Lottery out of the reach of all but the wealthiest sections of society and so effectively outlawed the lottery for the poor. Private lotteries, with their unregulated minimum stakes were next to go; proscribed by an Act of 1721 which imposed a penalty of £500 for running them. These ‘little goes’ as they were known, continued to run illegally despite the prohibition, and were patronised mainly by the poor who found them attractive for a number of reasons. Most obviously, they were easily accessible, simple to play and cheap, with the size of a possible prize far outweighing the paltry cost of a ticket. Furthermore, as Kavanagh and Dunkley point out, in a rigid social and economic system in which, despite its ideology of meritocracy, little genuine opportunity for advancement through effort or talent existed, sudden wealth through a lottery win appeared to the lower orders as a viable means - perhaps their only means - of material advancement. Dunkley notes that by the eighteenth century, the ideological basis for prevailing social divisions had been sufficiently weakened to encourage 'mobility aspirations' among the Third Estate (Dunkley 1985, p222). However, the material framework for realising these aspirations was not correspondingly advanced, and so a chasm between ambitions and the means of achieving them opened up. Into this gap, the
lottery appeared, and sustained the dream - crushed in more conventional economic arenas - of social mobility. So, the poor played in the hope of relieving their living conditions by a spectacular win, spurning the bourgeois equation of hard work and modest wealth in favour of the possibility of instant riches. The legislation against lotteries can be seen then as an attempt by the bourgeoisie to re-impose their values of hard work and material abstinence on the 'depraved poor'. The statutes also represented an attempt to maintain a social order whose stability was symbolically threatened by the lottery's creation of overnight wealth. As Kavanagh describes it: 'For the bourgeoisie, the spectacle of so rapid a social promotion amounted to a scandalous undermining of the whole equation of wealth and merit at the centre of their ever more triumphant ideology' (Kavanagh 1993, p60).

The legislature of the eighteenth century echoed sentiments expressed in papers like The London Spy: 'Parliament could not have given the Nation greater Assurances of their especial regard to the Welfare of the Publick than by suppressing all Lotteries which only serve to Buoy up the mistaken Multitude with Dreams of Golden Showers, to the Expense of that little Money which with hard Labour they have Earn'd; and often to the neglect of their Business, which doubles the Inconveniency. The Gentry, indeed, might make it their Diversion, but the Common People make it a great part of their Care and Business, hoping thereby to relieve a Necessity of Life; instead of which they plunge themselves further into an Ocean of Difficulties...' (in Ashton 1898, p228).

From the passing of the 1710 Act to 1824 there was no year without a State Lottery (and, although officially prohibited, doubtless few years without various private, clandestine ones too). Although such lotteries provided a welcome source of government revenue, Ashton tells us that 'it began to dawn on the public that this legalised gambling was somewhat immoral' (Ashton 1898, p238). Just as likely, and now the colonies no longer needed support from the mother-land, it would have begun to dawn on the government that other sources of revenue, such as taxation, existed as a more viable alternative to lotteries. So by the nineteenth century, the lottery was no longer seen as synonymous with the honour of the nation, much less with Christian duty, and was regarded instead as a thinly veiled instance of gambling; the existence of which undermined the honest virtues of hard work and material abstinence.
In 1808 a Government Committee declared: ‘the foundation of the lottery system is so radically vicious... that under no system of regulations... will it be possible for Parliament to adopt it as an efficacious source of revenue...’ The purpose of the lottery as provider of state revenue had come full circle; in 1819 a parliamentarian moved that the lottery ‘manifestly weakening the habits of industry, must diminish the permanent sources of the public revenue’ (Ashton 1898, p238). Inevitably, a final Act of 1823 made provision for its discontinuance, and the last British lottery was held in 1826. A satirical epitaph was inscribed on the hall of its last drawing:

In Memory of
THE STATE OF LOTTERY,
the last of a long line
whose origin in England commenced
in the year 1569
which, after a serious of tedious complaints,
Expired
on the
18th day of October 1826
During a period of 257 years, the family
flourished under the powerful protection
of the
British Parliament;
the Minister of the day continuing to
give them his support for the improvement
of the revenue
As they increased it was found that their
continuance corrupted the morals
and encouraged a spirit
of Speculation and Gambling among the lower
classes of the people;
thousands of whom fell victims to their
insinuating and tempting allurements... (in Ashton 1898, p238).
THE SEVENTEENTH CENTURY EXPLOSION

In the seventeenth century, the phenomenon of gambling appeared suddenly to burst upon
a startled society, who continued to reel from the shock of its almost epidemic proportions
for the next hundred years. This was a manifestation of the general extravagance of the
Baroque, an era that Huizinga described as characterised by the 'general tendency to
overdo things'. It was, he wrote, an era that inspired 'visions of exaggeration, of
something imposing, overawing, colossal, avowedly unreal'. Most importantly, it was an
age immersed in play for the 'Baroque, manifest[ed] the play element to an almost striking
degree' (Huizinga 1949, p182).

If contemporary observers are to be believed, the nation was virtually turned upside down:
'for the spirit of play, having overspread the land like a pestilence, raged to such a degree
of madness and desperation that the unhappy people who were infected laid aside all
thoughts of amusement, economy or caution and risked their fortunes upon issues equally
extravagant, childish and absurd' (Smollet, in Ashton 1898, p155).

'That destructive fury, the spirit of play' (Neville 1909, p38) wreaked havoc, leaving a trail
of wrecked careers, lost fortunes, bankruptcies, suicide and madness in its wake. Writers
and commentators watched this 'prophane, mad entertainment' (Pepys, 1 January 1668, in
Latham and Mathews, eds, 1976 vol 9, p4) sweep the nation with a peculiar combination
of fearful, disapproving fascination. Gambling was a plague, a disease, a curse, but most
importantly, it was madness, the antithesis of an enlightened society's pursuit of reason.
Cotton's definitive description of gambling in his Compleat Gamester (1674) articulates all
these nuances of the ambivalent seventeenth century response: 'Gaming is an enchanting
witchery ... an itching disease ... a paralytical distemper which drives the gamester's
countenance, always in extreems, always in a storm so that it threatens destruction to itself
and others, and, as he is transported with joy when he wins, so, losing, is he tost upon the
billous of a high swelling passion, til he hath lost sight both of sense and reason' (Cotton
1674, p1).
The unprecedented popularity of gaming in the seventeenth century has to be seen in the wider context of the growth of a mercantile society. Increased affluence allowed greater participation in games previously played only by the very rich, but more important were new notions of making money and the correspondence between the dynamic of commercial development and that of games of chance. The speculative nature of commercial transactions was recognised by one observer, who wrote that England was ‘the most speculative nation on earth ... Nowhere else is the adventurous rage for stock-jobbing carried on to so great an extent. The fury of gambling so common in England is undoubtedly a daughter of this speculative genius’ (Dunne, in Steinmetz 1870, p129). The growth of a money economy created a standardised, universal measure of value, and as such, its place in gambling was central. The universal equivalent in a capitalist economy became the universal wager in games of chance. The enumeration of the world created by the advance of the money economy encouraged the belief that every mundane phenomenon had its numerical counterpart, demonstration of how the principle behind rational calculation could easily foster quasi-mystical belief. Books of dream interpretations, linking dream images to numbers, were common at this time, with gambling providing an ideal opportunity for the expression of both these connotations of number. We should note that there is no contradiction contained in the increasingly numerical seventeenth century’s sustainment of these apparently antithetical types of knowledge, for, as Cassirer has shown, number lends itself just as easily to rational-scientific as to mystical knowledge. Whereas in scientific thought, number appears as an instrument of explanation, in mythical thought it is a vehicle of religious signification. In this latter formulation, it serves to sanctify the profane; the mythical character of number thus finds meaning in the realm of the sacred: ‘For whatever partakes of number in any way ... no longer leads a mere irrelevant existence ... but has precisely thereby gained an entirely new significance. Not only number as a whole but every particular number, is as it were, surrounded by an aura of magic, which communicates itself to everything connected with it, however seemingly irrelevant’ (Cassirer 1953, p143). Number thus has two-fold significance. While for science it is a criteria for truth and a condition for rational knowledge; for mythical thought it is permeated by ‘a character of mystery - a mystery inaccessible to reason’ (Cassirer 1953, p146). This dual character can be traced to its very inception. Just as astronomy derived from astrology and chemistry from alchemy, so
arithmetic and algebra stem from the science of almacabala, a magical form of number theory. Frequently, we find some conjunction of the two forms: not only did the Pythagoreans stand between the two views of number, but even in the Renaissance, alongside the scientific Descartes and Fermat we have Giordano Bruno and Reuchlin, writers who subscribed to belief in the 'miraculous, magical-mythical power of numbers' (Cassirer 1953, p144). In games of chance, of course, while one (rational, scientific) orientation to number was instrumental in the development of probability theory, another, mythical one went to sustain magical notions surrounding gambling activity. On the one hand then, we have probabilists like Pascal and Hoyle, on the other, mystics such as Alliette and Marcolini. Gambling was the ideal vehicle for the expression of all this variation, for the existence of number was central to its dynamic: whether in the calculation of wagers, or in the play itself, all games of chance revolved around numbers.

The expansion of international trade, the development of a money economy, the increase in enumeration and the concomitant rise of a numerical, probabilistic Weltanschauung seen in Chapter One was conducive not only to the theoretical examination of chance, but also to the practical enjoyment of the aleatory. A reciprocal relationship between games of chance and the development of probability theory prevailed in this seventeenth century, with the latter being disseminated amongst a wide lay audience keen to test its scientific application at the gaming table. An article in The London Spy in 1704 inadvertently highlights this relation whilst describing the dissolute existence of gamblers: ‘they read no books, but cards, and all their mathematics is to understand truly the odds of a bet’ (in Barnhart 1983, p27; my italics). Predicated almost entirely on number, gambling encapsulated the numerical milieu of the seventeenth century, as well as embodying the speculative nature of the commercial development of the era. Guttman links the growth of capitalism in England with the birth of modern sports, and in his parallel, the place of betting is central: ‘The readiness to wager on horses, cocks, beans, ships and pugilistic butchers paralleled the increasing willingness to risk venture capital in the development of England's expanding industry. From the eagerness to risk and wager came the need to measure time and space. The capitalist's ledgers are close kin to the scoreboard. We suddenly enter the world of the book-keeper and the bookie’ (Guttman 1978, p60).
As well as embodying the speculative, numerical spirit of the time, the activity of gambling was universalised by the involvement of money, a feature which made its eventual commercialisation in the nineteenth century a fait accompli of modern capitalism.

In the seventeenth and eighteenth centuries, the nature of the games played with cards had subtly altered. Out of the games of the middle ages, in which they were combined in melds to form significant groupings, cards broke free as bearers of number, suit and rank. Significantly, the Joker, the representative of chance and destiny in the medieval pack, was all but banished from post sixteenth century games. The rational new society of the seventeenth and eighteenth centuries had no place for such an unpredictable 'wild card', and so devalued it to the status it holds now, as a mere replacement. In this period, games like bassette, ecarte, loo and nap emerged, based on tricks. A trick occurs when each player plays a card in turn and the best card - either the highest or the card of the 'trump' suit - wins all the cards played in a 'trick'. Often a trump suit may predominate and may be chosen by a player on the strength of his hand (as in auction whist); otherwise suits have no order in the capture of tricks (Parlett 1979, p21). Unlike melds, in tricks cards have individual merit, and, far from being penalised, sole cards are now actively courted, for all tricks are won for their player on the strength of a good single card. This recognition of the value of individual cards in the games of the late seventeenth and eighteenth centuries can be seen as a reflection of the increasing individualisation of mercantile society. Released from the rigidity of the great chain of being, individuals were increasingly free to define themselves, not in relation to a fixed, traditional place, but according to the more fluid dynamic of a market economy. Just as one exceptional individual could rise above his station and enjoy commercial success in the wider world, so in the microcosm of games was one particularly good card empowered to break free from its dependence on others and determine the outcome of a game according to its individual value.

Out of that 'destructive fury' of the seventeenth century, three distinct but interrelated forms of gambling can be discerned, occurring as separate expressions of a single spirit. They are gambling in games of chance, betting between individuals, and speculating in economic ventures. These will be dealt with in reverse order.
Speculation

On 1st January 1695 the Bank of England was created, and from that time on 'we may date the methodical dealing in stocks and shares' (Ashton 1898, p243). On its authority, companies were formed and their stocks bought by hopeful adventurers. Speculation was rampant as new companies appeared every day, optimistically undertaking projects which had defeated science for centuries, such as the one for the creation of a wheel for perpetual motion and the company which aimed to transform quicksilver into a 'malleable fine metal' (Ashton 1898, p249). The field of economic speculation in which the new mercantile spirit was played out was part of a general entrepreneurial risk-taking milieu of which the playful urge to gamble was, to some, clearly a sinister branch. A contemporary observer depicted the trend rather grimly: 'The passion for gambling reached its climax in this age. A desire to build up a rapid fortune and contempt for the slower results of patient industry seized all classes of society. Company after company was formed; scheme after scheme of the most fantastic description rose and glittered and burst' (in Ashton 1898, p227). To the more conservative of the era, speculation was equated with gambling which was equated with chaos: it truly appeared as if the world had been turned upside down. Describing the Court of Olivarez and the artist Velázquez, who ruled and painted seventeenth century Spain respectively, Gonzalez-Crussi inadvertently describes the entire western world. It was a time, he writes, in which 'the fates of individuals, or of nations were firmly believed to be at the mercy of unintelligible forces that passed all comprehension and were neither foreseeable nor controllable'. Reason had been annihilated in this 'gigantic court of miracles', and a new type of individual - a 'gambling man' - created. 'The era of discoveries and colonialism had bred a type of man .... fit for paroxysmal efforts and heroic deeds but incapable of the quiet tenacity that alone could save the country. This new, seventeenth century man stood holding the gambler's mentality of win-all, lose-all, but disdaining as petty and mean hearted the quiet and patient effort necessary to set [his] house in order' (Gonzalez-Crussi 1986, p179).

The speculative energy of the time also extended, as we saw in Chapter One, towards the creation of insurance and annuities. Ashton waxes indignant that a wager on a possible loss should be classed a lesser evil than one on a possible gain: 'paradoxical as it may appear,
there is a class of gambler that is not considered harmless, but beneficial and even necessary' (Ashton 1898, p275). Rapidly expanding from its application to marine insurance, by the eighteenth century, a form of speculative insurance 'which could be affected upon anything' had become a favourite form of gambling (Neville 1909, p 49).

Anyone's life could be insured in this system, and to help customers make up their minds who to 'back', daily quotations of the rates on the lives of eminent public people were issued by Garraways and Lloyds. In 1708 Taylor's Friendly Society advertised the insurance of the lives of adults and children with the logo 'longest liver takes all'! (Traill and Mann 1893, p 817).

All of these concerns - of which the Mississippi Company's devotion to colonial expansion in the South Sea Bubble was the most famous example - were founded on credit speculation. 'Credit' from the Latin credere - 'to believe' - was characterised by 'the twin emotions of hope and fear' (Kavanagh 1993, p69) and founded on a reversal of the temporality of wealth. Previously, the foundation of any representative of value was 'rooted in the past of the issuing authority's actual holdings in gold or silver' (Kavanagh 1993, p86). The use of credit reversed this. Here, the belief in the wealth-creating potential of credit would be the foundation for the creation of real wealth. So 'instead of gold's giving birth to money, the dynamics of an increased money supply would produce gold and silver in a quantity far surpassing the value of the banknotes initiating the process' (Kavanagh 1993, p86). The fantastic degree to which wealth depended on faith was satirised by Montesquieu, who ridiculed the Scottish banker John Law's revolutionary system of credit and the illusory basis of the speculative wealth on which it was based. In the Persian Letters, two mythological figures - the son of the god of wind, accompanied by the 'blind god of chance' - sell air-filled balloons, saying "Citizens of Bettica, you think yourselves rich because you have silver and gold. Your delusion is pitiable. Take my advice: leave the land of worthless metal and enter the realms of imagination and I promise you such riches that you will be astonished" (Montesquieu 1977, p256).

This period saw a dramatic transition in the locus of value that was founded in a shift in power in a capitalising economy. It was a transition in which the economic power of a declining feudal aristocracy, represented by gold, was overtaken by a mercantile
bourgeoisie, whose wealth was rooted in money. The new foundation of wealth is eloquently articulated by Kavanagh: ‘Money, no longer a lifeless moon only reflecting the true light of gold, was recognised as a demiurgic force thriving in its own movement’ (Kavanagh 1993, p87). It is such a ‘demiurgic force’ that Surly in Jonson’s *Alchemist* refers to when he compares gaming with alchemy as two magical means of making money:

‘Give me your honest trick yet at primero,
Or gleek; and take your *latum sapientis* [sealing paste],
Your *menstruum simplex* [solvent]: I’ll have gold before you
And with less danger of the quicksilver;
Or the hot sulphur’

(Jonson 1987, p66-67)

Within this new order, the credit system was precariously linked to wider political interests, so that any news of political or economic upheaval abroad could send the price of a stock soaring or plummeting. As such, credit was ‘the evanescent illusion of wealth ready to be obliterated by the next roll of the world’s dice’ (Kavanagh 1993, p72). Such vicissitudes were reflected in the capricious nature of the stockjobber, described by Ashton in terms which made him virtually indistinguishable from Cotton’s gamester: ‘He rises and falls like the ebbing and flowing of the Sea; and his paths are as unsearchable as hers are... He is ten times more changeable than the Weather...’ (Ashton 1898, p246). Likewise, the value of stocks and shares could fluctuate wildly, ever-sensitive to the most minuscule aberration in political situation or opinion. ‘Shares which the previous week were worth a fortune were the next a fatality to their owners’ (Ashton 1898, p271). Bemoaning the havoc wrought by Law’s System, Montesquieu declared France to be at the mercy of ‘upheavals which plunge rich men into destitution and swiftly raise the poor, as if on wings, to the heights of opulence... The man who has just become rich is amazed at the wisdom of Providence, and the poor man at the blind inevitability of fate’ (Montesquieu 1977, p182). The result of such an unholy unleashing of power was turmoil: ‘The nobility is ruined! the State is in chaos! the classes are in confusion!’ (Montesquieu 1977, p245).
Speculation was clearly fuelled by a thinly veiled spirit of gambling. Stocks were a gamble, and buying them was a bet. To profit, the adventurer had to pre-empt the 'mood' of the market, and to do this he had to absorb himself into the aggregate of speculators, for 'profitability depended not on what the investor might do as an individual, but on how his choice related to everyone else's' (Kavanagh 1993, p96). To buy was to bet that others were about to act the same way, and that prices would rise; to sell, that they too would sell and prices would drop. The investor was thus not gambling on himself as an individual 'but on himself as part of that same large number that [had] play[ed] so crucial a role in the development of probability theory and statistics' (Kavanagh 1993, p97).

On another level, speculation encouraged play at games of chance, for the dynamics of stock-trading had accustomed individuals to handling paper as a representative of wealth. This particular representation appeared less 'real' than gold however, and was used more extravagantly. In this frame of mind, it was but a short step to carry the cycle of profits and losses sustained in the economic realm over to the equally 'unreal', equally capricious fluctuations of wealth at the gaming table (See Dunkley 1985).

The legacy of the stock companies of the seventeenth century was far more important than the success or failure of any single one of them. For the first time they called into question a fundamental belief 'that wealth somehow stood apart from the volatile, mysterious play of pure chance. It was the breaking down of a previously unchallenged frontier between legitimate wealth and pure speculation...' (Kavanagh 1993, p85). Fortunes could be doubled, tripled or lost altogether in a single day simply by making the right decision on the stockmarket, by buying the most buoyant shares or selling the least popular ones. The relation of wealth to material production became ever more distant as adventurers, investors and speculators gambled with abandon on international markets. Credit speculation shared the same spirit as pure gambling, and, when unleashed on the world, turned the seventeenth century economy into 'an enormous casino, where all were obliged to risk their fortunes on the winning combination' (Kavanagh 1993, p86).
The explosion in the sheer amount of gambling in the seventeenth and eighteenth centuries was matched by an enormous surge in the 'extraordinary range of subjects' for betting on (Stone 1967, p568). This betting was a different type of gambling usually involving wagers between predominantly aristocratic individuals on uncertain events or matters of opinion. The 'curious mania for making eccentric wagers' (Neville 1909, p103) led The Connoisseur to declare in 1754 that 'there is nothing, however trivial or ridiculous, which is not capable of producing a bet' (in Hibbert 1987, p372). People lost no opportunity in placing wagers on the outcome of undecided events, turning the minutiae of daily life into tense gambling situations. Money was staked on 'the colour of a coach horse, the build of a child, the breaking off of a marriage, and even a change in the weather', with betting on life expectancies and the birth of children being especially popular. Mitchell recounts how 'Lord Merton of Evelina could scarcely open his mouth without offering odds about some trifle' (Mitchell 1950, p436). One of the more grotesque examples of such wagers is the (somewhat apocryphal) anecdote, attributed by Sifakis to Horace Walpole who wrote: 'A man dropped down at the door of White's: he was carried into the house. Was he dead or not? The odds were immediately given and taken for and against. It was proposed to bleed him. Those who had taken odds that the man was dead protested that the use of a lancet would affect the fairness of the bet; he was therefore left to himself and presently died - to the great satisfaction of those who had bet for that event' (Sifakis 1990, p314, also Ashton 1898, p155).

When naturally occurring events were insufficient to sate the public appetite for betting, artificial ones were constructed, over which considerable sums of money changed hands. In 1735, the Count de Buckeburg laid a large wager on his being able to ride a horse from London to Edinburgh, backwards (Ashton 1898, p205), while 'a young Irish gentleman' had £20,000 on his ability to walk to Constantinople and back in a year (Ashton 1898, p163-171). Such 'matches against time' were common; the most famous being the wager of the Counte d'Artois to Marie Antoinette of 100,000 livres that he would erect a palace (the Bagatelle) in six weeks. In a feat almost as demanding, a journeyman won a bet by riding three times between Stilton and Shoreditch - 213 miles - in eleven hours, thirty-four
minutes, on fourteen different horses. A similar accomplishment won its executor £16,000 for covering fifty miles in two hours (Ashton 1898, p210).

In the twentieth century, such betting appears fascinating in its quaint eccentricity and, in what appeared trivial and insignificant to observers at the time, we can see action which is highly symptomatic of the milieu in which it was performed. In bets like that between two nobles; five to one that King Charles would go to Scotland in 1641 (Stone 1967, p568), we can see the development of probabilistic awareness of the world. The decidedly arithmetical nature of seventeenth and eighteenth century wagers demonstrates a newfound tendency to break the world down into discrete, quantifiable units. Concomitant with the development of mercantile society, and paralleling the rise of a 'doctrine of chances', betting behaviour in the seventeenth and eighteenth centuries demonstrates the emergence of a probabilistic Lebensgefühl, in which worldly phenomena are perceived as numerical entities. This enumeration of the world reaches its apogee in the quantification of the categories of time and space to a degree of precision that would have been unthinkable in agrarian society. Not so much the undertaking itself, but the description of the 11 hour, 34 minute, 213 mile journey seen earlier, is only conceivable in a modern society which requires and values the accurate measurement of time and distance. In bets like that of 'the young man who undertook for a considerable sum' to pull a pound weight on a mile long string towards himself in two-and-a-half hours, and the £500 bet that a man could travel from London to Dover and back before another made a million dots on a sheet of paper (Ashton 1898, p230), we see the numerical reduction of the world to the language of an arithmetical equation: 'take x quantity y distance in z time'.

The calculation of odds begun in the seventeenth century, was the beginning of a trend in which numerical values were assigned to opinions. Fully realised in the twentieth century, such a movement has resulted in the attribution of number to opinions on phenomena like films, books and ideas, lending an aura of objectivity to that whose origin is firmly in the mind of the beholder.

The eagerness with which so many people attached money to opinion in matters of uncertainty was demonstrative of another seventeenth century trend. In commercial society
the measure of value was no longer found in the utilitarian function of an item, instead being derived from its motion in exchange. Money, the 'universal equivalent' embodied the potential of all such exchange and thus was the ultimate representative of value. This peculiarity of money could be displaced so that as well as being a measure, it could also be seen as an attributer of value. The ultimate association of an article, event or even opinion (however trivial or worthless in itself), with money could, as if by magic, bestow on the former the value of the latter. This transference of the value of money onto various arbitrary phenomena was concomitant with the measurement of value in monetary terms and embodied a new measure of legitimacy in mercantile society; a move away from chivalric codes of honour. As Neville put it: 'As a means of settling disputes the wager was stated to have supplanted the sword, all differences of opinion being adjusted by betting' (Neville 1909, p38).

In the seventeenth and eighteenth centuries, the craze for betting on anything was a means of applying money - and hence value - to opinions which, in an age of dramatic economic, political and religious upheaval had become unstable. This insecurity was particularly acute amongst the old feudal order who, almost daily, witnessed the erosion of their authority by an ascendant bourgeoisie. It is thus no coincidence that it is from this group we see the most extravagant and the most reckless bets. In their betting frenzy, we can see the actions of an insecure class attempting to validate their opinions and re-establish their authority by ranging themselves behind the new measure of value. By proffering money as representative of their opinion, they made the latter tangible by expressing it in the new language of commercial exchange. That they would take up the challenge on virtually anything is evidence of their manifold uncertainty, for such easy demonstrations of confidence in fact belied a profound insecurity.

The aristocratic response to money at this time was, however, ambivalent. Whilst some declared the value of their opinions in it, other groups demonstrated patrician disdain by squandering it in huge amounts in games of chance. This attitude will be examined next.
Gambling

Beginning in the mid seventeenth century and continuing throughout the eighteenth, a gradual demarcation of the gambling world into private and public leisure spheres began, of which the latter developed into a stratified network of commercial gaming houses. During this period, and backed by various legislature, leisure was becoming increasingly class bound in its submission to the economic imperatives of capitalist development. Nowhere were these developments more apparent than in the social arena of gambling.

The Private Sphere

Private gambling was carried on in aristocratic court circles: the homes of the nobility, exclusive upper class haunts like Newmarket and Windsor and 'watering places' like Bath and Spa. Tucked away in private social spaces, court gambling led the fashion in games and constituted an exclusive network of privilege with its own rituals and rationale of play. The high stakes play of the court of Louis XIV - the 'Sun King' - set the tone for aristocratic circles throughout Europe, for here, gambling 'played an integral part of the social rituals of the most influential groups within the ancien regime' (Kavanagh 1993, p33). By centring aristocratic life on the court, the King removed from the aristocracy the chance of proving themselves competitively, and so reduced them to idleness and impotence. As a result, they channelled 'some of their competitive energies into an aleatory area in their everyday lives' (Dunkley 1985, p 221). The degree and extent to which this focus absorbed the idle aristocracy led to Versailles itself becoming known as ce tripot - the gambling den - 'and indeed resembled a casino' (Mitford 1966, p56). The intensity of its baroque rituals was captured in Pushkin’s portrait of early eighteenth century France; a period in which 'nothing could equal the frivolity, folly and luxury of the French'; when 'a greed for money was united to a thirst for pleasure and dissipation, estates were squandered, morals foundered; the French laughed and speculated and the state was going to ruin to the lively refrain of satirical vaudevilles' (Pushkin 1962, p18).

A 'phenomenal rise in the stakes', as well as the frequency, meant that 'gambling orgies at court... became a by-word for prodigality' (Stone 1967, p570). Solicitous hosts
entertained guests all night with games like pharaoh, bassette and ombre; games based on creating sequences and combinations from the suit and ranking order of the cards. The fever of gambling activity led to a situation in which the ability to play the most fashionable games was a prerequisite of entering polite society. With this in mind, many parents hired ‘gaming masters’ to instruct their children in the arts of various games, causing Montesquieu to lament the degree to which gambling had become a measure of social status: ‘Being a gambler gives a man position in society; it is a title which takes the place of birth, wealth and probity. It promotes anyone who bears it into the best society without further examination’ (Montesquieu 1977, p119). In England, the office of Groom Porter existed to regulate national gaming, and more specifically to oversee prodigious royal gaming. The Palace soon became known as a place of excessive play, where the King, who was ‘much enticed to play at tennis and at dice’ (Traill and Mann 1893, p206), would lose £100 on the turn of a card. A keen player, Henry would announce that ‘His Majesty was out’ when the desire to gamble came upon him, ‘On which intimation all Court ceremony and restraint were set aside and the sport commenced; and when the Royal Gamester had either lost or won to his heart's content, notice of the Royal pleasure to discontinue the game was, with like formality, announced by intimation that ‘His Majesty was at home’, whereupon play forthwith ceased, and the etiquette and ceremony of the palace was resumed’ (Ashton 1898, p47).

At court, the sheer scale of the spectacular ‘leviathan’ bets of the aristocracy rendered their gambling both very private through its exclusivity, and also extremely conspicuous through its prodigality, making it a baroque form of Veblen-esque ‘conspicuous consumption’. The size and frequency of court wagers quickly passed into popular folklore. A Lady Couper refused to sit down at one game when she saw that no-one was playing with less than £200 a hand (Traill and Mann 1893, p191), whilst in France, a Madame de Montespan lost four million livres in a single evening at cards (Kavanagh 1993, p32). A welter of gloomy prognostications accompanied such flamboyant acts, with conservative journals like The Connoisseur muttering ‘we shall soon see the time when an allowance for bet money will be stipulated in the marriage articles...’ (in Ashton 1898, p157). For Walpole the crisis was even more serious; such excessive play was ‘worthy of the decline of our empire’ (Hibbert 1987, p313).
These dire misgivings were, however, unfounded. The excesses of aristocratic play, watched with such foreboding by many bourgeois commentators, was indicative not of the establishment of a new social order, but of the frenzied death rattle of an old one.

At court, gambling was more than a simple recreation, and, as an important symbolic activity through which the nobility could demonstrate their detachment from money (Kavanagh 1993, p38), it was in fact actively expected from courtiers. For centuries the existence and status of the nobility had been rooted in the unquestioned authority of tradition, heredity and honour, but in the seventeenth century, a momentous divide appeared, interrupting the seamless lineage of history and undermining the very foundations of aristocratic life. A new social group had begun to emerge whose authority and status were predicated entirely on the anonymous force of money, already ubiquitous throughout society. Everything was reducible to this universal equivalent, and therefore anything could be bought, even, to the general chagrin of the aristocracy, noble title. Thus a rift appeared in the aristocratic order. The traditional, hereditary Old Guard who avoided all lucrative activity out of a profound contempt for commercial bourgeois values now faced a new order of nobility literally made of money. The two groups represented antithetical worldviews; while the Old Guard linked prestige with land and lineage, the ennobled bourgeoisie saw value as synonymous with individual wealth, an equation which earned them the contempt of their more ancient peers (Kavanagh 1993, p49-50).

According to Kavanagh, ‘these wealthy bourgeois purchased the privilege of denouncing a group whose explicit value system recognised no merit in what had been the arena of their greatest success’ (Kavanagh 1993, p55). Their denunciation found focus in gambling, which became the ‘scapegoat of everything this ennobled bourgeoisie chose to deny, condemn and repress’ (Kavanagh 1993, p56). ‘Traditional’ notions of honour and duty - areas not yet touched by the pervasive grasp of money or its attendant bourgeois law - became arenas of symbolic conflict for the old aristocracy. Gambling debts were not legally binding, therefore the gambling contract depended entirely on the word of the parties involved. Thus, to pay one's gambling debts demonstrated the value of one's word 'the true aristocrat recognised a gambling debt as binding because in doing so he was not
submitting to the dictates of any externally imposed law but acting entirely of his own free choice' (Kavanagh 1993, p42). Gambling became an arena in which to demonstrate status and gain prestige. Knowing how to lose was an important test of character, and showed one's indifference towards money: 'high stakes gambling was an important symbolic activity for a nobility obliged to affirm its prestige and its independence of any limiting financial considerations' (Kavanagh 1993, p42). For the nobility, such gambling was a 'metaphoric substitution' for an old way of life, and by playing, the aristocrat showed his allegiance to the old order of tradition and demonstrated his contempt for the modern values of pecuniary gain. In this symbolic activity, 'A man had to be able to hazard his fortune on a turn of the cards as coolly as his forefathers risked their lives on the luck of battle. Card tables at Versailles, where millions of livres were yearly staked, offered a new tournament ground for blood to show its quality' (Kierman, in Kavanagh 1993, p44). These grand rituals constitute a form of what Veblen was later to call 'conspicuous consumption'; the large-scale, non-utilitarian consumption of wealth and goods, regarded by those who engaged in it as a mark of human dignity (Veblen 1899, p68-102). Aristocrats did not gamble to win, but rather to project a self-image of honour. In the way that the upper classes participated in the Virginia lottery scheme, status, not financial gain was these gamblers motivation. In fact, financial interest was reprehensible to this group, as is apparent in one nobles' warning to her grandson that 'to playe for gayne more than recreation illegitimates all good meetings' (in Stone 1967, p569). Aristocratic play of the late seventeenth and eighteenth centuries can be seen as a desperate attempt by the old feudal order to reaffirm their rapidly declining position in a world where 'the sway of money was already irresistible' (Kavanagh 1993, p51). The following exchange between a member of the old order and one of the new, illustrates the declining legitimacy of the feudal measure of wealth, and the development of money as a demiurgic force, no longer a reflection of the 'true light' of gold. At a whist party, a woman won £21, which her opponent paid in bank notes, whereupon 'The fair gamester observed, with a disdainful toss of her head, "In the great houses which I frequent, sir, we always use gold"; "That may be, madam", replied the gentleman, "but in the little houses which I frequent we always use paper!"' (in Neville 1909, p63).
Their ostentatious display of nonchalance in handling large sums of money demonstrated the aristocracy's moral superiority to it, and to the values of a society in which they were increasingly marginalised. Mauss's essay on *The Gift* gives us an insight into the motivations behind these flamboyant rituals, or what Kavanagh calls 'the distinctively anti-modern underpinnings of aristocratic gambling in *ancien régime* France (Kavanagh 1993, p45). In it, Mauss describes the 'gift' economies of archaic systems of exchange, where the function of the exchange of goods and services is not to increase personal wealth, but to establish the giver's merit in a hierarchy of prestige and honour. As in court etiquette, these exchanges are *expected* of participants, for in spite of appearing 'voluntary, disinterested and spontaneous' they are actually 'obligatory and interested' (Mauss 1954, p1). Such behaviour can be seen as a form of the ceremony of the *potlach* of the North American Indians. Here, a group displays its superiority by presenting another with magnificent gifts, which the recipient is obliged to return in ever greater magnitude. The large-scale destruction of a tribe's own goods also features in the *potlach*, and serves to demonstrate the destroyers indifference to material possessions and noble distance from economic utility. In such dramatic ceremonies, the honour of the individual is closely bound with his expenditure, for 'it is the veritable persona which is at stake' (Mauss 1954, p38). In these societies, prestige is valued over economic wealth, and the system of *potlach* is a means of converting one into the other, for: 'The rich man who shows his wealth by spending recklessly is the man who wins prestige...Sometimes there is no question of receiving return; one destroys simply in order to give the appearance that one has no desire to win anything back' (Mauss 1954, p35). In this way, a peculiar kind of commerce is instigated, 'but it is an aristocratic type of commerce characterised by etiquette and generosity; moreover, when it is carried out... for immediate gain, it is viewed with the greatest disdain' (Mauss 1954, p36). In this system of 'noble expenditure', wealth is 'as much a thing of prestige as a thing of utility' (Mauss 1954, p73), and an individual's position in the social hierarchy is determined by how he handles it. 'To give is to show one's superiority, to show that one is something more and higher, that one is *magister*. To accept without returning or repaying more is to face subordination, to become a client and subservient, to become *minister*' (Mauss 1954, p72). Mauss explicitly identifies gambling as a form of *potlach* and means of gaining prestige, along with war, hunting and wrestling. Furthermore, a Germanic form of the gift relationship - the *wadum* - displays a particularly
clear affinity with gambling. The contractual bond of the *wadium* engages the honour, authority and *mana* of the individual who hands it over, and places the recipient in an inferior position until he can respond in kind. Here, the words *wette* and *wetter*, translations of *wadium* ‘imply wager as much as pledge’ (Mauss 1954, p61). Mauss’s collaborator, Davy, makes the affinity of the *potlach* with gambling even clearer when he likens the communities that practise it to ‘big gambling dens where, as a result of bets and challenges, reputations are made and whole fortunes exchange hands’ (in Huizinga 1949, p61).

The aristocratic gambler of the *ancien regime* can be seen to be engaged in such *potlach*-style behaviour, where the heroic dissipation of whole estates, jewels and money displayed to the world the magnanimity and status of the nobility. While they were engaging in this ‘noble expenditure’ however, another type of economic behaviour was being practised within their ranks. The figure of Dangeau - eventually the Marquis de Dangeau - epitomised the struggle for ascendancy within the aristocracy. When gambling at Court, Dangeau was hugely successful in a manner that was the ‘anthesis and nemesis’ of the truly noble style of play (Kavanagh 1993, p54). Dangeau played to win and he based his play on rational calculation, thus bringing the bourgeois values of self-interested accumulation to the gaming table. He proceeded by ‘pitting his careful study of probabilities against aristocratic opponents for whom such an approach... was unthinkable’ (Kavanagh 1993, p55). To an aristocratic observer, the difference in style was startling, as Madame de Sevigne recorded: ‘"I saw Dangeau play! - what fools we all are compared to him - he minds nothing but his business, and wins when everyone else loses: he neglects nothing, takes advantage of everything, is never absent; in a word *his skill defies fortune*, and accordingly 200,000 francs in ten days, 10,000 crowns in a fortnight, all go to his receipt book"’ (in Steinmetz 1870, p90; my italics). The sense of the player in aristocratic gambling was always of an individualised unit, while gambling itself was the personalised and individual conflict between each specific person and his opponents. Dangeau was well aware of anonymous mathematical probabilities, and of the notion of the average, and in this he represented the end of the old feudal order: ‘his willingness to reduce himself and his opponents to faceless permutations of a mathematical structure signalled the coming universal victory of the scientific man, the average man, the economic man’ (Kavanagh
The insouciance of the aristocratic gambler was the incarnation of Nietzsche's allegorical dice thrower; a romantic figure who already appeared anachronistic in a world steadily submitting to the imperative of capitalist organisation. In his patrician rejection of economic necessity and the needs of the workday world, the aristocratic gambler continued the Platonic tradition of play as a non-utilitarian activity in which the display of human values - in this case, the virtues of honour and nobility - were paramount.

Ironically, it is in the figure of the aristocratic player, not the bourgeois Dangeau, that we recognise the character of the twentieth century gambler. Although Dangeau represented the vanguard of the new intellectual paradigm out of which probability theory would develop, future generations of gamblers did not go on to copy his style or utilise the insights presented by the doctrine of chances. Apparently oblivious to the rational calculation of odds, modern gamblers do not play according to any kind of objectively judicious rules. Unlike Dangeau, they do not play 'sensibly' or conservatively, and above all, they do not (normally) play to win. The play itself, and the demonstration of character and nerve in the course of the game, are the motivations of the modern gambler, and these will be considered in Chapter Four.

**Commercial Gambling**

In the conflict within the aristocracy we see in microcosm a glimpse of the shape of things to come. In the wider society the values of the ennobled bourgeoisie were already a dominant social force, visible in the gambling arena in the development of commercial gaming houses. In keeping with a rigid social hierarchy: 'Englishmen developed a stratified network of public gambling shops, providing a milieu for betting that suited the larger society' (Findlay 1986, p29). From the luxurious rooms of private clubs to the 'hells' tucked away in taverns, gambling was for the first time being carried on in a commercial environment which, by the early nineteenth century would have profoundly altered the nature of play and the very style of the games themselves.
Clubs

At the top of the gaming hierarchy were the private Clubs which, with their strict membership and dress codes, were reserved for the exclusive use of the upper classes - gentry, dandies and society men. The licensing of public gaming houses belonged by patent to the royal Groom Porter, and was not given out without careful consideration of the social position of the applicant. Licenses were sometimes given to courtiers and peers, who it seemed, had an almost undeniable right to run a gaming house, some of them using a portion of their town houses for this purpose (Burke 1941, p49). Play at houses and clubs such as these was a private affair, and therefore, like the nobility, not subject to the law (Burke 1941, p91).

Ashton describes 'all the wit and gaiety and excitement' contained within the 'magnificent rooms' of the 'luxurious clubs' like Whites, Crockfords and Almacks (Ashton 1898, p131). Legally at least, gambling was not the sole focus of these places, although in reality, the social life of the clubs revolved around the gaming tables. According to Steinmetz: 'Good meats; good cooking and good wines, given gratis and plenteously at these houses, drew many to them at first for the sake of the society...' (Steinmetz 1870, p388). Opened in 1698, Whites attracted the wealthiest nobles of the day and, whilst offering popular games like hazard and bassette, also oversaw private bets between individual members on subjects ranging from politicians' longevity to the likelihood of contracting venereal disease!. The Almack Club (1764) strived for even greater exclusivity: to join 'no name that was not socially perfect could pass and no second application was possible' (Burke 1941, p42). It is amongst the elite of the Clubs that we see the establishment of minimum and maximum stakes. Those playing the new guinea table were required to keep at least fifty guineas before them, at the twenty table, no less than twenty (Ashton 1898, p91).

By the nineteenth century, Crockfords was recognised as the most exclusive and popular club of its time, offering a variety of games to nobles who, two centuries earlier, would have been playing their high stakes hands in private gambles at court. 'Leviathan' bets still went on - whole estates were lost in a single night at Crockfords. In a legendary seven hour hazard game, Lords Rivers, Sefton and Grenville each lost the equivalent of half a
million pounds (Sifakis 1990, p147). Such excess was typical in the seventeenth and eighteenth centuries, Burke tells us, and in his description of the social whirl - 'the promiscuity of Club-life' - we recognise a glimmer of the ambience of our modern casino.

The rooms of the club would be open for dinner, 'but its real life came at a later hour' when 'superb suppers, with noble wines, were served without charge'. After supper, dancing and gambling would go on all night, with the supper table 'cleared and re-set half a dozen times between midnight and morning' (Burke 1941, p92). It was common for parties to sit at the hazard table 'through a night, the whole of the next day, the following night and up to noon of the second day, tiring out three shifts of waiters... At the same clubs the players wore a special costume. To save damage to their fine clothes they put on frieze coats and a sort of leather mitten to protect their cuffs... they also wore broad brimmed straw hats and, to prevent opponents from guessing by their expressions what sort of cards they were backing, the hats were fitted with tassels which hung before the eyes' (Burke 1941, p77,8).

'Hells'

As the upper classes played in luxurious surroundings, the middle and lower orders experienced a very different world of gambling. What was tolerated as legitimate entertainment for the rich was considered unsuitable for the rest of society, and so attempts were made to restrict and control the playing of games of chance amongst the poor. Such attempts had been enshrined in legislation since the time of Henry VIII, when a statute confined gaming to Christmas when, assuming the lower orders would be celebrating anyway, its disruptive effects would be minimal. This Act stated that 'no manner of artificer ... apprentice, labourer, or any serving man, shall from the said feast of the Nativity of St John Baptist, play at the tables, tennis, dice, cards... or any unlawful game, under the pain of xxs to be forfeit for any time' (in Ashton 1898, p60). In the eighteenth century, a flurry of legislation removed gambling even further from the reach of the poor by imposing taxes on gaming instruments; sixpence on a pack of cards and five shillings on a pair of dice. Swift observed the desired result in his Journal, writing that 'Cards are very dear, which spoils small gamesters' (Swift, in Traill and Mann 1893, p817). This was followed by another statute which outlawed specific games and, while penalising the owners of public gaming houses, excused the play of the rich: 'The games
forbidden are Ace of Hearts, Faro, Bassett and Hazard, except in Royal Palaces' (in Ashton 1898, p59, my italics). These later prohibitions should be seen within the general eighteenth century condemnation of excess, which had special resonance for the activities of the lower orders. In the rational society of the Enlightenment, the threat of disorder - desodré - posed by gamblers, was regarded as particularly acute from gamblers of the lower classes. As well as disrupting the health of the individual player, gambling was feared to disrupt the well-being of the social order, encouraging the indiscriminate mingling of the classes and undermining the orderly social values and thrift and family loyalty. The effects of gambling on poor families were especially ruinous, for such families, reduced to destitution by the reckless play of their breadwinners, would be unable to pay their taxes and so become a burden on the state. The familial cohesion of the lower orders was thus regarded as a particularly pressing moral problem in the eighteenth century, and one which the activity of gambling had a particularly negative role in. It was in this climate that concerted efforts to restrict working class gaming were made, resulting in the increasing stratification of the gambling economy. In this period, the vast amount of privately owned land and the declining availability of public space made leisure increasingly class bound. The outcome of such a spatial segregation was a shrinking of public space which pushed the poor into ever-smaller and less visible areas (Cunningham 1980, p84). Excluded from Clubs, and with cards and dice kept artificially expensive, they were forced to gamble in illegal taverns and in lotteries. With their cheap, easily-available tickets, the latter were immediately accessible to all but the most impoverished, and offered the hope of unimaginable riches for a minimal stake. Meanwhile, in unlicensed alehouses and coffee shops, cards and dice were played with 'enthusiasm and vigour' throughout the land (Mitchell and Leys 1950, p305). In their small, dimly lit interiors, the stakes were low, and anyone could play with only a minimal bet. Not being clubs, these 'Silver Hells' were illegal and liable to be raided at any time and their owners imprisoned. The need for concealment was pressing, and so these clandestine houses often had four or five doors separating them from the outside world. Grilles, secret passages and watchdogs made the gaming room deep in the interior all but inaccessible to the initiate (Burke 1941, p91). The contrast with the plush opulence of the Clubs is stark, as Cotton's unsavoury depiction of an eighteenth century hell testifies: 'The day being shut in you may properly compare this place to these Countries which lye far to the North, where it is as clear at midnight as at
midday... This is the time when ravenous beasts usually seek their prey... (Cotton, 1674, p6). The ‘ravenous beasts’ to which Cotton is referring are the professional cheats and robbers that made up the criminal underworld of the gambling scene. Unobserved and unregulated by the law, these illegal taverns were home to a hierarchy of card sharps - ‘takers-up’, ‘versers’ and ‘robbers’ - practised in the various techniques by which an honest player - a ‘cousin’ - could be relieved of his money. The clandestine goings-on in these hells frequently made the operation of chance a mere secondary consideration in the outcome of a game (See Judges 1965). Despite the differences in appearances and organisations, the games played in hells and Clubs were surprisingly similar. Although played for lower stakes, hazard, primero and whist were as popular in private refinement as they were in sequestered squalor. More straightforward games such as four-of-a-kind and tabu, which Pablillos, the hero of the seventeenth century novel *The Swindler*, successfully cheated players with, were also popular in rural districts.

**Stratification**

By the eighteenth century, a clear social stratification with Clubs at one pole and hells and lotteries at the other, had emerged. A world of difference distinguished the conspicuous, leviathan bets of the aristocracy from the modest, clandestine play of the poor, for generally, the classes played different games and had different motivations for playing them. Although the lower classes *did* play cards, and the wealthy *did* participate in the lottery, by the end of the eighteenth century a broad class allegiance to specific forms of play had emerged, with the gambling of the upper classes characterised by high stakes card play at court and in private clubs, and that of the lower classes comprised of a majority of gamblers who pinned their hopes on the lottery. While the conspicuous dissipation of wealth by the aristocracy demonstrated the latter's indifference to money, the engagement of the poor in the lottery was a contract whose sole aim was the pursuit of wealth. For a minimal stake, they hoped to reap great riches, and aspire to a social mobility that was denied them through more conventional economic means. So, as the rich proved their status through their losses at cards, the poor hoped to improve *theirs* by winning the lottery. This stratification left an indelible mark on the physiognomy of play, traces of which are still evident in the gambling economy of today, as we will see in Chapter Three.
For the moment however, we should note that even while it was at its height, this stratification was being challenged by the increasingly powerful force of commercialisation, which would bring in its wake the equally powerful trend towards democratisation.

**Commercialisation**

A complex division of labour which saw the employment of croupiers, waiters, and directors developed within the public gaming houses and Clubs of the eighteenth century as the economic imperative of capitalism extended to the practise and organisation of gambling. The amorphous flux of individuals wagering and collecting money, as well as those actively involved in running games of chance, at this time gave way to an ordered collection of employees, each with a specific function. The *Gentleman's Magazine* of 1731 outlined a list of seven offices 'established in even the most notorious gaming houses', These included 'A Director, who superintends the Room... Two Crowpees, who watch the cards and gather the money for the Bank... a Clerk, a Flasher; a Waiter...' (in Ashton 1898, p57). This recognisably modern organisation mirrored the changing nature of play itself. Since Clubs and hells were run as businesses, gambling was organised in such a way that the house itself might profit from the money wagered between individual bettors. This applied to all ranks of the public gaming hierarchy, and contributed to the standardisation of the activity. Although the games themselves appeared the same as their privately played counterparts, their nature had subtly altered. Instead of a players losses being the gains of his direct opponent(s), now they became incorporated into commercial enterprise and partially absorbed as the gains of the faceless house - the ubiquitous opponent in every game. By interposing an anonymous opponent between real flesh and blood gamblers, this commercial reorganisation of play to some extent depersonalised high-stakes gambling contests, removing the element of face to face confrontation so important in the creation of prestige amongst the upper classes. The introduction of percentages and house edges took away something of the excess, and so expurgated the whole notion of the heroic 'noble exchange', from gambling in Clubs. At the other end of the scale, they also took away some of the cheating from the hells. Since it denied them the opportunity to intervene and take their percentage, it was not in gaming houses' interests to allow
cheating. Therefore, efforts were made to eliminate all 'irregular' practices, with rules tightened up and harsher penalties inflicted on cheats. In these ways the introduction of commercial interests began to regulate the experience of gambling, 'evening-out' its extremes in a process that would gradually make it more homogenous across the classes.

'The Sport of Kings'

In horseracing, we see the encapsulation of the forces of commercialisation and democratisation that were gaining ascendance in the wider society, and being bitterly resisted at every turn by the patrician legislation of a steadily declining aristocracy.

In the seventeenth century, consistent with a tradition stretching back to the Assyrian Kings of 1500 B.C. and the Roman Emperors of the first millennium, horseracing was the privilege of the very wealthy. The cost of their upkeep confined horse ownership to the upper classes, a group whose over-riding concern was the maintenance of the privilege of racing and betting on the animals as their exclusive right. In twelfth century England, the elitist nature of the sport seemed to promise the indefinite continuation of the situation, for racing tended to be a private affair between gentlemen who rode their own horses on their own grounds (Ashton 1898, p175). Under the Royal Patronage of Charles II, 'the father of the British Turf', post-Restoration racing was gradually systematised, with rules of play laid down and professional jockeys installed. During this period of patronage, racing appeared more than ever as the 'sport of kings', with successive monarchs Charles II, James II and Queen Anne building homes by Newmarket racetrack and entering horses to race in their own names (Ashton 1898, p179).

However, events which were to dramatically change the face of racing, turning it from an elite pastime to a mass spectator sport were already under way by the eighteenth century. The role of popular broadsheets was crucial - by the 1750s London papers were carrying advertisements of major meetings and news of results to a wide public (Plumb 1950, p16). Such a dissemination of information meant that, for the first time, it was no longer only owners and their friends who were privy to information on the time and location of races. As a result, huge crowds began to gather at races, stimulating the demand for more and
larger courses. When Tattershalls came into existence in the 1770s, betting finally became formalised according to the rules of probability. No longer carried out man to man, it was now organised by an anonymous bookmaker according to set odds. Just like card and dice games, racing was regulated by the science of probability; a regulation which took it out of the hands of individual upper class patrons and placed it in the public domain of commercial interests. The proliferation of racetracks, encouraged by the spectator-appeal of the sport, encouraged racing for small stakes so that by 1722, over 112 towns and cities were holding small races. Horrified by the erosion of the exclusivity of 'their' ancient game, the aristocracy resisted the trend, and a tide of defensive legislation surrounded the proliferation. Thus, because 'the Great Number of Horse Races for Small Plates, Prizes or Sums of Money, have contributed very much to the Encouragement of Idleness, to the Impoverishment of the meaner Sort of the Subjects of the Kingdom' an Act of 1740 insisted every race have a £50 prize, effectively excluding the 'meaner sort' from participating (in Cunningham 1980, p19). The very integrity of racing came to depend on its separation from the lower classes. In 1674, and this was made explicit, when a tailor was punished for racing his horse against a planter's 'it being contrary to Law for a Labourer to make a race, being a sport only for Gentlemen'. The planter was also punished by an hour in the stocks for the crime of arranging the race in the first place! (Findlay 1986, p22).

But it was all too late! The inexorable march of capitalism was dragging racing, along with cards and dice, out of the private recesses of the upper classes and into the public domain, and no amount of retrograde legislation could stop it. By the end of the nineteenth century, the democratic coup would be complete.

THE NINETEENTH CENTURY: PLAYING WITH NUMBERS

In the industrial discipline of the nineteenth century, the separation of the spheres of leisure and work, which had been ongoing for the previous two hundred years, was finally consolidated. Such a development was particularly evident in the gambling arena which at this time was disengaged from its surrounding social life and organised into distinct, highly
commercial spheres. The casino was perhaps most representative of the trend, emerging in
the second half of the century as a collection of public rooms devoted exclusively to
gambling, away from its earlier formulation as a dancing saloon and summer house
(Yarwood 1993).

In this period, the fashionable watering places of the aristocracy continued to be popular
gaming centres and were supplemented by the development of a series of resorts
throughout Europe, in which gaming houses - now casinos - were the central attraction.
This development of what Turner and Ash describe as a decadent and extravagant
‘Pleasure Periphery’ in the French Riviera included Nice, Cannes and Monte Carlo, or, as
the French called them, ‘the World, the Flesh and the Devil’ (Turner and Ash 1975, p61).
Baden Baden, Bad Homberg and Wiesbaden were small localities whose deliberate
expansion turned them from health spas into gambling resorts (a process which would be
perfected in the twentieth century in Las Vegas). Although generally exclusive - Monte
Carlo was known as the ‘pleasure reserve’ of the aristocracy (Turner and Ash 1975, p64) -
the commercialism of at least some of these resorts bore witness to some degree of
democratisation. In Bad Homberg and Wiesbaden the great mass of visitors were of the
middle and lower middle classes, ‘leavened by very few celebrities and persons of genuine
distinction’ (Steinmetz 1870, p213). In this era of commercial gambling, Steinmetz
noticed with disapproval that ‘the general run of guests is by no means remarkable for
birth, wealth or respectability’ (Steinmetz 1890, p213).

In the description of the interior of one of these nineteenth century ‘temples’, we
immediately recognise the experience of the modern casino: ‘On entering, the eye is at
once dazzled by the blaze of lights from chandeliers of magnificent dimensions, of lamps,
lustres and sconces. The ceiling and borders set off into compartments, showered over
with arabesques, the gilded pillars, the moving mass of promenaders, the endless labyrinth
of human beings assembled from every region in Europe, the costly dresses, repeated by a
host of mirrors, all this combined which the eye conveys to the brain in a single glance...
As with the eye, so it is with the ear: at every step a new language falls upon it... the

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4 See Russell T Barnhart's history of these gambling centres, as well as the illustrious figures who
frequented them (Barnhart 1983).
suppressed buzz of conversation, the muffled jingle of the money on the green cloth, the sweep of the croupiers' rakes, and the ticking of very ornate French clocks' (Steinmetz 1890, p188). 'In short', Steinmetz concludes 'every possible antithesis that the eye, ear or heart can perceive, hear or respond to, or that the mind itself can imagine, is here to be met with in two minutes'. And yet all this was no Babel; 'for all, though concentrated, is admirably void of confusion...'. Through the 'brilliant and moving throng', crowds of stationary individuals are engaged by tables that 'fascinate and rivet their attention' so that 'perfect order and... deportment' reigns (Steinmetz 1870, p166).

But for the existence of clocks and the use of money instead of chips, Steinmetz's impressions could describe any modern Las Vegas casino. This is indicative of the dramatic changes which, by the nineteenth century, had transformed the nature of the play of commercial games of chance, overseeing the formulation and codification of what we now recognise as modern casino games.

Just as the economic imperatives of emergent capitalism were reflected in the growth of commercial gaming houses, so the games themselves came to reflect the social logic of a capitalist system. It is these changes we shall turn to next.

**Cards**

In cards, traditional games that revolved around various kinds of patterns and sequences, such as the gaining of suits, trumps and tricks or the making of combinations like flushes and marriages in melds, were being supplanted by a new form of game. This new style of play was based on the arithmetical values of the cards in their properties as individual numerals, and forms the basis of all modern casino card games.

Such a shift was made possible by an experiment of the Woolley card company. In 1884, in keeping with the statistical spirit of the times, they printed the numerical value of each card on one of each of the suit signs (Hargrave 1966, p189). As numbers 'poured into' the nineteenth century, so they poured onto packs of cards. With this seemingly trivial development, the face of cards was literally changed forever. The value of these new cards...
was depicted by a bold unequivocal number, no longer represented by an image. which was necessarily more ambiguous. The authority of the number was not open to interpretation; it was a fact. Not only was it instantly more striking, in the new style of games, the number on these cards was also more important than all the other information they contained. In games based on the speedy calculation of number, it was vital that each card be immediately recognisable to the player. A simple digit in each corner met this requirement in a way that a more vague pictorial depiction never could. Given the commercial environment of the new games, it was not only important that the player should quickly recognise his cards, but equally, that other players should not. Until now, the backs of cards had been either plain or decorated with a single one-way design. This meant that they could easily be marked, or, in the case of decorated cards, arranged with some backs upside down to distinguish for example, high cards from low ones, face cards or suits (Sifakis 1990, p57). The possibilities for cheating with such packs were unlimited, even a player without a good memory could not fail to recognise specific cards from their backs after a while! In the nineteenth century this golden age of cheating was ended when companies began experimenting with uniform back designs so that by the end of the century, simple two-way designs had rendered cards indistinguishable (Encyclopedia Americana 1990 vol 5, p639). These twin developments made cards at once both unique and standardised. As instances of 'the same kind of thing' they were indistinguishable, yet within this general category each one was recognisably the bearer of a specific value. Similarly, in the wider society, l'homme moyen was characterised by his representativeness of all others of his kind. At the same time, these characteristics came out in individual properties which displayed as much statistical variation in their particular sample, as, say, the individual cards in their particular pack. In the nineteenth century then, both l'homme moyen and the new-style cards came to be represented as individual variations on a single, standard theme. By streamlining them, the numbering and standardisation of cards was integral to the development of new styles of play, loosely termed banking games, which evolved into casino games.

In the game of vingt-et-un (which later grew into pontoon, and then the casino game of blackjack), and chemin de fer (baccarat), suits and court cards were irrelevant, numerical values paramount. From their regal status as the most important cards in the pack (many
bearing the image of their owner), in baccarat, picture cards were dethroned and given no value at all. A similar fate befell court cards in blackjack which were also democratised and given a single numerical value - ten. Consonant with the statistical spirit of the times, cards in these games, like all the others in the pack, were only important through their representation of number. Both games were basically arithmetical exercises whose principle was to assemble cards whose value did not exceed a specified number, 21 in blackjack, 9 in baccarat. Sifakis' advice on splitting strategies shows the degree to which pontoon and its later incarnation as blackjack are pure number games: 'always split aces, and never fives or tens... if holding twos, threes or sevens, split if the dealer shows two through seven; holding fours, split against five or six; holding sixes, split against two through six; holding eights, split against two through nine...' (Sifakis 1990, p35) and so on! These rules are evidence of a level of complexity that would be impossible to achieve without numbered cards, for pictorial representations of value would make this kind of play immensely difficult and very slow.

With their emphasis on calculation and the irrelevance of any distinctions other than numerical ones, we can see in these games the mirror of the commercial, statistical interests of an increasingly capitalist society.

It was not only in card games that the dynamic relation between games and society was apparent. The early probabilists used games of chance to develop their theorems, and their discoveries in turn affected the games they experimented with. As probability became more fully understood, the games it was applied to became more complex, so that games and theory developed by feeding off each other in an ever more complex dialectic of theoretical and practical application.

**Roulette**

The game of E-O (even-odd) was popular during the eighteenth century in fashionable resorts like Bath and consisted of a wheel with forty cups alternately marked E for even and O for odd. A ball was released as the wheel rotated and players wagered whether it would fall into an E or O pocket. Pascal experimented with a similar ball and wheel device,
but did not, as is sometimes claimed, 'invent' roulette. The game as we know it today was actually developed in the nineteenth century when the French addition of thirty-six numbers and colours to the wheel revolutionised the simplicity of the original game (Sifakis 1990, p256). The impact of the addition was enormous, greatly increasing the variety of betting available from one to ten, with different odds on each. The player could still bet odd or even, but now any single number or combination of numbers as well. The addition of numbers made roulette a far more exciting and complex game than its rather staid predecessor, and, with the inclusion of a zero (two in America), also made it a very commercial one, for when the ball landed in this pocket, all bets were won by the house.

**Dice**

Advances in the study of probability, together with the imperative of commercial expansion, also transformed the ancient game of hazard into a faster, more streamlined version known as craps. Hazard had been played in the same way for centuries, with a player betting that he would eventually throw a certain number with two dice, throwing until he did and then continuing to throw until the original number or 'point' came up again. However, since the odds of certain numbers coming up before others varies, a competent player would require a basic understanding of probability to play well. Such an understanding of averages and odds in relation to dice simply did not exist until the seventeenth century, with the result that most bettors did not comprehend all the ways various combinations could be achieved with two dice. For hundreds of years 'A hustler could indeed have made a fortune!' (Sifakis 1990, p147).

In France, hazard was known as Krabs (after the English work for a throw of two or three), later corrupted to creps or craps (Scarne 1974, p35). When introduced to America by French colonists, a modified version grew in popularity among black slaves in New Orleans and took its name from French craps (Scarne 1974, p39). In the nineteenth century, the intricate betting odds of hazard were reformulated in craps, making the latter a 'far more mathematically equal' game than its predecessor (Sifakis 1990, p78). Hazard was further streamlined into craps by the constant addition of new concepts 'to compensate for new knowledge gained about gambling odds' (Sifakis 1990, p148).
Dozens of types of bets now became available to the player, with many more variations of each type.

With its multitude of betting strategies and combinations of odds, the appeal of craps as a lucrative commercial game was obvious. To entice it into the casino, further modifications were made, which changed its structure yet again. A small charge was made by the house whenever the thrower made two or more passes. This was known as a Take-off game. Next, the house took the opposition against the thrower, so that all players now had to bet the dice to win against the house. A simple table layout bearing the six and eight, the Field, Win and Come bets, was drawn up to play on; exactly half of the table layout today. The house now took its cut ‘not as a direct charge, but indirectly and less noticeably by offering short odds so that it gained a percentage’ (Scame 1974, p41). A further development offered players the opportunity to bet the dice to lose, as well as to win. In effect, every bet could now be either for or against the dice or the house. Betting opportunities were doubled, and the craps table reflected the change, changing its shape from a semi-circle to a full oval, with one half a mirror image of the other. The game of craps at times appeared as the archetypal game of probability theory, with its complex permutations of odds, pay-offs and house percentages, a working (or rather playing) example of a theoretical construction.

Gaming machines

One of the most significant developments of the nineteenth century was the introduction of gaming machines. The Industrial Revolution of eighteenth century Britain had laid the foundations for automatic gambling when a London bookseller created an automatic vending machine in order to sell proscribed literature, although the introduction and proliferation of coin operated machines did not appear on a mass scale until the last quarter of the nineteenth century (Costa 1988, p11). During this period of technological innovation, the automation of the leisure sphere was complemented by that of the workplace, so that the development of what Costa calls ‘automatic pleasures’ was symptomatic of the automation of the wider world of the late nineteenth century (Costa 1988).
Being born in a secular, industrial age, the ancient image of divinatory drama which ran as a leitmotif through most older, established types of gambling would not be expected to feature in this young form. However, slot machines did manage to maintain the link of all gambling with the sacred, for the automated machines from which the early gaming machines drew their inspiration were originally used for fortune telling! In the white heat of the technological revolution, the art of divination was not made redundant, it was simply mechanised.

Fortune telling was automated early on in the history of the coin machine (Costa 1988). Around 1820 the Great Magician Clock appeared and ‘answered’ questions put to it by curious bystanders. More machines followed, inviting individuals to discover their future by means of a spinning pointer, a card dispenser or some kind of animated figure (Costa 1988, p21). The earliest gaming machines utilised the principles of these fortune tellers, their patents stating that they could be used either as divinatory devices or in modified form as games of chance, although in an attempt to limit their appeal, both forms of amusement were only allowed to return tokens such as cigarettes and chewing gum and not cash, as prizes. The design of many of these first machines was simply an automatic adaptation of already existing games - hence the popularity of images of cards and horses, as well as of pieces of fruit, from which the term ‘fruit machine’ is derived.

In Plate Three we see two late nineteenth century machines: the ‘gypsy fortune-teller’ and the ‘mysterious hands’, that were used partly as fortune-tellers, partly as gaming machines (in Costa 1988).

The first automatic three reel machine, or ‘one arm bandit’ - the prototype of our modern gambling machines - appeared in San Francisco in 1905 (Sifakis 1990) when Charles Fey developed a device in which a handle was pulled to spin three wheels and, if a winning combination was made, a stream of nickels poured out into a tray below. The one armed bandit (which Fey patriotically named the Liberty Bell) was developed in a rush of pioneering individualism typical of the Gold Rush state of that time. Throughout the nineteenth century risk-hungry Californians, whom Findlay called ‘people of chance’
(Findlay 1986), were possessed of a dynamic, innovative spirit which culminated in their westwards advance across Nevada and the subsequent creation of that testimony to American entrepreneurialism that is Las Vegas. It is no wonder then, that in an era of technological advance, it was these ‘people of chance’ that gave slot machines their final configuration and so created the most modern form of gambling device.

**Horses**

The numerical preoccupation of the age, along with technological innovation was to change the face of horse race betting forever.

The role of newspapers became steadily more important in this process until, in the nineteenth century ‘the demand for tips and news, played a large part in the development of the popular press’ (Cunningham 1980, p177). Sporting journals devoted entirely to this type of information, began to appear, with *Sporting Life* in 1863 and *Sporting Chronicle* in 1871. Furthermore, according to Cunningham, ‘no less than half the evening papers started in the 1870s and 1880s had a close connection with sport and gambling’ (Cunningham 1980, p177). For the second time in history, print encouraged - and was encouraged by - gambling. This plethora of sporting journals fed the voracious public appetite for information, and was crammed full of facts and statistics about horses, races, jockeys and odds. Aided by the electronic telegraph system, which meant the press could quickly publish results and starting odds, the 1880s saw the development of large scale organised betting (McKibbon 1979, p148). In a move which the aristocracy would have fought bitterly against, railways helped make horseracing a national spectator sport by sponsoring races and linking towns to courses (Cunningham 1980, p159). Meanwhile, good railway communications and fee paying spectators encouraged massive investment - the future of public racing was assured.

These nineteenth century developments revolutionised racing. Now thoroughly democratised, its status was reversed from being the prerogative of a rich elite, to being a massive working class entertainment. Under the imperative of commercialisation,

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5 The first being the dissemination of cards from the fifteenth century printing press.
spectacular, individual upper class bets had disappeared and popular betting between a mass of punters - both on and off the track - taken over. Such bets were subject to strict odds: the chances of a horse winning a race was calculated by taking many variables into account, and expressed in a numerical equation. Payoffs were equally subject to strict calculation, based on the amount of the original stake and the odds on the particular horse. No longer a simple 'gentlemen's agreement' for a set amount, betting became an infinitely complex contract between bettors and central race organisers, relayed through a number of betting shops.

The physiognomy of betting now changed from being private and limited, to being public and widespread. Whole areas were permeated with this form of gambling: 'The streets of our towns are perambulated by bookmakers or their betting agents inviting persons to bet with them... Houses or shops exist in large numbers in all towns where... the real business is the receipt and collection of betting slips for some bookmaker...' (Report from the Select Committee on Betting Duty 1923; in McKibbon 1979, p160).

According to Neville, the first betting house, owned by Messrs Drummond and Grenville opened in 1847, and by 1850, around 400 existed (Neville 1909, p99). Most were no more than small rooms in 'obscure and dirty thoroughfares', where 'regular lists of prices were openly exhibited' (Neville 1909, p99). Crowds gathered to watch the rise and fall of the odds before a big race, and, in the scenes of wild excitement, which usually ensued, 'an epidemic of gambling was declared to have attacked even the poorest class' (Neville 1909, p99). Needless to say, An Act for the Suppression of Betting-Houses swiftly appeared in 1853, fining owners £100 for allowing betting on their premises (Neville 1909, p102). Again, it was too late. The popular tide of betting simply went underground, largely unaffected by the 'suppression'.

The highly numerical nature of all these forms of gambling made them consonant with the statistical milieu of the nineteenth century, and particularly suited to the imperatives of commercial organisation. Their commodification, in an expanding capitalist economy, signalled a new orientation to chance; for, before the latter had even reached ontological status, the organisation of these new games created yet another dimension of the
phenomenon: the *commodification* of chance.

The commercialisation of gambling changed the experience of play forever. In gaming halls and public houses, people played all day and all night at games like craps and roulette, which had been refined and organised in such a way as to include a 'space' for a 'player' who always won - the house, or dealer. Commercialisation encouraged dealers to rely increasingly upon the more predictable and more secure profits provided by odds fixed inflexibly in their favour (Findlay 1986, p91). Realising the impossibility of winning games of chance by participating in them, the commercial interests - 'the house' - made a brilliant move whereupon winning was assured. Rather than participate in a game, they removed themselves from it altogether and allied themselves with the very law that told them they had to lose. By placing themselves actually *within* the probability equation, they could simply sit back and await the profits which would inevitably result from favourable odds. Backed by the indomitable authority of probability, the house could not possibly lose. On the other hand, the alliance of both odds and house meant the individual gambler could not possibly win. He found himself competing against an invisible opponent with a permanent place at every table and unlimited resources. What is more, he was forced to play against the house, for this element of competition had been built into the commercial games and was now inherent in their structure. Gamblers no longer played against each other, but were directed against the house, whose invisible impersonal force mirrored the imperatives of economic behaviour, the 'invisible hand' of market forces.

Commercialisation changed the social composition of play by encouraging 'players of more moderate means': as the size of wagers became smaller 'the number of bettors expanded tremendously' (Findlay 1986, p91). Hiding behind the iron laws of probability, gaming entrepreneurs made profits, not by increasing the stakes of games, but by increasing the volume of players. With enough individual participants, the law of large numbers could be realised, and with it, the profits of the gaming house accumulated.

As its nature was transformed through commercialisation, the experience of gambling itself underwent a change. 'With the odds against them, it came to matter less whether players won or lost, so long as they got a chance to participate' (Findlay 1986, p83). The meaning
of gambling changed: 'Players still hoped to win... but they looked upon betting more as a commodity for sale ... as an experience worth purchasing with losing wagers' (Findlay 1986, p92). In a capitalist economy, gambling had finally succumbed to commodification. But this was no ordinary commodity, for it had a unique experiential component. While players continued to gamble for money 'they did so in larger and larger part for the thrills that it provided' (Findlay 1986, p94). Now 'thrills that came from taking risks had become almost as important as winning; the excitement of the speedy games and the unusual surroundings combined to make even losses seem worthwhile' (Findlay 1986, p93). Fast games and moderate stakes became valued for prolonging participation and therefore maximising excitement. Although it was good to win, acknowledged one historian, 'the tremulous rapture of mingled hope and fear is almost compensation enough even if one loses'. Now that their main motivation was participation, gamblers played simply to play, for: 'Next to the pleasure of winning is the pleasure of losing, only stagnation is unendurable' (Bankcroft, in Findlay 1986, p94).

Out of this process of commercialisation, we see the final emergence of the modern form of gambling, and the experience of the modern gambler. Ironically, in this modern figure we see an image of the aristocratic gambler of the seventeenth century. Despite the victory of the values of players like Dangeau, the edifice of modern commercial gambling, created by the institutionalisation of his style of play, bore more resemblance to the vanquished aristocrat than to the calculative bourgeois.

Although the appearance of aristocratic and modern gambling differs, underlying motivations point to a fundamental correspondence between the two. For both, money serves only as a measure of play, unimportant in itself. The high stakes of the aristocracy showed their indifference to money; they participated in gambling rituals in order to demonstrate their laodicean disregard for contemporary worship of mammon. As such, the aristocrat played to participate, never to win. The low stakes of the modern gambler at first seem far removed from the leviathan bets of the aristocrat, but they serve a similar purpose: to lengthen participation. The aim of the modern gambler too, is participation, not winning. Again, money is only a means of play, and the indifference of the modern gambler to it stems from his participation in play itself. So, while the aristocrat played to
demonstrate indifference, for the modern gambler, indifference stems from play. These orientations will be examined further in Chapter Four.

POSTSCRIPT: ‘THE VORTEX OF VICE’

Various forms of suppression and condemnation ran alongside the long history of gambling, a persistent and largely ineffectual distraction to the serious frivolity of play. From the Roman prohibition of gaming during the Saturnalia to the medieval bans for the 'protection of archery', the practice of gambling was accompanied by a succession of specific legislative prohibitions and enforced by individual rulers.

In the seventeenth century, just as gambling reached unprecedented popularity, attempts to forbid it suddenly became more draconian, and previously disparate criticisms were focused into a coherent and intensely vitriolic assault. The fulminations of a new urban Protestant bourgeoisie against the 'Satanic vice' of gambling made the relatively perfunctory criticisms of feudal monarchs appear positively lenient! What had been tolerated by the Catholic Church was not by the Reformed one.

Plate Four represents two images of the 'vice' of gambling. The top picture, a caricature by Thomas Renton from 1790 entitled 'The Dangers of Dice Addiction', outlines the havoc wrought by that 'destructive fury, the spirit of play' on seventeenth century reason, while the caption on the lower picture: 'Lawyers and Soldiers are the Devil's Playfellows', suggests the specifically sinful nature of the activity (in Arnold 1993).

In the seventeenth century, the condemnation of gambling was virtually a shibboleth of the Protestant - bourgeoisie. It was seen as the apotheosis of vice, superseding deviations like drinking, blasphemy and all kinds of immoral excess, for, by uprooting the foundations of a virtuous order, it could create any of the above. Gaming was evil in itself and because it could lead to even greater evil. As 'a doore and a windowe' into all sorts of ungodly behaviour (in Findlay 1986, p18), it represented the antithesis of the Protestant bourgeois search for a society founded on a rational godly order. The Puritan New Englanders of
seventeenth century Harvard College exemplified the values of both groups by fining individuals according to the sinfulness of their behaviour. In this sliding scale of vice, gambling was the most expensive act of all! The activities listed were:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Fine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keeping guns</td>
<td>1s</td>
</tr>
<tr>
<td>Drunkenness</td>
<td>6</td>
</tr>
<tr>
<td>Lying</td>
<td>6</td>
</tr>
<tr>
<td>Frequenting Taverns</td>
<td>6</td>
</tr>
<tr>
<td>Profane Cursing</td>
<td>6</td>
</tr>
<tr>
<td>Profanation of Lord's day</td>
<td>0</td>
</tr>
<tr>
<td>Graduates playing cards</td>
<td>0</td>
</tr>
</tbody>
</table>

It is the criticism of the Protestant-bourgeoisie that interests us most, for the legacy of their condemnation was passed through the ages, and permeated each subsequent wave of attack. Their disapproval was evident in the Enlightenment struggle against disorder, in the nineteenth century enforcement of labour discipline, and in the categorisation of gambling as a form of mental illness of our own era.

In the statutes of the seventeenth and eighteenth centuries, we see a new bourgeoisie attacking what it regarded as the immoral extravagance of those surrounding it - 'the unrespectable leisure of aristocracy and poor' (Cunningham 1980, p110) - and struggling with the problem of labour discipline and the wider fear of irrational disorder. To this end, attempts were made to sweep examples of roaming irrationality out of sight. By an act of George IV, if found gambling in the street, individuals were to be 'committed to gaol as rogues and vagabonds' and sentenced to corporal punishment and hard labour. Such confinement was the remedy for the 'common and intolerable nuisance' of young boys and men 'sprawling about the pavement... and playing... at games of chance' (Steinmetz 1870, p427). Such imprisonment confined the gambler to a secure space where, out of public sight, he could no longer exist as an affront to the rational society around him. In America, river gambling was organised in steamboats so as to be outwith the jurisdiction of states which prohibited gambling. The vast, slow moving boats glided slowly up and down the
rivers of southern America in a kind of limbo, a no-mans-land, with no particular destination, keeping moving to remain untouched by the laws of the land around them. Like the Renaissance ‘ships of fools’, these ‘strange drunken boat[s]’ that ‘conveyed their insane cargo from town to town’ (Foucault 1961, p8) contained examples of roaming irrationality and moved them on. The loss of reason which the Enlightenment saw inherent in gambling was anathema to its ideal of rational progress, and was a particularly abhorrent form of madness. Of the other archetypes of irrationality - the madman, the child and the primitive (Ferguson 1990), the gambler was by far the most offensive, for his refusal of reason was wilful. Unlike the others, who could not help their actions, the gambler made a decision no reasonable human was supposed to be able to make. He intentionally gave up his most precious faculty, his mark of humanity, for nothing more tangible than the vicissitudes of chance. Writing in this Enlightenment tradition, Montesquieu stated that God forbade anything which disturbed reason, and, since they produced ‘anxiety and frenzy’, he especially denounced games of chance (Montesquieu 1977, p120).

The horror of the gambler’s rejection of reason continued to run as a leitmotif through the nineteenth century. By the beginning of the era, it was believed by certain members of the British Medical Association that gambling was explained by the nervous tension of fin-de-siècle Britain. By the end of the century, working class gambling was equated with idleness and with the moral ill-health of the nation, and psychologists began to concern themselves with the possibility of the hereditary effects of this ‘disease’ (Brenner and Brenner 1990, p141). It was an apocalyptic vision: ‘anti-gambling writers came to regard their attack on working class gambling as a crusade to save England from economic and social disaster, to maintain political stability, to preserve the Empire and even to halt the degeneration of the English race and so to defend civilisation’ (Dixon, in Brenner and Brenner 1990, p75). It is in this era of social Darwinism that we can see the genesis of the medical psychology of the twentieth century, including the origin of the contemporary search for a gambling ‘gene’. Such perspectives were voiced in the hysterical polemic of reformers like Anthony Comstock, who wrote that gambling was a trap set by Satan.

6 With its surveillance cameras and security guards, the twentieth century casino can be seen as the legacy of this move: the voluntary confinement of the gambler.
which swept morals 'with the fury of a tornado' into the 'vortex of vice' (Comstock 1961, p58). The loss of reason was the inevitable consequence of such moral decline. Gambling gave rise to 'unhallowed appetites and passions', which 'render[ed] the mind ungovernable and destroy[ed] it for useful purposes' (Comstock 1961, p58). Comstock could barely articulate his loathing, which poured out in a stream of rhetoric: 'Tastes and appetites are perverted, evil habits are formed, vicious and filthy habits encouraged and death and destruction escort our youth on every side. That human beings can sink so low seems almost incomprehensible' (Comstock 1961, p92). The gambler, by renouncing reason, gave up his claim to humanity: 'These are caricatures of true men. They are forms hollowed out by this cursed traffic until there is nothing but form left' (Comstock 1961, p83). The equation of gambling with formlessness had been made earlier by Jean Dusaulux in *De la passion du jeu* (1779). Here, the loss of reason bore a physical stamp 'what particularly characterises gamblers is their lack of any character. Their tumultuous and contrary feelings reciprocally destroy each other and leave only confused traces. They have the faces of lost men with no distinct physiognomy'. Lacking will, self control and any sense of purpose, the gambler became 'an empty space within the triumphant discourse of reason' (Dusaulux, in Kavanagh 1993, p36). In this state, the gambler was the incarnation of that primordial chaos, *chaos*, which, as 'an abyss or empty space', characterised 'the first state of the universe' we saw in Chapter One.

As chaos incarnate, the gambler was a thing to be condemned, denied and repressed, and this the Protestant bourgeoisie did with unprecedented violence.

From the seventeenth and eighteenth centuries, gambling came to embody the fears of this group in two distinct senses. On the one hand, as we have seen, it encapsulated the unease felt by the Protestant and the bourgeois at the outside world; a chaotic, disorderly world whose members did not share the rational, godly values of the hard working Christian. On the other hand, it embodied an even more terrifying vision: it held up a mirror to the Protestant in which he saw reflected all that was unacceptable within himself. In one moment of revelation he witnessed his belief stripped of its cloak of piety and reason, and all his doubts and fears - so carefully contained within the security of its articles - laid bare. The horrified cry uttered from this moment of introversion was diverted into a stream of
vitriol against gambling - the activity that had provoked this terrible recognition.

As a reaction against the activity, the Protestant bourgeoisie violently condemned gambling on both economic and religious grounds. Each condemnation however, concealed a more profound recognition of their own actions and beliefs in gambling and it was this which really stimulated their attack. These condemnations and recognitions are examined next.

**Economic Disapproval**

The activity of gambling displayed a blatant disregard for the values of the Protestant. Hard work in a calling, glorification of God through earthly activity and an ascetic disregard for material gain were shamelessly flouted by the actions of the gambler and thus existed as a blasphemous assault on the divine order. Although Christianity had always recognised the virtues of work, with the Protestant emphasis on worldly activity, its value was 'mightily increased' (Weber 1990, p83). Especially for Calvinists, diligent labour in a calling became defined as a virtuous activity, which would result in gradual, predictable, and, more importantly virtuous rewards, whereas idleness and the squandering of precious time, were regarded as the epitome of vice. The activities of the gambler represented the antithesis of these virtuous pursuits. His reaction to wealth was one of immediacy and extremity. Instead of the slow accumulation of money, appropriated for the future through saving and investment, the gambler's financial transactions were located firmly in the present, where his economic standing could soar to immense riches or plummet to penury, out of all proportion to physical effort. Such vicissitudes were seen to disrupt the ideal of a meritocratic social balance, and, in the new moral-economic climate, gambling represented unearned, therefore immoral and illegitimate wealth. It was this orientation that prompted the Puritan John Northbrooke's outburst in his *Treatise against Dicing, Dancing, Plays and Interludes* (1577) against 'turpe lucrum, filthie gaine' which, because it was 'gotten in a trice over the thumbe, without any trafficke or loan' would be witness against its winners 'at the last daye of judgment if they repent it not' (Northbrooke 1843, p125). Given the ambivalence of the Puritan attitude to wealth, the latter of which could only by legitimated by work, the existence of such riches that had accrued without effort was simply regarded
as theft: 'money gotten by play is flat theft, and to gaine by such measures is plainly to robbe, and to possesse other men's goodes without just cause...[and] ... is playne against the commandment of God, that sayth 'thou shalt not steale' (Northebrooke 1843, p123) 7

It was the waste of time and money inherent in gambling that preoccupied the Protestant bourgeoisie during the period when, for the bourgeois, the systematic use of both were necessary for capitalist expansion, and for the Protestant, both were appropriated by God. The rational management of time and money was a prerequisite of the labour discipline which, in the early years of capitalist development, was pursued mainly by the bourgeoisie. Thus the aristocracy were attacked primarily for their profligacy; their gambling for its wastage of money, while the poor were attacked for their laziness; their gambling for its wastage of time. It is in this vein that Steinmetz described a congregation of the poor around a lottery drawing. His criticism (and Steinmetz writes as a dispassionate observer, not an ideologue!) was excited not so much by the possibility that the crowd may have stolen money to enter the draw, but by their very presence, which meant that they were 'stealing from their masters' time' (Steinmetz 1870, p402). Thus the Protestant bourgeoisie criticised the gambler of idleness and excess, profligacy and greed, caprice and persistence: characteristics which always stood to one side of the balanced, moderate bourgeois ideal. As such, the figure of the gambler was generally perceived as a member of the aristocratic or labouring classes.

However, the tide of condemnation which the bourgeoisie poured on the gambling of their social neighbours could not conceal the fact that the very root of their existence grew from this activity in its purest form. Their wealth derived from adventure capitalism: the speculation on commodities and circulation of money on international markets. Bourgeois power was thus created by the risking of money on events whose outcomes were determined by the operation of chance.

It is this fundamental similarity which links two of the (ostensibly oppositional) characters we saw earlier - Cotton's gamester and Ashton's stockjobber. Their capricious natures, the

7 A similar view of gambling as theft was observed by Marco Polo to be held by the ruler Kubilai Khan, who told his subjects: 'I have acquired you by force of arms and all that you possess is mine. So, if you gamble, you are gambling with my property' (Polo 1953, p161).
former 'always in extreams, always in a storm', the latter 'ten times more changeable than the weather', are united by their common economic origin in financial speculation. The 'immoral excesses' of the gambler were thus being carried on as everyday business by the respectable bourgeoisie! But even in the nineteenth century it took a perceptive - and brave - observer to point out that the piously - clad bourgeois had, in fact, no clothes. One such observer wrote in 1865 that 'the Stock Exchange... has completely... superseded 'four aces'. It looks more respectable to game in the guise of business than to stake a fortune upon the turn of a card, or the hazard of a pair of dice' (Taylor 1865, p374).

The bourgeoisie, themselves 'acutely uneasy about the real source of [their] power' sought to deny it by attacking it whenever it appeared (Kavanagh 1993, p56). For Kavanagh, 'It is this obsession with erasing their own shameful origins in money that explains why gambling became for the ascendant bourgeoisie a scandalous evil...'. Such condemnation served as a convenient smokescreen for the pecuniary origins of this class, for it implied that 'there existed an essential difference between gambling as a self-interested manipulation of money and those various other manipulations of money through which the bourgeoisie had acquired its wealth' (Kavanagh 1993, p56,7).

The 'artillery of the Puritans' (Taylor 1863, p313) was directed at the gambler with, if anything, even more force in the realm of non-economic activities.

Religious Condemnation

'The ladies, arm and arm in clusters,  
As great and gracious a' as sisters  
On lee-long nights, wi' crabbit lewks  
Pore owne the devil's picture bueks'  
(Burns, in von Renssalaer 1912, p294)

The Protestant criticism of gambling on non-economic grounds took two forms, which, if examined closely, are found to be contradictory. Out of this contradiction we see the real source of Protestant antipathy to gambling, and gain insight into the very nature of
On the one hand, games of chance were seen to foster superstition and idolatry by sustaining belief in pagan gods and transcendental forces like fate, and so fuelled 'the Puritans ferocious hatred of anything which smacked of superstition, of all survivals of magical or sacramental salvation' (Weber 1990, p169). For Northbrooke, the pernicious effect of such games was the invention of the devil himself: 'the playe at cardes is an invention of the devill, which he found out that he might the easier bring in idolatrie amongst men. For the Kings and coate cards that we use now, were in old times the images of idols and false gods, which they that would seem Christians have changed into Charlemaire, Lancelot, Hector and such lyke names, because they would not seem to imitate their idolatrie therein, and yet maintaine the playe itself the very invention of Satan... would so disguise the mischief under the cloake of such gaye names' (Northbrooke 1843, p143).

On the other hand, Protestant divines criticised gambling for deliberately invoking the presence of God in trivial matters, for 'God, whose hand the Puritan sees in all the occurrences of life' (Weber 1990, p162) was as interested in the outcome of a game of chance as he was in the unfolding of more serious worldly affairs. Ashton's recollection of a dialogue between a sixteenth century preacher and a professor clarifies the role of the Divine in this matter, when the former explains how activities such as 'Dice, Cardes and Tables are Lots ...', and as such, presuppose the special providence and determining presence of God...' in their unfolding (in Ashton 1898, p30). Such an intervention was unproblematic for some Protestants who actually condoned the deliberate casting of lots. Zinzendorf's Pietists advocated the use of the lot as a means of revealing the Divine Will, while John Wesley's Methodists utilised scriptural playing cards for the same purpose. Containing Biblical verses and hymns, these cards would be shuffled and the one drawn would provide a conversational text. Hargrave draws attention to their ancient roots lying just beneath the pious surface: '[the cards] quickly took on the old-time significance of cards as a means of divination. Good men and women believed that Providence spoke through them, and many decisions were made according to the guidance of those little scraps of paper' (Hargrave 1966, p324). These instances were exceptional, however, for
on the whole, opinion railed against what it saw as the blasphemous profanation of the will of God. Ashton's preacher voiced the orthodox position on the subject, declaring that because God is a 'principall actor' in games of chance, 'the use of lots is not to be in sport', and 'we are not to tempt the Almighty by a vaine desire of manifestation of His power and special providence'. Such an action would be even worse than blasphemy: 'For as calling God to witness by vaine swearing is a sinne... so making God an umpire by playing with lots must need be a sinne; yea such a sinne as maketh the offender... more blame - worthie' (Ashton 1898, p32).

Taken together, these lines of criticism present a peculiar picture of the protestant's relation to gambling. By condemning gamblers as tempting the Almighty, their critics were attributing to him a role in play which gamblers themselves assigned to mystic, pagan forces. The existence of a divine presence of some kind in gambling was not in dispute; the Protestant argument was simply that it was the wrong one! There existed only one legitimate presence for them - the Christian God, and so by rejecting gamblers' beliefs merely for their paganism, Protestants did not dispute the presence of the divine in play per se. Their argument was, on the one hand, that to see this divinity as anything other than the Christian God was pagan, and on the other, to see it as this God and still play was blasphemous and idolatrous. Thus the Protestant accepted the presence of God in gambling just as ancient man had accepted the presence of his gods in divination. No doubt the continuance stirred acutely uneasy Protestant feelings, as he recognised in gambling the descendance of divination and magic. The collocation he felt at this vague perception of the similarity between ancient divination, which invoked pagan gods, and modern gambling which invoked his God, struck at the heart of profound tensions he experienced with his own religion, for it was becoming apparent that Protestantism - that most rational of religions - contained aspects of the most mystical of beliefs. This mysticism occurred in two main areas.

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8 A similar containment of the sacred in games of chance is recognised and made more explicit in Chinese, where the character tou applies to games of chance, bets and ordeals, and is also the name for blasphemy, for 'to tempt chance is considered a sacrilegious wager against destiny' (Caillous 1962, p34).
Mysticism in Protestantism

For a religion which had succeeded in attaining the 'radical elimination of magic from the world' (Weber 1990, p149), and which, as the apogee of religious rationalisation, provided a systematic basis for action founded on rational belief, Protestantism in fact contained profoundly mystical elements. What is more, these elements, albeit in a different context and with different application, also constituted the worldview of the Protestants' arch rival - the gambler. There exist two areas of this confluence.

Firstly, the focus for both was an omnipotent, transcendent being who determined the fate of every individual and who could not be perceived or measured in any rational, quantifiable way. An 'unbridgeable gulf' separated the Protestant from his God, before whom he stood alone - sola-fide - for the first time. This God had predestined the fate of every individual in the afterlife as a member of the elect or the damned, and no amount of earthly activity could effect this decision, for the state of grace was as impossible to lose for those granted it as it was unattainable for those not similarly chosen (Weber 1990, p104). The mystical nature of the idea of predestination was pointed out by Otto, who wrote 'from the standpoint of the rational, this notion of predestination is a sheer absurdity, an absolute offence' (Otto 1925, p90). Such a doctrine of 'magnificent consistency' but 'extreme inhumanity' was all but intolerable to the Protestant, and the Dutch Armenians and Cambridge Platonists reacted against it, calling it 'this divine fatalism arbitrary' and the 'divine Fate immoral' (Campbell 1987, p110). The distant God of the Protestant had come to resemble the capricious and amoral forces which regulated the gamblers' life. For Campbell, 'the emphasis on the independent activity of divine grace was so strong as to make divine will appear to be mere fate, and God Himself to be an arbitrary rather than a moral and loving figure' (Campbell 1987, p109). This divinity was unacceptable to Milton, who wrote 'Though I may be sent to hell for it, such a God will never command my respect' (in Weber 1990, p101). The majority of Protestants however, tried to come to terms with this aspect of their religion; and unable to control or even know their fate, were forced to live in a state of 'unbearable psychological tension'.

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9 See, for example. Otto's discussion of the non-rational in Luther (Otto 1925, p98-112)
It is this tension which leads us to the second mystical aspect of Protestantism - the emphasis on faith. The central issue for the Protestant was the mover from the status naturae (state of nature) to the status gratiae (state of grace), and the achievement of certitudo salutis (certainty) of being in this state. The Reformation had emphasised the importance of inner faith over outward shows of ceremony in devotion to God, and as such the Protestant had a duty to consider himself one of the elect, for inner faith was the means by which such certainty could be attained. The emphasis on faith in the matter of election was a recourse to subjective feeling over objective knowledge; a state which could not be held up to rational scrutiny and which lent itself to all kinds of irrational mysticism. Various Protestant sects possessed different solutions to the problem of certitudo salutis - all of them judged by their own criteria of rationality, mystical. For Lutherans, as 'vessels' of the holy spirit, the highest religious experience was the unio mystica; the experience of certainty. Apparent as a loss of ego, and communion with God: 'a powerful feeling of light-hearted assurance... breaks over them [the supplicants] with elemental force and destroys every possibility of the belief that this overpowering gift of grace could owe anything to their own co-operation or could be connected with achievements or qualities of their own faith and will' (Weber 1990, p101-2). The unio mystica was a strange state for a religion in which the elimination of irrationality 'came here to its logical end', for 'it is a feeling of actual absorption in the deity, that of a real entrance of the divine into the soul of the believer' (Weber 1990, p112). Something like the unio mystica was experienced by the Pietists, whose extreme asceticism led to a 'hysterical character' that was realised in half conscious states of religious ecstasy, nervous enthusiasm and overwhelming trances (Weber 1990, p130). Methodists also relied on subjective emotion as a guide to certainty; the only basis for the latter was a pure feeling of absolute certainty of forgiveness, derived immediately from the testimony of the spirit (Weber 1990, p140). As tools of the divine will, Calvinists believed that 'intense worldly activity gives certainty of grace' (Weber 1990, p112) and so their faith was demonstrated in a more tangible fashion by the active pursuit of one's calling - the direct execution of God's will. The performance of good works in an earthly calling was thus a medium through which certainty of election could be demonstrated. Such apparently rational, worldly conduct was not free of mystical elements however. More than mere performance, some degree of success in a calling was regarded as a sign of election. Good works in
themselves were useless for attaining salvation, but were 'indispensable as a sign of election', being 'the technical means... of getting rid of the fear of damnation' (Weber 1990, p115). The Calvinist would create the conviction of election through systematic good works, so that the will of God - 'that God, whose hand the Puritan sees in all the occurrences of life' (Weber 1990, p162) - could thereby reveal itself through those works. Success was a sign of election, and the life of the tormented Calvinist a search for such signs - secular symbols of a divine plan he was powerless to influence.

The conjunction of these two areas of mysticism in Protestantism created a certain tension. The belief in a transcendental predetermining God created a terrible uncertainty, mitigated only by its 'solution' - the emphasis on faith. Together, the tension between pure faith in the face of overwhelming uncertainty shaped the Protestant worldview and provided a dynamic for action. The mystical - religious worldview of the Protestant was shared, in part, by the gambler, whose actions were driven by a similar dynamic - the tension between faith and uncertainty. The nature of the gambler’s worldview will be examined in Chapter Five, but for now a brief description of it will serve to highlight the similarities between it and that of the Protestant.

Like the Protestant, the gambler believed his fate had been predetermined by an anthropomorphic, transcendent force: the 'hand of God' of one is the equally omnipotent 'hand of fate' of the other. He knew his destiny was decided and outwith his control, and was desperate to know what it was. The belief in a predetermining deity led to the terrible condition of uncertainty. Like the Protestant, the gambler longed for the state of certitudo salutis, and again like the Protestant, he found the only possible means of achieving it in faith. Just as a member of the elect simply knew he was chosen, so the gambler simply knew he would win. For the gambler, this faith was manifest in the conviction of the efficacy of his own luck, whose apprehension in play reassured him of his select status. The fact that every gambler considered himself lucky, but not every one could win, did not shake his faith, just as the Protestant remained unperturbed that, although every believer regarded himself elect, not all were. Faith transcended the irrationality of these convictions, which, being purely subjective, could never be subjected to rational analysis.
Like the Calvinist, the gambler was driven by his uncertainty to search for signs of the divine plan. When he played, the minuitiae of a game revealed deep significance, for Fate 'communicate[d] with him by means of small signs indicating approval or reproach' (Bergler 1970, p230). Like the Protestant, the gambler interpreted success (a win) as approval, for gambling was a perpetual posing of the question - 'am I your favourite?' - to Fate. The Protestant asked the same question when he beseeched God - 'am I one of your elect?'. The unfolding of a game in terms of lucky runs, near misses, wins and losses, was combed by the player for signs which would provide indications of his destiny. Likewise, the unfolding of the Calvinist's life was a vast tableau upon which clues to his fate were to be found. The activities of both were necessarily repetitive, for the Calvinist knew that the value of his works lay in their systematic application, and the gambler, who was 'obsessive in his uncertainty' demanded constant, repeated signs of assurance (Bergler 1970, p83).

The realisation of faith - the *certitudo salutis* - of the Lutheran, Pietist and Methodist resembled the experience of the realisation of faith of the gambler - the experience of winning. The 'powerful feeling' that 'breaks over' the Lutheran, and the half-conscious states of ecstasy of the Pietist were the apotheosis of the belief of the Protestant. Similarly, when winning, the gambler reached the apogee of his faith and was in direct communion with Fate. The turmoil of Disraeli's *Young Duke* was typical of the ecstatic experience of winning: 'His hands and feet were like ice, his brow like fire; his ears rung with supernatural roaring, a nausea had seized upon him' (in Steinmetz 1870, p77). Certainty of election overwhelmed the gambler, who knows that 'Fate has singled him out from the other two billion inhabitants of the earth...' (Bergler 1970, p230). He transcended himself through his faith and communicated with the Deity, as did a young officer who won so enormously that 'he thought he was no longer an ordinary mortal' (Steinmetz 1870, p58).

It can be seen that it was the same fundamental dynamic - the tension between faith and uncertainty - which drove both the Protestant and the gambler. But of course, each responded differently *in action* to this tension. The Protestant response was one of overtly ascetic withdrawal from all forms of uncertainty and irrationality in the world. The gambler's response was a voluptuous abandonment to chance; a reaction which the Protestant, with his denial of all forms of sensuousness, could only behold with the utmost
Both responses derived from the same basic dynamic, and so touched a nerve in the Protestant's armour of rationality. On one level, the activity of the gambler represented pagan mysticism and economic irrationality which was anathema to the Protestant worldview. On another level however, lay a subconscious recognition, within this 'vortex of vice', of aspects of the Protestant's own belief, and it was the horrified recognition of his true, if repressed, self that lent real vitriol to the Protestant attack on gambling. The motivation to attack thus grew out of the vague perception of the disquieting similarities between gambling and Protestantism. Any correspondences between the two activities were unacceptable in a religion supposedly divested of all mystical association. Such a correspondence demonstrated that the most mystical - pagan belief shared with the most rational - Christian fundamental correspondences and fears, a correspondence which could only be denied, condemned and repressed as having no place in the world of the bourgeois.
CHAPTER THREE: PLAY GROUNDS - A MAP OF THE MODERN GAMBLING SITES

THE MAP

Skill and Chance

Rate of Play

Player Relation to Game

Spatial Organisation and Social Integration

Player Profile

THE SITES

The Lottery

Bingo

Slot Machines

The Racecourse

The Bookmaker

The Casino: Las Vegas, Capital of the Twentieth Century

SEPARATE WORLDS
PLAY GROUNDS
A MAP OF THE MODERN GAMBLING SITES

THE MAP

In the late twentieth century the stratified gambling network which emerged in the seventeenth century has been consolidated and institutionalised through a process that has culminated in the commodification of chance. The apogee of this process is the differentiation of the gambling economy into distinctive 'phenomenological sites', each bound by its own rules and governed by its own dynamic.

Just as, throughout its historical development, gambling represented the social milieu in which it existed, so contemporary gambling represents its period and can be said to exist as a microcosm of modernity.

The legitimation and commercial expansion of games of chance in modern western economies matches those economies' own development, which comes increasingly to resemble the purest form of gambling. In the world of high finance speculation and shares trading, the absence of the creation of any tangible product and the reliance on correctly predicting future changes in the market have brought economic systems under the sway of a kind of 'casino capitalism', leading some to conclude that 'the western financial system is rapidly coming to resemble nothing as much as a vast casino' (Strange 1986, p1). Thus it is in the language of games that a currency dealer advises companies on how to play the markets: 'It's gambling', he states 'Problems arise when people don't see it as a gamble and try to dress it up with macro-economic wisdom. It's a gut feel. Dollar's up. Sterling's down. Let's trade' (Bellini 1993, p57).

This speculative economic trend goes unremarked until unforeseen events result in huge losses. Then, like any gambler who starts to lose and is labelled 'compulsive', the economy
is declared sick, unstable and in imminent danger of collapse. Commentators suddenly become aware of the correspondence between gambling and economic speculation and, much like those in the seventeenth and eighteenth centuries, draw back in horror at the recognition. Since the speculative boom of the seventeenth century and the disastrous bursting of the South Sea Bubble, the economic history of the west has been littered with such gambling losing runs, including the Wall Street Crash of 1929, Black Wednesday in 1987 and most recently, the collapse of Barings Bank due to the over-ambitious bets of trader Nick Leeson.

Despite its failed bets, the capitalist economic system seems to be both driven by the risking of money on uncertain future events and limitlessly able to cope when the risk fails. For these reasons it always appears slightly disingenuous of commentators to feign surprise when the gambling - speculation equation is highlighted by a spectacular loss. When Strange writes that our old image of bankers as 'staid and sober men' has been displaced by one that is altogether more entrepreneurial, and that something 'radical and serious has happened to the international financial system to make it so much like a gambling hall' (Strange 1986, p2), we are forced to point out that surely by now it is apparent that this kind of speculative risk is part of the very nature of capitalism itself. Those stereotypes of Weberian rationality described by the author occupied only a fleeting moment of economic history, for the dynamic of capitalist expansion has, since the seventeenth century, been lodged in the casino.

It is appropriate that in this era of heightened sensitivity to indeterminism in economics, Borges should write his tale of hypostatised Chance: The Lottery of Babylon. In the mythical society of Babylon, the lottery has swallowed up all other institutions, subsuming the laws of justice and economics to the rule of chance, so that the narrator says: ‘I come from a dizzy land where the lottery is the basis of reality’ (Borges 1985, p55). The sacred drawings which are held every sixty days determine the course of a citizen's life for that period, and since the lottery has permeated every social institution, the individual could find himself imprisoned or fined with an unlucky ticket and promoted or rewarded with a lucky one. This fantastic social upheaval was once reality when a sixteenth century British lottery win brought with it, as well as a cash prize, immunity from arrest except for major
crimes! (Brenner 1990, p10). In Borges words 'I stole bread and they did not behead me' (Borges 1985, p55). In such a scheme, the edifice of society has been turned on its head so that social consequences are arbitrarily divorced from their actions, and it is no longer economic reason but chance itself that determines the infrastructure of society. The land of Babylon then 'is nothing less than an infinite game of chance' (Borges 1985, p61). In this, it is not unlike Montesquieu's 'Bettica', an imaginary land created to satirise what he considered the illusory basis of the speculative wealth on which it was based. Montesquieu's 'blind god of chance' who oversaw the selling of air-filled balloons to the citizens of Bettica performed a similar allegorical function to Borge's lottery-society in which a hypostatised chance threw the lives of its citizenry into confusion and disarray. Both fables can be seen to express a similar disquiet with chaotic economic conditions: once eighteenth century, the other twentieth, and both descriptive of our present situation of 'casino capitalism'.

It is not surprising that such an economic system as this should so willingly embrace the pure form of its own dynamic - the arena of games of chance.

Thus in the twentieth century, we see the rapid development of games of chance, accelerated by the influence of technology and the institutionalisation of play, into the economic framework of capitalist economies. Much has been written on the capitalist embrace of gambling and the mechanics of the resulting relationship, and it is beyond the scope of this essay to recount the debate here. However, the salient point which emerges is that, after a lengthy historical suppression, the activity, while still retaining some moral ambiguity, has shed its pariah status and become fully incorporated into western capitalist economies as just another type of commercial enterprise. The ability of market economies to embrace almost any kind of activity has resulted in games of chance, for the first time, being encouraged, developed and organised according to the homogenising dynamic of entrepreneurialism. Such is the embrace of what Balzac acutely described as 'an essentially taxable passion' (Balzac 1977, p21). Having achieved ontological status, chance has been commodified as the ultimate twentieth century product, sold by business and purchased by the consumer - the gambler. An excerpt from the Circus Casino's 1989 annual report

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1 See, for example Abt et al. 1985; Eadington (ed) 1988 Volumes 1 and 2 and Caldwell (ed) 1985.
illustrates this new status, explaining that, like any shop: 'Circus is an entertainment merchant. It's just that we happen to merchandise playtime to our customers rather than goods' (in Spanier 1992, p101).

Along with its institutionalisation and commercialisation, the democratising trend begun in the nineteenth century has led to a certain degree of homogenisation of gambling behaviour. The previous stratification of the gambling economy with horses and high stakes casino play the prerogative of the aristocracy and lotteries patronised mainly by the poor, is gradually breaking down, and the middle class - traditionally opposed to all forms of gambling - are becoming incorporated into the map. As the organisation of this gambling economy comes increasingly under the sway of commercial interests (witness the effective repeal of the 1968 legislation and subsequent deregulation of the industry since the introduction of the lottery in Britain), casinos and racecourses are becoming less exclusive while bingo halls and bookmakers are 'upgrading' their image to attract more affluent customers. These changes are leading to the homogenisation of once disparate areas of gambling activity and to the inclusion of all classes into their fold. In this respect it is perhaps not too early to predict what appears to be the shape of a future trend - the embourgeoisment of gambling. At the same time, however it must be emphasised that these sweeping changes do not signify the breakdown of social distinctions altogether, for, since games can only reflect the society they are played in, as long as social divisions remain in the world outside, so will they remain in the world of play.

From all these developments we can conclude that, in the twentieth century, gambling has become a diverse phenomenon, and that there exist many different ways to wager money on games of chance. It is the purpose of this chapter to outline the diversity of modern gambling by drawing a map of its major areas or 'sites', and to distinguish the phenomenological experience in each by referring to the physical structure and organisation - the physiognomy - of these sites.

The major sites of the late twentieth century are the lottery and its derivative, the bingo hall, the slot machine arcade, on and off-track betting and the casino. The physiognomy of these sites can be approached by a delineation of the categories of skill and chance, the
rate of play of a game, the player relation to the game, the spatial organisation and social integration of the site, and the socio-economic constitution of the players themselves. These categories can be regarded as a set of co-ordinates upon which the phenomenological map is based, and are intended neither to be exhaustive nor mutually exclusive.

Skill and Chance

Two broad forms of gambling exist: games of skill and games of chance. The practical orientation of the player to the game is different in each, for the former imply the possibility of (at least some) mastery over play while the latter imply submission to the blind laws of chance.

Although the existence of chance is pervasive, games of skill such as horse race betting and poker facilitate the exercise of varying degrees of ability on the part of the player. His choice in the placement of his wager can be informed by the rational application of relevant knowledge and by analysis and prediction based on the results of future outcomes. Such games are marked by 'the existence of an underlying order, a principle which can be figured out and mastered by a skilled observer' (Zola, in Herman 1967, p26). With sustained attention, appropriate training, assiduous application, discipline and perseverance' (Caillois 1962, p15) the gambler can learn from past experience and develop a technique for play, such as the handicapping of horses. Numeracy and psychological insight are vital for the poker player while the synthetic, probabilistic analysis of many variables are pre-requisites of the successful handicapper. This type of gambling Herman describes as work (Herman 1967), but we can term betting in order to distinguish it from involvement in games of chance which will be referred to as playing. In betting, the work-play distinction often appears to break down, as is revealed in a statement from one gambler, who says: 'God, there's nothing I love better than staying up all night and studying the relative positions and abilities of the teams and comparing points and then coming up with my choices...' (in Lieseur 1984, p29). This calculative approach represents the apotheosis of a statistical, probabilistic Lebensgefühl: the tendency to reduce
phenomena to numbers and to express the relations between such phenomena as relations between numbers, a trend which first emerged as a science in the seventeenth century.

The orientation involved in betting can be distinguished from that of games of pure chance, whereby winning numbers or combinations are generated at random. For Caillois, such *aleatory* games include 'all games that are based on a decision independent of the player, an outcome over which he has no control and in which winning is the result of fate rather than triumphing over an adversary' (Caillois 1962, p17). These games are not amenable to human prediction, for the operation of chance activates play and it is this, 'the very capriciousness of chance that constitutes the unique appeal of the game' (Caillois 1962, p17). Outcomes are determined by the laws of probability, where the past is irrelevant for future outcomes, and so it is impossible for the gambler to enhance his chances of winning through knowledge or skill. He may be *involved*, but his actions are not influential in play. According to Caillois he complies with the 'verdict of destiny' and such compliance 'signifies that the player submits to the roll of the dice, that he will do nothing but throw them and read the number that comes up' (Caillois 1962, p72). Such games are the antithesis of betting games, and exist as 'constant external reproaches to those who would try to manipulate the cards, dice or chips as they would operate a lathe or balance a set of accounts' (Cohen and Taylor 1978, p105).

Part of the 'unique appeal' of games of chance is their absolute *democracy*. As Gogol put it: 'Play is no respecter of persons ... All men are equal at cards' (Gogol 1926, p220). Each player is equally powerless in his inability to influence or predict the outcome of a game for *alea* tends to 'abolish natural or acquired individual differences so that all can be placed on an absolutely equal footing to await the blind verdict of chance' (Caillois 1962, p18). In contrast to games of skill, *alea* 'negates work, patience, experience and qualifications. Professionalism, application and training are eliminated... *Alea*... grants the lucky player infinitely more than he could procure by a lifetime of labour, discipline and fatigue. It seems an insolent and sovereign insult to merit' (Caillois 1962, p17).

This merciless egalitarianism was illustrated when the petty-bourgeois Trina won the lottery in Frank Norris's *McTeague*: "'Why should I win'? She asks, "'Eh, why shouldn't
"you?" cried her mother. In fact, why shouldn't she... after all, it was not a question of effort of merit on her part...’ (Norris 1985, p110). The undiscriminating favour of destiny was not met with such equanimity by the ragman, Zerkov, however, for the converse of its democracy can be seen as the unjust caprice of chance: ‘‘$5000. For what? For nothing, for simply buying a ticket, and I have worked so hard for it, so hard, so hard... fought for it, starved for it, am dying every day...’’ (Norris 1985, p126).

Although the gambler cannot predict which numbers will win, he does not lapse into passive fatalism, but actively entertains superstitious and mystical notions to guide his selection. In fact, the greater the degree of chance in a game, the greater the degree of the gambler's superstition (Brown, Devereaux, Caillois). The structures of belief underlying games of skill and games of chance thus rest on different foundations: while 'Knowledge and skill aid and reward agon,... magic and superstition and the study of miracles and coincidences are invariable accompaniments of the study of alea' (Caillois 1962, p77). The mystical orientation that results from exposure to alea will be examined in Chapter Five.

The abandonment of one's wager, guided by nothing more concrete than magical belief, to the vicissitudes of chance, is a form of play, and is the apotheosis of the mystical attitude towards number. The distinction between betting and playing, and the rationalist and mystical orientations to the world implied in each, first emerged in the seventeenth century when the simultaneous publication of scientific laws of probability as well as tracts on the magical and divinatory use of cards demonstrated two antithetical approaches to the understanding of the phenomenon of number.

Of course, the analytical distinction between modern games of chance and games of skill is somewhat artificial. As noted earlier, all games, even those most amenable to the skilful prediction of the player, contain an element of chance. The distinction outlined above is therefore not an absolute separation, for between the two extremes 'lie a multitude of games that combine the two attitudes in varying degree' (Caillois 1962, p75). Even in games like poker, a winner depends on not being dealt appalling cards while opponents are dealt favourable ones, and all the skill involved in handicapping is rendered obsolete if at the last minute it rains or a horse becomes ill. No amount of skill can ever eliminate
uncertainty and confer absolute control, for chance is an ontological feature of the world, its influence is pervasive and the outcome of a gamble is always a contingent event.

**Rate of Play**

The rate of play of a game includes ‘the number of complete gambling transactions which take place in any given unit of time’ (Devereaux 1949, p44). The length of time that elapses between the placing of a wager on an uncertain event and the resolution of that event constitutes the duration of the gamble or risk, while the *intensity* of the risk is effected by whether or not the event is settled instantly or gradually; for example, in roulette ‘the entire and final outcome is settled the moment the ball comes to rest in its cup and the outcome is completely indeterminate before that instant. Subjective hopes and tensions are held in suspense while the issue is pending, but no sense of progression, involving reorientation is present’ (Devereaux 1949, p45). On the other hand, at the race track the gambler may see the odds and conditions continually change before the race even begins and so witness ‘the entire process as an infinite series of progressive stages in the materialisation of the final result’ (Devereaux 1949, p45). Similarly in poker the structure of the situation changes with every hand and the gambler must therefore reassess his position in each round. The risk experienced in such games, while still intense, is more drawn out and less acute.

Despite the various rates of different types of games, gamblers tend to act in a manner that *shortens* the rate of play. By placing their bets on *any* game at the last possible moment (Dickerson 1985, p141), gamblers actually homogenise rates of play, despite the different structural characteristics of individual games. The reasons for and results of this tendency will be examined in the next chapter.

**Individual Relation to Game**

The players relation to a game and to other players is complex. Whether he participates directly or is removed from the action depends on the separation of the event from the betting on it. In a sense, all gambling ‘events’ (with the exception, perhaps, of horse
racing) are artificially created situations which would never be instigated but for the fact
that people bet on them. Events like lotteries are set up for the sole purpose of generating
an uncertain situation on which to wager money. What is important here is whether or not
such events directly engage the bettor, and in this sense, the players' relation to a game can
take one of three forms - (1) physical participation, (2) observation at close proximity or
(3) distance. Goffman's distinction between focused and unfocused interaction can
illuminate the form of interpersonal relations in gambling. Whereas in cases of the former,
individuals extend deliberate communication to each other, in the latter, communication
occurs merely by virtue of their being in the same situation (Goffman 1963, p83). All
forms of gambling can thus be seen to be instances of unfocused interaction.

In casino games like blackjack, craps and baccarat, and in slot machine play, the player is
physically involved and is betting on a situation which is at least superficially derived from
his own actions. His sheer physical presence is necessary for such games to occur for he
must manipulate the cards, throw the dice and activate the buttons on the slot machine for
play to continue. Despite the interactive nature of such games, the presence of other
players is extrinsic to the gambling experience, for it is not they, but the house or the
machine that the gambler plays against. He plays neither with nor against them, they are
simply there; each playing their own private game.

Games where the relation is one of distance are non-interactive. The player is not
physically involved, and need not even be present at all, as is the case with lotteries and
races. Here the player's relation to the game is distant and mediated by technology:
telemphones, cables and fax machines can all be employed to place a bet on an event which
may be occurring thousands of miles away. Technology thus expands the 'reach' of the
gambler - from sitting at a blackjack table, holding cards in his hand, he can expand and
protect his 'gambling body' into a thing of huge proportions over vast distances in such a
way that his actual body need not be present in any single specific space. According to Abt
et al.: 'Bookmaking is the first major form of commercial gambling to be transformed by
the twentieth century revolution in communications technology. The face-to-face
transactions between bookmaker and bettor that were so prominent a feature of the
nineteenth century American gambling scene have... almost wholly disappeared. Many
regular sports bettors never see the person who books their bets, their personal contact with the betting operation being limited to periodic settlements with the book's collection agents or "runners" (Abt et al. 1985, p45). Here, the gambler is completely absent from the action: there is nothing he need do, nowhere he need be to allow a lottery or race to go ahead. In fact, the lottery or horse race gambler is only a player at all in the sense that he demonstrates interest in the event through his wager, which is sufficient to include him in a ritual which can then go on without him. The players relation to others is as distant as his relation to the game itself. In the lottery, he need have no contact with other participants, and in off-track betting, he deals directly with a commercial bookmaker.

Observation at close proximity is a peculiar relationship in which the gambler is neither physically involved nor physically distant from the game. Pari-mutual wagering is the sole example of this 'in between' state. Unlike fixed odds, in pari-mutual betting, gamblers wager among themselves with the result that the odds on horses change before the race as an expression of the changing confidence and opinions of the bettors involved. Changes are reflected on the tote board which records shifts in odds as well as wagers and so registers the collective betting opinion 'in a manner analogous to the stock market ticker tape' (Abt et al. 1985, p86). Pari-mutual betting is thus a competition among bettors. Although these bettors are not directly involved in the gambling event - the race - their non-physical presence - their opinions are necessary for the event to be defined as a gambling one. In other words, competition 'does not determine the outcome of the gambling event... which... is beyond the bettors control... But the competition among the bettors does determine the financial value of successful bets as to this outcome - in other words, the odds at which winning bets are paid' (Abt et al. 1985, p86).

Spatial Organisation and Social Integration

The spatial organisation of a gambling site refers to the concentration or diffusion of the gambling environment. Concentrated sites are areas of intense, localised gambling activity like the casino and racetrack, while diffuse 'sites' are disseminated over a wide area, as in the lottery.
Such spatial organisation is related to the social separation or incorporation of sites into the larger social fabric, with concentrated sites tending to exist outwith the local environment in their own separate spheres and diffuse ones tending to be incorporated into the routine of daily life.

Spatial organisation affects the players relation to a game. Upon entering a concentrated site, the player is likely to be physically immersed, if not actually involved in play, whereas a diffuse site has no tangible 'site' to enter and hence the gambler does not participate in the means of play themselves. Diffuse sites provide many intermediary points of contact where the gambler may interact with the larger game going on elsewhere. Such sites as lottery vendors exist like spokes in a wheel, reaching deep into the social fabric from a central hub - the lottery draw. These 'spokes' reach out to the most everyday locations like shops and kiosks and are thus incorporated into the social fabric, while concentrated sites that have no such outlets are demographically separated in their own exclusive spheres. Abt et al. describe this distinction, referring to casinos as: 'timeless, hermetic environments of near-monastic abstraction and isolation from the real world... In contrast, state lottery tickets are purchased... in the most prosaic neighbourhood environments: bars, grocery stores, newstands and so forth. Unlike casinos, lotteries are perfectly integrated into the real world' (Abt et al. 1985, p46). The otherworldly separation of the casino is typified in its most extreme form, in the giant city-casino of Las Vegas; isolated from the rest of America by hundreds of miles of Nevada desert.

**Player Profile**

The phenomenological sites host a variety of social groups, each with their own motivations for playing and with their own relations to chance. Since the socio-economic constitution of players varies between individual games and even within games, player profile will be examined separately in each site.
THE SITES

Every phenomenological site forms its own separate world, with its own distinctive ambience and relation to chance. Each has the character of what Goffman calls 'social occasions': events which are bounded in space and time and which possess 'a distinctive ethos, a spirit, an emotional structure that must be properly created, sustained and laid to rest' during a 'pre-established unfolding of phases' or 'agenda of activity' (Goffman 1963, p10). In their existence as social occasions, the sites are possessed of a spectacular nature, for the nature of the spectacle is of a 'social relation among people, mediated by images' (Debord 1987, p4). It is this dimension of sociability that, for Caillois, lends to gambling its character as a 'spectacular pleasure'. Although games of chance can be pursued as a solitary pastime, they are more attractive when played in a crowd, for, he argues, gamblers would rather 'be pressed by the throng which fills the hippodrome or casino, for the pleasure, thrill and excitement engendered by fraternisation with an anonymous multitude' (Caillois 1962, p40). As 'spectacular pleasures', modern, commercial games of chance are typical of a trend of modernity which is outlined by Debord. Paraphrasing Marx on the nature of capitalism as an immense collection of commodities, he begins his Society of the Spectacle, by writing: 'In societies where modern conditions of production prevail, all of life presents itself as an immense accumulation of spectacles' (Debord 1987, p1).

No doubt the spectacular nature of the phenomenological sites will be drawn out in future sociologies of gambling, but these should proceed carefully in a territory where specious analogies cloaked in post-modern jargon are easily made. It is easy to see evidence of the spectacle in the architecture of the phenomenological sites, amongst the halls, rotundas and grandstands that house the various games of chance. However, the conveniently spectacular nature of this physical design tends to obscure a contrary trend towards the increasing fragmentation and insulation of the gambling experience. This privatisation, the result of commercial and technological development, undermines the sense of 'social occasion' in gambling and is most obvious in the sites of the lottery and the bookmaker where, as we shall see, individuals are increasingly enabled to gamble at home, and, with the appearance of technologies such as the internet, across larger and larger distances.
Although leaving the physical structure of the sites intact, this trend removes from their essential constitution the element of the spectacle.

The Lottery

Although lottery-type games like football pools, on which the gambler bets on the results of future matches, have been run in Britain for years, the creation of a state lottery in 1994 institutionalised the form, creating almost overnight the foremost type of national gambling and effectively sweeping away competition from companies like Littlewoods and Vernons.

After 168 years of prohibition, the British state lottery was reinstated to resume its original function of state fund-raising and the creation of private profit. In an era in which the government is unwilling to levy unpopular taxes for services it is reluctant to fund at all, the lottery's role as state fund-raiser comes to the fore. Once again arguments against the 'immorality' of games of chance go unheeded as the vested interests of capital see in such games the opportunity for pecuniary gain. Just as sixteenth century British lotteries funded the growth of a nascent state - bridges, libraries, and its exploits abroad - so the twentieth century one finances the recreation of a declining one - opera houses, sports fields and the exploits of its organisers closer to home. The proceeds from stake money are divided between players, organisers and government, with 50% going to winners, 5% to retailers, 5% to lottery organisers Camelot, 12% to the treasury and 28% for 'good causes' such as arts funding and charities.

In the late twentieth century the embrace of lotteries by state fiscal policy is more apparent than ever, with lotteries world-wide running unashamedly as capitalist ventures, distributing revenue for both public works and private profit. Far from the lottery taking over other social institutions as in Borges' tale of chance, western economies have proved themselves quite able not only to incorporate it in their structure, but also to use the lottery for their own ends.
To date little research on the social basis of lottery participation in Britain has been carried out, and significantly, what interest there has been has come not from social scientists but from market researchers.

The historical trend towards the over-representation of the lowest socio-economic groups in lottery drawings is substantiated today with a geographical concentration of both state and private lotteries in poor countries such as Brazil, most of Latin America, and Catholic countries like Spain and Italy (Kaplan 1988). A contrary trend is also becoming apparent however, whereby effective marketing and distribution campaigns by privately run businesses have brought about the proliferation of lotteries and the expansion of their socio-economic base throughout the industrialised west. Walker has pointed to the high incidence of lottery participation amongst the poor, the under-educated and the old, and the increase in participation in times of high unemployment (Walker 1992, p59-63). He ascribes these patterns to decreasing marginal utility with increasing wealth, (i.e. a lower relative value of prizes for the rich and higher value for the poor), making a £5000 return on a £1 stake, even at long odds, appear more attractive to an individual who has no other means of raising such funds than to an individual who can obtain such amounts through solid investments, or by saving. Greater participation with age Walker sees as another desperate measure: when an individual reaches end of his productive life without achieving his original goals, a lottery win may appear as only remaining option (Walker 1992, p62).

This is particularly evident in the case of the British lottery whose launch in November 1994 signified, in the words of one market analyst, 'the biggest event in Britain's economic life since decimilisation' (The Guardian 21st March 1995, p22). Spending £100 million a week on tickets, more than is spent annually on bread, health and beauty care, books or rail travel (The Guardian, 22nd August 1995, p1), the public embraced the lottery with open arms, transforming the nature of the consumption economy almost overnight as they did so. Patterns of spending and recreation have changed: the lottery has created 12 million new shopping trips each week and sales in shops with terminals have risen by 20%, due in part at least to the five thousand new customers brought in by the desire to purchase tickets. Leisure habits have also changed: Saturday night television viewing has
increased by 20% because of the televised draw (*Henley Centre Report*, in *The Guardian* 22nd March 1995, p3).

It is not only in economic life that the impact of the lottery has been felt, for it has dramatically and irrevocably altered the profile of British gamblers. Here the *homogenisation* of the gambling experience inherent in the commodification of games of chance is most strongly felt. Before the introduction of the lottery there were 15 million regular gamblers in Britain; now there are 25 million. In 1994 - the year of the lottery - around 90% of the population took part in some kind of gambling activity, compared with 74% the previous year. The increase is directly attributable to the lottery. Over a year later, playing habits have stabilised and market analysts Mintel estimate that 58% of the population now play every week. Groups previously under-represented in gambling activities - the young, women and the middle class - are now becoming visible through their lottery participation. Traditionally a male pastime, playing lotteries like the pools was popular with skilled manual workers aged between 35 and 44. However, the lottery has attracted more young, female and affluent patrons. *Mintel* comments: 'Women in particular seem to be attracted by the lottery' so that, with its influence, their total participation in gambling activities has risen from its pre-1994 figure of 70% to 87%, bringing them almost level with male gambling which stands at 89% (*Mintel, Report*, in *The Guardian* 5th June 1995, p3).

Remarkably little socio-economic or geographical variation exists amongst players. Traditional middle class dislike of gambling has been overcome in this state sanctioned activity, which further assuages uneasy consciences with the reminder of the 'good causes' that benefit from participation. The predilection of 'upmarket' ABC1 socio-economic groups for the game is a source of pride for its wealthy organisers, Camelot, who state 'Guardian readers are just as likely to play as Sun readers' (in *The Guardian* 22 March 1995, p2). The introduction of the lottery has initiated the deregulation of the entire gambling economy. Seeing its success, and fearing its competition, other forms of gambling such as casinos and bingo companies have demanded the same freedoms to advertise and promote their 'product' as the lottery monopoly, with the result that the 1968 Gaming Act is gradually being repealed. The paternalistic tone of the Act was designed to
limit what was generally regarded as a dubious activity and so stipulated that gambling facilities could not encourage the public to gamble in any way, but could only satisfy existing demand. Strict rules thus forbade advertising and the 'proliferation' of facilities that exceeded demand. Now, the strictures of the Act are being swept away, and the entire gambling industry being opened up to the vicissitudes of market forces.

The ubiquity of participation and the inclusion of the young, the middle class and female gamblers, while an important trend in the demographics of British gambling, should be interpreted carefully, for it tends to conceal another trend - the concentration of play amongst the poorest socio-economic groups. Although 58% of the population play, not all spend the same amount each week, much less a similar amount relative to their total incomes. The average of £2.08 per person per ticket conceals vast differences in the reality of play. The Henley Centre survey has built up a profile of a heavy player as an individual who is Scottish, aged between 25 and 34, earning between £9,500 and £15,000, watches more than twenty-nine hours of television every week, and reads a tabloid newspaper (The Guardian 22 March 1996, p3). Furthermore, the National Low Pay Unit has observed that millions of the 14 million households with an annual income of less than £7,000 spend far more than this mythical 'national average' on the game. Like the poor who played the lotteries of the sixteenth and seventeenth centuries, the unemployed, the low paid and the economically marginalised of today regard the distant possibility of winning as their best chance to escape poverty in what is essentially still a static unmeritocratic social system. One woman who plays heavily says 'I have to. It's a necessity. You live on the bread-line all your life and this is the only way out of it' (in The Guardian 31 October 1994, p4). The very reasons that led to its outlawing in 1826 - its 'buoying up the multitude with dreams of golden showers' - are the same reasons that assure its popularity today. Denied genuine opportunity, the poor are given a chimera; a vision of immense riches only one in 14 million will ever attain. Balzac's comment on the French game: 'The lottery was the most powerful fairy in the world: did it not nurture magical hopes? No-one has realised that is was the opium of poverty', is still as pertinent today as it was in 1845 (in Culf 1994, p3).

The advertisement for scratchcards in a Las Vegas casino in Plate Five embodies the brutal exploitation of hope that is an integral feature of all lotteries. Instead of some
Cash Your Paycheck
& WIN!!

You work hard all day. Isn't it time for a raise?

Try Silver City's brand new "Scratch for Cash"
Guaranteed cash on the spot.

Everyone is a winner!

Please ask casino cashier for more details.
redistribution of wealth, here money is taken directly from the impoverished as they cash entire pay cheques in the hope of instant riches.

It is ironic that, despite their over-representation in the purchase of tickets, those with least to lose do in fact end up losing out in the distribution of stake money. At only 50%, the return, of the total stake as prizes is extremely low, and the impressive sounding 'good causes' which supposedly contribute to the wealth of the nation have turned out to be highly partisan causes - in effect, the pastimes of the affluent. While pennies are thrown at brass bands and school swimming pools, millions are plunged into the playgrounds of the middle classes - opera houses and art galleries, and those of their children - for example the project to refurbish the sports grounds of Eton.

So, although lottery participation is biased to the working classes in the North, proceeds are appropriated by the middle classes in the South. The Rowntree Foundation have expressed concern at this arrangement, writing that the distribution of lottery funds contains a 'built-in bias against the poor', favouring 'the relatively well-off living in the most prosperous areas' who enjoy 'artistic, heritage and sporting pursuits which are less interesting or less accessible to those with smaller incomes' (Rowntree Foundation Report 1995, p2). Psychologist Ian Brown calls the lottery a 'tax on desperation', but it is more than this, for, since the lower socio-economic groups play it to the benefit of the higher ones, it also functions as an insidiously regressive form of taxation.

In the U.S. state lotteries have passed the point where they generate revenue for only 'luxuries' and are now firmly ensconced in an area the state has gradually backed out of; the provision of vital services. In most states, lotteries are funding larger and larger proportions of expenditure on health and education, and although (as in Britain) most deny such funding is intended to take over the state's share, it inevitably does so. For example, in Pennsylvania, rent assistance and medical rebates for the elderly were 'introduced under the general [state] revenue and later transferred to the lottery fund as lottery revenues increased' (Abt and Smith 1986, p31). No doubt the temptation to allow lottery players to 'voluntarily' pay for state-funded services will prove too much for Britain over the coming
years; and, with the projection of 'NHS Loto', a private lottery whose 'good cause' is the National Health Service, the process may already have begun.

The organisation and form of the lottery and its instantaneous cousin, the scratchcard, have contributed to its easy integration into public life, and the broad social base of its support. Its form has remained virtually unchanged from that of its sixteenth century predecessor and involves the selection of six numbers which are chosen by a randomising device every Saturday evening. The spatial organisation of the lottery is diffuse; tickets are available from many points and, because it is an integrated site, they blend almost seamlessly with their local environment. Since they are 'woven into the fabric of their communities' buying a lottery ticket 'is a part of everyday life' (Abt et al. 1985, p62). The very act of playing the lottery has become normalised, with tickets purchased as part of a daily routine along with the morning groceries or weekend shopping. There exists little spontaneity in this realm of pure chance: 80% of lottery purchases are pre-planned with half the nation's players making special trips to buy tickets (The Guardian 22 March 1995, p2). The customer stands in a queue as he would for any other commodity, and, upon paying a pound, his bar-coded ticket indicates that he is now a gambler. It is in this prosaic ritual that the modern commodification of chance is most evident.

Because the lottery has a slow rate of play every stage in the process of buying a ticket can be separated and stretched out to fill the seven days between draws. There is no sense of urgency in this kind of game: the gambler need not chose his numbers at the same time or even in the same place as picking up his play slip. He can fill them in immediately or take the slip home and make his selection at a more leisurely pace. When the ticket has finally been purchased, another period of inactivity unfolds, for the player must now wait for the draw. In the interim, involvement is minimal, possession of a ticket being the sole measure of participation in an activity which is both spatially temporally dispersed.

The most distinctive characteristic of scratchcards on the other hand, is their instantaneity, a feature emphasised in the advertisement 'forget it all for an instant'. This fast rate of play makes scratchcards an immediate form of gambling, whose instant result constitutes a large part of their appeal and contributes to their extremely addictive effect.
The televised, Saturday night draw is the climax of the protraction of lottery activity. In contrast to the leisurely stretched out time of the previous seven days, the draw is over in seconds and is characterised by a concentration of time and space. It begins when a drum containing the numbered balls is activated and, while revolving, ejects six in succession. The entire episode lasts approximately thirty seconds but as the balls drop out of the drum and career down the chute, accompanied by drumrolls and fanfares of trumpets, player excitement is at a peak. At this point the gambler's relation to the game is mediated by the television screen and for a moment he is oblivious to his surroundings and absorbed in the action. In seconds it is all over, and the deflation of mood which inevitably follows such tension has for some been characterised as a unique new illness - lottery stress disorder. A doctor describes how patients presenting with the disorder show 'an initially intense anticipatory anxiety, which [builds] throughout the week to reach a characteristic peak in the early evening on Saturday'. Such anxiety is often accompanied by 'unrealistic optimism and grandiose ideas' in which 'the subject experiences the delusional belief that great riches are about to befall him or her'. Inevitably, after the draw on Saturday, 'these feelings give way to rapid deflation of mood', and although recovery sets in at the beginning of the week, 'characteristically the pattern repeats itself over the coming week' (Hunter 1995, p875).

In a sense the draw is the lottery, the spatial and temporal hub of the action, while the choosing of numbers and buying of tickets are the spokes of dispersed action whose ends culminate in this central point. The whole cycle of action is repeated in long, slow, revolutions week after week and year after year, as regular as the occurrence of any natural event.

The distant relation of the player to the game, the high integration and the slow rate of play culminate in the normalisation of the lottery as a form of gambling. Such normalisation is so extreme that the gambler is not regarded as a gambler at all, often even by himself. In Spain, where the State El Gordo is a national institution, most people deny they gamble but when asked if they take part in the lottery reply 'of course' (The Guardian 31 October 1994, p3). This perception is codified in language where, unlike
gamblers in other games of chance, lottery gamblers never 'gamble', they merely 'participate' or enjoy an innocuous 'flutter' on a *sui generis* event. The idea of the lottery participant is not so much a euphemism as a reflection of the presentation of the lottery itself, and one which for Benjamin, means that 'an incorrigible patron of a lottery will not be proscribed in the same way as the gambler in a stricter sense' (Benjamin 1992, p.137) Such a perception is descended from the lottery's sixteenth century forebears when gambling was encouraged by the state as a patriotic duty and so defined as a philanthropic gesture, never a gamble. With its emphasis on the lottery's support of 'good causes' and 'heritage' the modern state once more sanctions betting and, thus legitimised, removes it from the arena of gambling proper.

The discovery already of a 'lottery pathology' serves to highlight the more general malaise which lies behind the official position on gambling. For every individual with Lottery Disorder Syndrome there are thousands more whose poverty is exacerbated by overspending on tickets, and worse, by the removal of funds once provided by the state and now dependent on the vicissitudes of lottery revenue. State lotteries (and, to a lesser degree, *all* state sanctioned and therefore taxable gambling) of the late twentieth century are an indication of the degree to which states are increasingly abnegating responsibility for the provision of services they once felt bound to provide. In the era of nascent capitalism, lotteries provided revenue for states whose infrastructures were insufficiently developed to collect taxes from every citizen. Now, the lotteries widespread amongst the most highly bureaucratised nations in the world function to collect an indirect and regressive form of taxation their governments are politically unwilling to collect. As the presence of the state recedes in public life, that of the lottery grows, to the extent that every harmless 'flutter' heralds a further disintegration of the apparatus of state funding.

The potentially pernicious aspect of lotteries in the hands of the modern state was recognised by Orwell. His *Nineteen Eighty-Four*, projected exactly ten years before the re-introduction of the British state lottery, describes the cynical manipulation of hope by the Party in the form of a lottery whose prizes were 'largely imaginary' and where 'only small sums were actually paid out': ‘The Lottery, with its weekly payout of enormous prizes,
was the one public event to which the proles paid serious attention... It was their delight, their folly, their anodyne, their intellectual stimulant' (Orwell 1984. p77).

Bingo

Derived from the game of 'lotto', bingo is essentially a form of lottery, albeit a concentrated one that occupies a separate site, is governed by a faster rate of play and patronised by its own unique social group.

As in the lottery, a bingo winner is declared when a randomly generated series of numbers matches those held by a player. However, unlike the lottery, in bingo the player is present during the number-calling session, marking off the numbers on her cards (of which she usually has between one and six) as they are announced. Although unable to influence this game of pure chance in any way, the player is fully involved at every stage by the need to vigilantly check her cards and keep up with the flow of numbers being called. Unlike the weekly drawing of the lottery, bingo sessions are conducted in the afternoons and evenings of most week-days in buildings which, despite being part of the local community, are essentially separate sites. Often situated in disused cinemas or town halls, entry into a bingo club is an entry into another world, which is secluded from the one outside and governed by its own set of rules and conventions.

The bingo hall itself is housed in a large atrium, lined with hundreds of perfectly symmetrical tables and enclosed by a refreshments bar at the one end and a caller's box at the other. Despite these common features, enormous variations in levels of comfort, decor and amenities can be found between clubs. Dixey, for example, writes that 'the equivalent of sawdust and spittoon pubs can be found in the tombola clubs of the north-east, whilst the refurbished clubs of some of the major companies can be visually stunning, offering a very different kind of experience' (Dixey 1976, p208). The ambience of a session can further vary, depending on whether it constitutes a 'Saturday night out', or whether it is scheduled on a mid-week afternoon and fitted around the daily routine of children, housework and shopping.
Although Downes et al.'s 1976 survey found males and females to be equal participants in the game of bingo, subsequent research has found female participation to be far higher, and has pointed to the high degree of recruitment from working men's clubs in the original survey as the source of such an imbalance (Dixey 1987; Freestone 1995). The Gallup Survey of 1991 found that 83% of players are women, 17% men, with an average age of 53 (in Freestone 1995). The socio-economic basis of bingo participation is predominantly working class; Downes et al. stating that 'not being working class was practically enough to predict virtually no bingo playing' (Downes et al. 1976, p180), and that 'the stable middle class are [chiefly] excluded from bingo' (Downes et al. 1976, p175).

Such demographics are the result of female patterns of leisure activity in post-war Britain. The schemes to re-house the working class into new housing estates and high rise flats in the 1950s and 1960s disrupted established communities and reduced the amount of semi-public space in which neighbourly interaction (especially amongst women) could take place (Dixey 1987, p203). At the same time, the large-scale closure of cinemas in the 1950's curtailed the specifically female tradition of visiting the cinema, and so removed an important female meeting place. However, the re-opening of cinemas as bingo halls during the next decade provided a new public space for women, and the 'natural' continuation of an already existing habit, assuring such clubs a place in the leisure time of the working class woman. This role is summarised by Dixey: 'The bingo club in the early 1960s thus enabled women to get out of the house, to meet in a semi-public place in an environment which had been largely female anyway... in a time of relative affluence and spare disposable income' (Dixey 1987, p203).

As well as the intrinsic rewards of the game itself then, bingo serves as a sociable outlet - an opportunity to 'get out of the house' to meet up with friends. Four-fifths of Downes et al.'s female sample reported that they never played alone (Downes et al. 1976, p177).

Until recently, the bingo economy was bound by the restrictions of the 1968 Act which allowed the opening of only sufficient clubs to meet 'existing' not 'stimulated' demand. To this end, clubs were not allowed to advertise - even when their intention was to attract new members of staff - or to show any illustration of the inside of a bingo hall. Visitors to
bingo clubs were required to be members, and had to wait 24 hours between joining a club and playing in it - a measure whose residual Puritanism was intended to eliminate any 'irrational' playing on impulse.

However the general deregulation of the gaming industry has been felt most markedly in the arena of bingo and has been codified in an Act of 1992 which lifted the ban on advertising and allowed clubs to invite the public to take part in their activities. The proposed deregulation of 1996 will take these first steps towards market integration even further by allowing bingo sites to exist without being 'members only' clubs and to abolish the 24 hour 'cooling off' period. Justices' powers to refuse licenses on the grounds of 'insufficient demand' will be removed, as will the limit on national game multiple prizes (The Guardian 28 February 1996, p2).

As a capitalist enterprise bingo, like the lottery, is attempting to broaden its demographic base to attract younger and more affluent players, in the words of the chairman of the industry, to: 'compete on equal terms for its share of the leisure market' (in Freestone 1995, p8). The renovation of many older sites is deliberately intended to create a more 'upmarket' image, as is the introduction of various new technologies. For example, a computer linked National Game which joins together some 650 clubs in competition for a single prize of £50,000 can, we are told, be seen as 'a prime example of product differentiation being used to revitalise a dwindling leisure market' (Freestone 1995, p6). Touch screen computers have further modernised bingo, their digital screens sunk into tables rendering books of numbers redundant in many clubs. The option of a 'waitress call' button whereby players can order drinks at the touch of a screen is set to alter the constitution of the old-style bingo experience still further (Griffiths 1994, p2).

Already the physiognomy of bingo is changing; the deregulation of the industry and intervention of modernising technologies breaking down the traditional player profile. As more young people and more upwardly mobile social groups join in, the game, like the lottery, appears to be increasingly subject to the homogenising force of commercial interests.
Slot Machines

Since the first slot machines of the nineteenth century represented their era of industrial mechanisation, a century of technological advance has ensured that the digital microprocessor slots of the late twentieth century represent their post-industrial age in a similar fashion.

Because of strict licensing controls, in Britain slot or 'fruit machines' occupy two types of phenomenological site: specially licensed arcades, and 'single sites' such as cafes, chip shops and sports centres. These single sites also include what are termed 'adult environments' - public houses, bingo clubs, casinos and private members' clubs. Both the number of machines and maximum prizes are regulated in these areas so that the top payment in arcades and single sites is £4 in tokens, £8 cash, and £250 in 'adult environments' where the maximum number of machines is limited to two. However, the imminent repeal of the 1968 Gaming Act is set to relax these restrictions on slots, increasing jackpot size and making machines more widely available. The Deregulation Committee, whose report was made to the government in February 1996, have proposed to allow slot machines into betting shops. Casinos will be licensed to contain six and bingo clubs four, while cash prizes in arcades will be increased to £10. Further, electronic tokens which would store players' credits on a kind of debit card are to be introduced for a trial period (Report of the Gaming Board 1994-1995, p42-45; Deregulation Committee Report 1996, vii-x).

Although this deregulation looks set to increase the integration of slots into everyday life, for the moment, British machines still occupy two distinct sites. Being spread out across large sections of public space, the organisation of machines in adult environments is relatively diffuse. Although they must remain thinly spread, such slots penetrate deeply into the local social fabric and are more or less integrated with their surrounding neighbourhood. Amusement arcades, on the other hand, form concentrated sites which occupy their own separate gambling space. Found usually in commercial or tourist areas of towns, arcades exist slightly apart from their surrounding environment in buildings whose
interiors are darkened and concealed from the outside world by blacked out windows. One can enter the arcade in a way that it is impossible to 'enter' the diffuse slot machine site.

From the elegant displays of lights and the soporific hum of a hundred vibrating machines, arcades are possessed of a distinctive ambience. As the player enters its dimly lit interior, he passes rows of perfectly aligned machines, each rattling its hypnotic tune to a lone player standing before it in solitary rapture. Tom Wolfe described this noise as 'a random sound John Cage symphony' which keeps churning over and over again in eccentric series all over the place... much like the sound a cash register makes before the bell rings' (Wolfe 1981, p19). Arcades are dominated by colours towards the red end of the spectrum (Griffiths and Swift 1992) so that carpets, walls and lighting tend to a uniformity of tone. Such colouring, first noticed by Goethe for producing in the perceiver 'an ideal satisfaction' and an 'active feeling of power' (Goethe 1840, p191-5), reduces sociability and stimulates the desire to play among gamblers (Stark et al. 1982). In the arcade, players indeed have little contact; in a total environment of light and colour and noise, it is easy for the gambler to forget the world outside the arcade and, lost in his own private reverie, immerse himself in play.

Despite their impressive technological advancement, the microprocessor slots of Las Vegas in which the player inserts a credit card, presses a button and hopes for a multi-million dollar jackpot, operate according to the same basic principles as their nineteenth century predecessors. Like a kind of mechanical lottery, these machines, however advanced, are basically random number generators. Play is straightforward: the gambler activates a machine by inserting money and wins a prize if a specific pattern or configuration of images is produced. Each machine is a self-contained gambling unit, accepting the player's stake and paying out his prize, and so rendering the presence of other players entirely superfluous. Player involvement is direct and immediate. The gambler sits in front of 'his' machine, inserts his money and pulls a handle or pushes a button to set the electronic wheels in motion. He is thus physically involved in play:

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2 See Griffiths 1995, p200-210 on the effects of colour, sound and structural determinants of machines such as 'nudge' buttons and the 'near miss' effect on the continuation of play.
3 Although note the social nature of some forms of slot machine play, discussed in Griffiths 1995, p65 and Fisher 1993.
presence is necessary to activate the machine and during the time spent playing it he must continually monitor his actions in accordance with its commands. He will be presented with a range of options for play and must decide whether to hold or nudge the reels, insert more money or collect his winnings. Such features create direct player involvement, involvement which should not be mistaken for influence however, since the slot machine is a game of pure chance. For Caldwell, slots are 'the epitome of non-skill gambling... The banker, the Cabinet Minister, the housewife and the labourer are all equals before the poker machine, for skill and experience count for nothing' (Caldwell, in Walker 1992, p69).

It is perhaps at least partly their simplicity that contributes to slots' egalitarian appeal. Ever since the first penny arcades offered a wide public cheap entertainment in the late nineteenth century, slot machines - both in and out of the arcade - have been patronised by the same cross-class clientele, and especially by the young. Generally, 'social class could hardly make less impact on slot machine play' (Downes et al. 1976, p185; also Griffiths and Fisher 1991), the distribution of players being rather effected the age and sex of participants. Their integration into their surrounding communities and their utilisation of the imagery of popular culture in designs which copy cartoon characters, soap operas and game shows makes slot machines an everyday sight and also renders them easily accessible, especially to those traditionally denied access to gaming, i.e. the young. The situation of machines in chip shops, youth clubs and arcades provide a favourable environment and opportunity for the young to gamble, with the result that the average age at which individuals begin slot machine play is ten or eleven years (Griffiths 1995, p64). In this way, Fisher explains: 'amusement arcades... provide an important leisure environment for school age and unemployed youngsters' (Fisher 1993, p446). These arcades are typically male environments where young adolescents form groups in which slot machine play is central as a source of solidarity, status and means of impressing girls (Fisher 1993). However, although easy access creates a profile of the British slot machine player as someone who is primarily young and male (Downes et al. 1976, p185), limited access in, for example, America and Australia where machines are confined to casinos, creates an average player who is both adult and female (Walker 1992, p77).
The rate of play in slot machines measures the time taken for the gambler to insert his money, pull a lever or push a button, watch the display as the wheels rotate, carry out any commands and, if lucky, collect his winnings. This process lasts between five and twenty seconds, time that is animated by a cacophony of electronic sound and pulsating lights. Such a heady atmosphere is deliberately designed to seduce the player into a rhythm of repetitive, continuous play. Although he can play at any pace he wants, the gambler is carried along by this stream of noise and light which only stops when he stops, and plays continuously, barely completing one round before inserting more money for the next. Speeding up what is already a continuous rate of play, some gamblers play two or even three machines at once. Responding to their commands and feeding each one money at lightning speed, such preoccupied players assume the guise of efficient workers tending a fast moving production line. Unlike the slow stretched out rate of play of the lottery, the rate of slots is concentrated; grinding on with hardly a pause between one game and the next. In America, such instantaneity is encouraged by a device which in some machines, allows the winnings of one round, instead of being paid out in a clanking stream of coins, to be retained and recycled into another. The process is further accentuated by the use of credit cards, which credit a player's winnings and deduct his losses from the overall balance of his account as he plays. When winnings become invisible in this way, the gambler is relieved of the inconvenience of pausing even for a second to scoop up his coins, and so play speeds up. By retaining his winnings, the avaricious machine ensures that play flows into a seamless continuum, one round gliding into the next in an effortless, uninterrupted cycle. In the 'Megabucks' progressive machines of the late 1980s the continual churn of play is visible across large distances, and is remorselessly advertised for all to see. These machines stand together in banks in casinos throughout the state of Nevada. On top of each machine, in the centre of the bank, is a display panel showing the cumulative amount of money being wagered as it is wagered. As hundreds of these slots are linked together, the money put into them is pooled, resulting in frequent million-dollar jackpots. The display panel is usually well into six figures and is constantly moving, numbers whirring round like a wildly unravelling ball of string. The hundred dollar digit clicks up every five or six seconds, the tens are always running and the single dollar digits are a blur, rushing round too fast for the human eye to see. Seeing money 'ticked off' in this way, players try to 'catch up' by playing faster, making the display reels whirl round at an ever more rapid
pace. Slot machine 'guides' emphasise the importance of speedy play, one advising gamblers that it is 'extremely important' to 'make sure your play is fast enough to keep your numbers lit at all times' (Crevelt 1989, p26). Occasionally someone wins, making the headlong rush of numbers freeze and the digits vanish from the board for an instant, only to be replaced by still more as the whole cycle begins again.

By linking together - and yet keeping separate - hundreds of machines and players across an entire state, such machines literally record the cumulative rate of play. With every push of the button, the categories of time and money become inextricably entwined on the screen above, the flow of dollars appearing as a blur of digits as if on some giant clock. The categories of time and money are further conflated by the duration of slot machine play, which is relative to the funds of the player and the denomination of the machine. Although in Britain the range of stakes is limited to a maximum of twenty-five pence, in the United States, the player can insert anything from twenty-five to one hundred dollars. Discounting such intangibles as good or bad luck, a gambler will be able to play for the longest period with a large sum of money on a small denomination machine and a shorter time on a high denomination one, while a player with little money will be restricted to a small denomination machine for a short amount of time. In the midst of play then, money loses its independence and becomes a mere measure of time.

The Racecourse

The racetrack of the twentieth century still retains the aura of its aristocratic heritage, its legacy as the 'sport of the kings'. Although commercialisation in the nineteenth century meant that paying spectators were welcomed, the sheer size of racetracks which places them in relatively remote locations on the periphery of urban areas, has tended to militate against such a democratising trend. Racetracks occupy distinct, geographically separate spheres which create 'significant geographic and demographic barriers to regular participation' (Abt et al. 1985, p93). Physical enhances cultural separation, so that for Abt et al. 'the elaborate, ritualised sub-culture of horse racing' where the natives are 'absorbed in unintelligible rituals and arcane wagering terminology' is a confusing and
often incomprehensible experience to the initiate (Abt et al. 1985, p84)⁴ All this, along with a hefty entrance fee, works as a form of exclusion, limiting regular attendance to those living nearby and/or with the financial means and leisure time to make a habit of spending 'afternoons at the races'. As Walker points out, British racing is still a predominantly upper middle class form of gambling (Walker 1992, p105).

The architecture of the racetrack itself is a monument to social stratification. The better quality seats in the clubhouse, traditionally reserved for the elite, are set slightly apart and are more expensive than those of the grandstand which, uncovered and commanding a less expansive view, are patronised by the 'commoners'. The modern racetrack is, then, a separate site and one which, despite the democratising commercialism of the past hundred years, still retains an air of privilege and exclusivity. In contrast, the dog track is still a separate site but one that is more integrated into its surrounding neighbourhood. Being smaller, it need not be situated on the outskirts of towns, and in fact, is often close to bettors homes in working class or industrial areas of cities. It is this that Downes et al. call the 'localised character' of the dog-track, in contrast to the 'expeditionary character' of the horse racecourse (Downes et al. 1976, p143). Smaller, closer to home and with more races going on, the dog-track can be seen as a miniature version of the racecourse. Furthermore, free from the aristocratic heritage of the latter, it is a site that is occupied primarily by the working class.

Despite his physical immediacy, the gambler's relation to play at the racetrack is not one of involvement but immersion. Although he does not participate in it in any way, he is surrounded by the race as much as by the air he breathes. The constant hubbub that comprises the activity of the track creates an atmosphere so concentrated as to be almost tangible. The smell of damp earth and horses, the calm air, shattered by thundering hooves, the sound of flags flapping along the course and the very different 'feel' of a race on a cold bright day and a warm rainy one, all create a unique ambience peculiar to the track. Despite this immersion, the gambler at the racetrack, like the one in the lottery, is extrinsic to the gambling event itself. Unlike the lottery player, who is neither involved nor present

⁴See also Scott's (1974) Goffman-esque study of racetrack culture and etiquette.
in the lottery however, the punter at the racetrack is present during the race and so can watch the event upon which he is betting unfold in front of him.

The gambler's actual involvement with the race is dictated by the paraphernalia of the race itself. Having chosen his horse(s) he places his wager at a betting kiosk, takes a receipt and waits for the race to begin. Around the track, tote boards display times of races and odds on horses, while loudspeakers boom unintelligible information on conditions and events. As the race gets under way, such sources of information are rendered obsolete by the desire to see the action as it happens. It is at this point that the panopticon-style design of the stadium becomes obvious, for every feature is built in order to extend vision from the periphery of the stadium to a concentrated point in the centre - the track. To this end, giant elevated grandstands surround the course, descending down in terraces lined with seats, like tiers of church pews. On the ground, hundreds of punters line the track, straining against barriers, as close to the action as is physically possible. On the terraces, gamblers have a complete view of the entire race in miniature, while on the ground, they see a life size slice of the action which, for a fraction of a second will be immediately in front of them; so close as to drag the observer momentarily into the race itself.

Races are held two or three times a month during the racing season, giving them a rate of play that can be measured, like the lottery, in long slow cycles. Such cycles lack the absolute regularity of lottery draws however, for their periodicity can be interrupted by natural events - bad weather or track conditions - resulting in the last minute cancellation of races. Planned races are much publicised, giving the punter time to find out who is running and what their past records are like. As it draws closer, the race occupies his thoughts more and more frequently. With a big race like the Grand National, this sense of an impending Event rushing ever closer is intensified, so that a group of punters recounting the anticipation of the race said: 'We were like sleepwalkers, imagining the race... through a week long trance...' (Inside Racing 8, p15). Unlike the lottery draw where the gamble - the event - is over in seconds, on a race day the gambling lasts all day long, broken up into three or four separate races.
The racetrack is a concentrated site within which the concentration of action itself waxes
and wanes in a series of stages. It peaks during the two to ten minutes of the race and
debases during the twenty minute periods in-between. The rate of play is intimately
connected to the players relation to the game and to the concentration of action, a
connection which is centred on the vast amounts of geographical and temporal space at the
racetrack. After making his bet, the gambler has a period of 'empty' time before him until
the start of the race. Because of its separation from the outside world, he cannot leave the
track and so enters a period of waiting. During this time, punters' actions betray a certain
purposelessness. From the distance, their collective milling appears like a particularly
anxious form of Brownian motion. As the race is prepared, expectation mounts and a
sense of direction gradually guides the disparate actions of individual punters into a
focused movement towards the track and the stands. Pronouncements over the
loudspeakers come more and more frequently as the race draws closer. Corresponding to
this temporal narrowing of distance is a physical one; with the race only minutes away,
punters draw closer to their vantage points, the directionless flux becomes gathered,
concentrated and stationary. Paraphrasing Merleau-Ponty, Scott writes that the individual
at the track is so engrossed in the action that the reality of his field of consciousness 'is
confirmed and thrust upon him with clearness and distinctness' (Scott 1974, p114). Just
before it begins, anticipation reaches a climax: the entire stadium come to a halt, focused
entirely on the track, watching a space that is so full of activity, so charged with
excitement that it brims over, obliterating any distractions and making the race immediate
in the consciousness of its spectators. Such charged, 'full' space contrasts with the 'empty'
featureless space experienced in the period of waiting just before the race. The gambler's
concentrated attention overcomes any physical distance between himself and the focus of
his attention: completely immersed and blind to distractions, he is Here.

Seconds into the race, absolute concentration makes hundreds of punters stand immobile,
frozen but for the gradual incline of their heads which turn almost imperceptibly, as if to
the strains of a hidden orchestra. The harmonious tension snaps as the home straight
appears, and the unitary mass of spectators erupt into a cacophony of individual screams
and imprecations.
The race is over in minutes, time concentrated by gut-wrenching tension. Now a period of quietude ensues in which energy and individuals are again dissipated throughout the course. This whole cycle of energy and concentration, lassitude and relaxation, is repeated several times throughout the day; a stage in the drawn out recurrence of peaks and troughs that is the rate of play of the racetrack.

The Bookmaker

The bookmaker is an ambiguous site and one that is in transition: concentrated but becoming more diffuse; separate but in many ways incorporated into its local environment.

Such ambiguity stems from a historical tension between the existence of racing as a legitimate aristocratic sport, and simultaneously as an illegitimate working class one. This disparity was formalised in statutes of the seventeenth and eighteenth centuries which effectively prohibited the poor from betting on races, and again in the nineteenth century outlawing of betting shops. The imperative of capitalist development proved a stronger force than moral outrage however, so that by the late 1950s bookmaking was legalised, allowing companies like Ladbrokes, Coral and William Hill to form and start making huge - and legal - profits from their ventures. Like the private clubs of the eighteenth century, these bookmakers accepted individual bets on disparate events, as well as setting odds on horse and dog races and football matches. Betting shops became visible and proliferated after the 1950's, especially in the working class districts of urban areas. Despite being located on street corners and among conventional shops and public amenities, bookmakers until very recently were legally required to separate or distance themselves from their immediate surroundings. Blacked out windows and double sets of doors were permanent fixtures, ensuring that at no time could even a chink of their mysterious interiors be glimpsed from the street. Such an extreme attempt at separation was complemented by a deliberately austere interior design. From their barren, brightly lit walls and rows of metal stools nailed to the floor, to their dusty linoleum floors covered with cigarette ends and discarded betting slips, decoration was minimal. Every relentlessly functional fixture was designed to encourage the gambler to make his bet and leave. This project was effective, for the vast majority of patrons chose not to linger in such an inhospitable environment.
remaining in the betting shop only for the few minutes necessary to place their bet (Downes et al. 1976, p126). Although forced to separate themselves from their surroundings, bookmakers nevertheless became incorporated into the daily routine of their local neighbourhoods. Their situation and their opening hours (generally 9.30 a.m. until 5.30 or 7.00 p.m., now with the inclusion of Sundays) enabled them to blend in with the rhythm of daily life around them, making it convenient for punters to drop in on their way home from work or on their way to the local pub. Downes et al. found that proximity leads to regularity: three-quarters of those regularly visiting betting shops lived only five minutes from one (Downes et al. 1976, p314).

Their concentration in working class neighbourhoods has resulted in an overwhelmingly working class and also an overwhelmingly male clientele. Downes et al.’s 1976 study found the working class to be using betting shops between five and twelve times as often as the middle class, with frequency increasing with descent down the class hierarchy (Downes et al. 1976, p123). They also found males eight times more likely to use the premises than females and that when women did wish to bet on a race, they would do so by proxy, asking a male friend or relative to place the bet for them, rather than entering the premises themselves (Downes et al. 1976, p122).

Until the deregulation of gambling in 1995, the artificial separation and deliberate austerity of the betting shop served as a testimony to the ambiguous status of working class gambling; a token reminder of its clandestine past. In an effort to attract a broader range of customers - notably the middle class and women - in April 1995 the restrictions that made them deliberately inhospitable to discourage demand were lifted. Now bookmakers are allowed to have clear windows, to advertise what goes on inside and even display odds to passers-by. Restrictions on the maximum size of television allowed inside have been abolished, and bookmakers licensed to sell refreshments. More comfortable seats, carpets and sitting areas are no longer frowned on by a government suddenly eager to throw open the closed shop of the betting world to a wider, paying audience. It remains to be seen, however, whether such deregulation will prove sufficient to alter the physiognomy of the bookmakers, and so overcome the cohesion of a social formation developed over centuries of social stratification.
The site of off-course betting is a strangely contradictory location. Separated from the outside world in an enclosed and claustrophobic space, it presents, on the one hand, an intense concentration of action and on the other, a sense of removal, an absence from action. This uneasy dualism is derived from the relation of the subject - the bookmakers - to its object - the race; a relation characterised by the overcoming of spatial distance by technology.

Corresponding to the integration of individual sites into their local environment is the diffusion, amongst these separate sites, of a single concentrated site of action.

Only the actual gambling event itself does not take place in the bookmakers. Everything else - from making a bet and watching the action unfold, to collecting winnings - is contained within its walls. Thus, as a scene of action in its own right, the betting shop is a concentrated site. However, insofar as it exists to receive an image of the race and to accept bets to and from areas outwith the actual scene of the action, it also exists as part of a larger whole. In this sense, it functions as a diffuse site, dispersing a single localised event throughout a wide area. Like the lottery vendor, the bookmaker is a spoke emanating from the hub of the action - the race itself.

The distinctive atmosphere of the racetrack is removed from its geographical location, fragmented into hundreds of smaller races and flung onto the walls of betting shops across the country. From the flickering screens, these new, miniature races are projected across smoky, brightly lit rooms in a multitude of points. The variable weather of the track is replaced by the static luminosity of artificial lighting, while the dynamic interplay of a single mass of individuals freezes into numerous groups of punters whose mobility is conditioned by their cramped surroundings and the necessity of maintaining the screen in their constant field of vision. The action of the racetrack is, then, both displaced from its original location, and diffused among many new ones.

The betting shop is a site in transition; one which technological development is making ever-more diffuse. In the nineteenth century, railways took bettors to the racetrack, now in
the twentieth century, technology brings the race to them. An innovation in computer linkage has brought the twentieth century trend of automisation and privatisation in gambling to its logical conclusion. Pioneered by a company called 'Betpoint', this latest development will literally bring the betting shop into the living room, in a package which links races and bank account details to a personal computer. To place a bet with Betpoint, the punter simply connects his personal computer to his telephone, and relays his credit card details to it. The system can link together millions of players, who need never interact with each other and who can gamble on a race going on many miles away without ever leaving their own home. The betting shop is made redundant when 'After choosing a bet from the menu of options, the gambler waits for the most favourable odds to come onto the screen and, by pushing a button, places a bet. The stakes are instantly taken from your (sic) bank account and winnings credited as soon as the race is over' (Griffiths 1994, p1).

Thus, the various transactions of play are made instantaneous and the gambler isolated into a solitary, gambling 'unit'.

Like the lottery, this increasingly diffuse site reaches deep into society. Its spokes are breaking down into ever-smaller, more individualistic units which can penetrate the social fabric even further than the sociable aggregate of the betting shop.

While the separation of the racetrack works to encourage its exclusivity, the increasing diffusion of the bookmaker encourages the opposite trend of democratisation, bringing the race to an increasingly wide audience. In the betting shop, the object of the punter's attention - the race - is only available to him through the medium of technology. At no point is he able to perceive or interact with it directly since it occurs outwith his perceptual sphere, possibly hundreds of miles away. The gambler is physically removed from the game; he inhabits a facsimile of the action, forced to participate in a distant, fragmented manner. His perception of the action is formed by technology; video screens relay details of the race to him from outside, bringing together many different races held in different places and at different times into one central location. By not being present at any of them, the gambler can observe - and gamble on - them all. Although his attention is focused wholly on a race, absorbed as by osmosis into the real action, his physical presence is rooted in the betting shop. With his mind engrossed in the distant events and his body
engaged in its immediate physical surroundings, the gambler experiences a kind of
'removed action' - he interacts with his surroundings, but his mind, like the action, is
elsewhere.

As with the lottery and slot machine play, the presence of other players is superfluous to
action in the betting shop. However, the integration of the site into the daily routine of its
regular clients, the cramped conditions and the importance of specialist 'insider'
information all provide points of contact between punters and so make the bookmakers a
fairly sociable site.

Like the long waves of lottery play, the rate of play in the betting shop is a drawn out,
protracted affair. Although bets are made on races which necessarily involve speed, the
placing of bets themselves can be achingly slow. Calculation, deliberation and careful
consideration overcome any sense of urgency - bets can be made hours, days or even
weeks before a race. Like the lottery transaction, the gambler 'buys' his wager like any
other commodity. After calculating the odds on choosing his bet, he writes his stake, race
and time on a slip, hands it over and pays for it. Another time lapse follows in which the
result is waited for in physically and/or temporally distant form. The gambler may remain
in the betting shop and watch the distant race on the screen, or, since his presence is not
necessary, he may leave the premises altogether.

In the betting shop the punter puts his money on a race in leisurely cycles with pauses,
consideration, even physical departure from the site altogether between bets. Generally
days mark the temporal separation of bets, as opposed to the seconds of frenetic haste of
the slot machine player. The full immersion of the latter, surrounded by action and
physically participating in the repetition of successive bets contrasts with the gambler at
the betting shop, who, displaced spatially and temporally from the action, slowly and
carefully repeats daily 'long wave' bets.

But for the fact that the punter at the bookmakers is not actually present to see the race,
the conditions for the exercise of skill are the same for him as they are for the gambler at
the racecourse. The 'arcane wagering terminology' of the racetrack belies the complex
frame of reference which underlies horse race betting. Such a frame of reference, based on
the art of handicapping, demands considerable skill and knowledge for the list of variables
which can influence the outcome of a race is vast, and requires the talents of a perceptive
and experienced punter for effective interpretation. A wide range of betting options further
increases the complexity of race gambling. The punter can decide which type of bet to
place - single, double, treble or accumulator, chose the odds of the bet - favourite, outsider
or in-between and select whether or not his bet is 'each way' or 'to win' (Downes et al.
1976, p134). Such levels of complexity have elevated the practice of betting on horses into
a virtual science with top punters regarded as skilled probabilists. The sporting media have
been instrumental in creating this specialist subculture. Since their humble beginnings in the
nineteenth century, sports journals like The Sporting Life and The Sporting Chronicle have
flourished and been all but drowned in an avalanche of highly specialised magazines and
papers so that, by the late twentieth century, literally hundreds are widely available to the
general public. Learned magazines like Inside Racing disseminate information that is all
but unintelligible to the lay reader, but extremely useful to the skilled punter. Lists of
'strike rates', expressed as a percentage of wins to runs, and 'level stakes' which show the
net profits or losses of a punter's £1 bet on each of a particular trainer's runners on a
certain course and over a specific period, read like the hieroglyphics of an advanced
mathematical textbook. The ability to deal with such a range of information is described by
Zola as 'a pragmatic system of integration of available information' which functions as a
major source of prestige amongst horse-race bettors (Zola 1976, p26).

The Casino : Las Vegas, Capital of the Twentieth Century

If, as Debord has suggested, we do indeed live in a society of the spectacle, then Las
Vegas is the incarnation of such a society; the casino its spectacular form.

The casino can be said to be the purest of the phenomenological sites for it presents in
microcosm a map of the various sites of gambling, and in doing so employs a category not
yet used. It is an inclusive site, for the casino (and especially the Las Vegas casino).
incorporates all the forms of gambling seen so far as many others of its own. Thus Abt et
al. state: 'In combining table games with slot machines, modern American casinos have
created the most nearly universal gambling opportunity in history. No other form of commercial gambling is comparable' (Abt et al. 1985, p133). The insulation of this 'ideal type' from the world outside and its accumulation of gambling forms inside make it a 'phenomenological centre'; the site of a 'total gambling experience', for in the fleeting, inconsequential moments of the casino floor are embodied all the instances of the entire history of gambling itself.

Based on the very different societies they represent, significant differences distinguish the American from the British casino. However with the imminent deregulation of the gambling industry, the British experience is gradually moving towards the American model.

**Societies of the spectacle: American and British casinos compared**

Consistent with a historical tradition which allowed the wealthy to gamble but forbade such a frivolous waste of time and money amongst the lower orders, the British casino attempts to recreate the air of exclusivity of the private clubs of the eighteenth and nineteenth centuries. To this end, a membership requirement and formal dress code reinforce class distinctions and create an atmosphere of glamorous refinement. The Stakis casino chain outlines its code of conduct in the most patrician language, stating that 'Only Ladies and Gentlemen of good social position and over the age of 18 years are eligible for Membership of the Club' (Stakis Members Guide 1994, p3). Assuming a tacit 'gentleman's agreement' between member and management, it reminds patrons that 'to maintain the desired atmosphere, we have, naturally, standards regarding dress and behaviour'. These 'standards' are the standards of an elite, designed to insulate them from the rest of the world, and backed up by a government whose residual Puritanism aims to protect the gambler - and especially the working class gambler - from the 'vice' of playing. Such an attitude is apparent in the innumerable obstacles that are placed in the way of immediate play. A forty-eight hour rule forces the potential gambler to wait two days after joining to enter a casino, thus creating a 'cooling off' period in which he can reflect and come to a rational decision about his impulsive desire to play. Having decided he does in fact want to play, the potential gambler must apply for membership by visiting the casino in person.
have a physical description of himself taken and complete a form detailing, amongst other things, his occupation. A strict dress code of jacket and tie for men and evening dress for women further restricts spontaneous play, for the need to be 'appropriately dressed' generally requires planning and makes a visit to the casino something of an occasion. In this it differs markedly from, for example, the betting shop which can be 'dropped into' on a casual basis.

Casino doormen wearing bow ties and tails welcome members individually as they arrive, taking their coats, presenting them with the guest book to sign and showing them to the tables in an antiquated ritual that attempts to recreate the atmosphere and splendour of the 'magnificent rooms' in the 'luxurious clubs' of the nineteenth century. The relatively limited facilities of the British casino (most clubs have no more than four different types of game) are licensed for approximately twelve hours a day, and the gambler is bound by a strict set of rules while he uses them. He is required to wear his jacket while at the tables, forbidden to tip the dealers or bring food or drink into the segregated gaming area. The rules of the games themselves are designed to encourage moderation and sensible play, and, unlike American casinos, in British ones, players are allowed to sit at the gaming table without playing and are permitted to consult the rules of play which are printed (with tips for the gambler!) on every table. The roulette wheel has only one zero, and 'sucker bets' in blackjack are not allowed. Coffee is provided free, to keep players alert and sentient, unlike the casinos of Las Vegas, where a steady flow of alcohol dulls gamblers' senses and encourages rash bets.

The formalities of British casinos - whilst perhaps not in reality excluding lower socio-economic groups from their membership - are nevertheless indicative of an overt attempt to attract a particular class of clientele. In comparison to those of the United States, British casinos are antiquarian establishments where the aura of tradition and social hierarchy emanates from every deferential doorman and every subdued fixture. In this they belong to a European tradition of gambling which reached its nadir in the aristocratic play of Louis XIV, and which today is exemplified by the unashamed elitism of Monte Carlo. Of this playground of the rich Tom Wolfe wrote: 'At Monte Carlo there is still the plush mustiness of the nineteenth century noble lions... At Monte Carlo there are still Wrong
Folks, Deficient Accents, Poor Tailoring, Gauche Displays, Noveau Richness, Cultural Aridity - concepts unknown in Las Vegas' (Wolfe 1981, p26)

Unlike its British counterpart, which actively works to reinforce class distinctions, the Nevada casino is 'the most democratic or perhaps simply undiscriminating' of social organisations (Skolnick 1980, p46). The casinos of America actually eliminate class distinctions by exposing every gambler equally to chance. Thus Puzo writes of the 'immediate ennoblement' of the customer as he enters the casino: 'One of the greatest Vegas tricks is to make every gambler a King... If you just throw the dice or step into a casino, you're at least a duchess. The customer is immediately ennobled, make a Knight of the Garter, A Chevalier of the Legion of Honour...' (Puzo 1977, p82). While the British gambler has already to be a noble before he can enter the casino, the American one is ennobled simply by virtue of being there.

True to the pioneer spirit in which it was built - Bugsy Siegel's famous 'come as you are' - there are no entrance restrictions in Las Vegas casinos. Literally anyone can walk in off the street and into some of the most spectacular buildings in the world. They will not be asked for credentials by any security staff and no-one will notice what they are wearing or care if they are eating or drinking. Inside, in a general atmosphere of license, alcohol will be freely distributed to encourage gamblers to indulge their every desire amongst an enormous variety of games, in this vast, twenty-four hour playground. The absence of licensing regulations in Vegas casinos contrasts with Britain's paternalistic temperance, for in the former players are encouraged to drink as much and as often as they like at the tables. While credit and debit mechanisms are strictly prohibited in British casinos, American ones make every effort to relieve the player of his money, furnishing their interiors with so many cashcard machines, phone-credit lines and bureau de changes, that at times they resemble enormous banks. The decoration of these Arcadian palaces, like Las Vegas itself, is 'a monument to American classlessness and - if truth be told - tastelessness too' (Kaiser and Lowell, in Findlay 1986, p203). From the gaudy carpets and plastic statues to the rhinestone chandeliers of the central gaming hall, the star attraction of the Luxor casino is an enormous replica of the mask of King Tutenkhamen. Called 'Tut's Head' it towers fifty feet above the casino, an airbrushed plastic monolith of shiny purple and yellow whose
luminous laser eyes blink every few seconds in an expression of surprised stupidity. The tourist brochure is proud of its monument to kitsch, and actually celebrates reproduction over reality, boasting ‘Unlike almost any Egyptian display outside Egypt, this display features reproduction rather than Egypt’s treasures. In short, the Head is a homage, not an exploitation’ (Las Vegas Today, June 1994, p32).

This melting-pot of kitsch and tastelessness has often been described as ‘ironic’ by British commentators; an attitude which reflects a heritage of centuries of repression, of the Protestant work ethic and of the Enlightenment quest for moderation in gambling behaviour. Las Vegans, unencumbered by any such traditions, and the equivocations of irony, can simply have fun gambling.

A vast melting pot in which social distinctions are dissolved in the desire to gamble, the Las Vegas casino is the embodiment of the American ideal. Its laissez-faire policy creates an ambience of relaxed intemperance where everyone’s dollars are welcome, whatever the station of their owner. This American dream is Simmel’s nightmare, in which money is truly ‘the frightful leveller’ (Simmel 1971c, p329).

Having built a model of the archaic, class-bound British casino, it is now time to dismantle it, just as the government is dismantling the legislation that created it. The deregulation that is set to change the physiognomy of the gambling economy is nowhere more apparent than in the casino, where the market forces that created Las Vegas out of American gambling have begun to make themselves felt. As the 1968 Act is relaxed, the British casino is about to be transformed by longer licensing hours, more slot machines, and the ability, for the first time, to advertise itself. Membership will be available by post and the forty-eight hour wait to play will be halved. Whether or not the British casino comes to resemble the American remains to be seen: what is apparent is that Las Vegas appears to be the model towards which it is now moving.
Las Vegas: capital of the twentieth century

Las Vegas is the epitome of the casino and, insofar as 'casino capitalism' exists as a metaphor for post-modern economies, it can also be said to epitomise the condition of post-modernity. If, for Benjamin, Paris was the capital of the nineteenth century (Benjamin 1992), then Las Vegas is the capital of the twentieth.

The form and organisation of Las Vegas is the form and organisation of the casino in macrocosm. All casinos are separate sites: 'timeless, hermetic environments of elaborate unreality' within which an intense concentration of play takes place (Abt et al. 1985, p79). Situated in the middle of the Mojave desert hundreds of miles from the nearest town, Las Vegas presents such separation in extreme form. Isolated from the reality of the everyday world, the city appears to rise out of nowhere; a giant casino where the concentrated urge to gamble has pushed back the desert, annihilating its aridity in a flood of neon. Its remote location in such a hostile environment makes the city a uniquely tangible embodiment of Huizinga's abstract notion of play: 'Play is distinct from ordinary life both as to locality and duration. The world circumscribed by play is a temporary one, a magic circle within which the player takes on new roles and gives up his own ones. The play world is secluded and limited with its own internal order and logic. Most importantly, play is an interlude in our daily lives, a 'stepping out' of real life into a temporary sphere of activity' (Huizinga 1949, p9). Similarly, for Caillous such 'abnormal cities' as Las Vegas appear as 'both refuge and paradise', cloistered 'like huge secret retreats or opium dens', where the time passed by their nomadic visitors 'is merely a set of parentheses in their ordinary lives' (Caillous 1962, p117).

The visitor to Las Vegas 'steps out' of real life, and, engulfed by the city, temporarily 'steps in' to a new world. The energy of a city sustained by play surrounds and overwhelms the individual the moment he arrives. There are slot machines in the airport, in the hotels, in the hospitals and sunk into the bars. People play the souvenir toy machines on sale in shops and keno slips nestle between the salt and pepper pots in restaurants. In this labyrinth, all the relations which anchor the visitor to familiarity and routine are severed, and, cast adrift, he enters a play world of illusion and unreality. Mario Puzo knew the
sensation well: 'It is all a dream. It has nothing to do with reality. It is a sanctuary from the real world... and it's somehow fitting and proper that the city of Las Vegas is surrounded by a vast desert. A desert which acts as a cordon sanitaire' (Puzo 1977, p21). It is easy to imagine that the oasis of Las Vegas is in fact a particularly beguiling mirage. Looking out of the plane minutes after take-off, back in the real world, the visitor sees nothing but desert.

The city of the spectacle

'The present age... prefers the sign to the thing signified, the copy to the original, fancy to reality, the appearance to the essence... illusion only is sacred, truth profane. Nay, sacredness is held to be enhanced in proportion as truth decreases and illusion increases, so that the highest degree of illusion comes to be the highest degree of sacredness' (Feuerbach 1957, xxxix).

Feuerbach's comment on the predilection of the modern age for the illusory over the real is used by Debord to open his essay on The Society of the Spectacle. It can equally well be used to illustrate the spectacular nature of Las Vegas, for here, the spectacle defines the form and content of the city.

According to Lash and Urry, the trend toward a 'spectacular' kind of nostalgia is typical of the post-modern commodification of the past in which there is an 'increased significance of pastiche... as the past is sought through images and stereotypes which render the 'real' past unobtainable and replace narrative by spectacle' (Lash and Urry 1994, p247-8).

In Las Vegas', such a trend derives from the cities' rapid artificial growth and its internal constitution which is made up of a tiny resident population of under one million and a huge transient one of twenty-four million tourists per year. Built at break-neck speed purely for the purpose of gambling, it is less than a hundred years old and has no conventional economic infrastructure, no personal taxation and no existence without the gambling economy which created and sustains it. As such, Las Vegas is a city without substance and without history; its profusion of neon signs concealing the fact that it is similar to the
Invisible Cities described by Calvino in which: 'Memory is redundant: it repeats signs so that the city can begin to exist' (Calvino 1979, p18).

Lacking an indigenous cultural tradition of its own, Las Vegas mimics the activity that gives it form, and so the repetition of play corresponds to the city's repetition of other cultures throughout the hotels and casinos of the Strip. Las Vegas as an entity engages in repetition on a grand scale - the repetition of events and images, plucked out of historical narrative and recreated in the form of spectacular themed resort hotels. These 'mini worlds' provide every convenience for their guests, including a number of enormous casinos: a 'total illusion' housed under one huge thematic roof. In 1887 a French tourist noted what he considered a particularly American trait, writing ‘Hotels are for Americans what cathedrals, monuments and the beauties of nature are for us’ (in Findlay 1986, p161). In the century since he wrote, this trait has developed exponentially and surely reached its apogee in Las Vegas, where hotels now boast of being destinations in their own right and tourists talk of 'going to Caesar's Palace' or 'going to Excalibur', not of 'going to Las Vegas' itself.

In its creation of themed worlds, Las Vegas acts as a giant sponge, absorbing the most fecund images from world history and drawing them into a lush playground in the desert. Its indiscriminate borrowing results in a bizarre pastiche of cultural appropriation: medieval England in Excalibur, the Roman Empire in Caesar's Palace, ancient Egypt in Luxor and south seas piracy in Treasure Island. Walking through a thoroughly modern laser display, the individual finds himself in the Roman Empire, surrounded by luscious fountains and piazzas. Beyond the triumphal arches of Greek gods rises a medieval fortress, encircled by a moat and dozens of jousting knights. The horn of a nineteenth century New Orleans paddle steamer, festooned in neon sounds, interrupting the pre-recorded battle cries of pirate galleons fighting in a climactically-controlled Spanish lagoon. Luxor's life-size sphinx stares out impassively across the cityscape, its giant head surrounded by lasers that shine so high they interrupt the flight of local planes. In this creation of fantasy, the illusion is more 'real' than the reality. Las Vegas has created itself from a spectacular and arbitrary collage of historical images, proving that 'technology can give us more reality than nature can' (Eco 1995 p44). Like Calvino's Invisible Cities, the
city itself 'is redundant: it repeats itself so that something will stick in the mind' (Calvino 1979, p18).

Play Grounds

In these miniature worlds of play, the boundary that separates inside from out, night from day and the casino from the city breaks down in a city so saturated with gambling that it is itself a giant casino. Inside and out merge into a vast gaming emporium, so that like Benjamin's Arcades, Las Vegas casinos are 'houses without exteriors' (Benjamin, in Buck-Morss 1990, p271). See the breakdown of exterior and interior, night and day, in the dazzling casinos of the Strip and in the self-contained universe of Excalibur, in Plates Six and Seven.

Upon entering, the gambler becomes disoriented in both time and space, and his sense of the passage of time becomes relative to the nature of the game he happens to be playing. In this way, the rate of play of the games in the casino measure the player's perception of time, and so constitute his own internal 'clock'.

In blending the immediacy of the slot arcade with games like keno (a concentrated lottery), table games and sports betting, no single rate of play and no definitive relation between the player and the game, exist in the casino. Instead, both are contingent on the specific game being played. The outcome of a round in games of pure chance like roulette, baccarat and craps is resolved in the time it takes for a wheel to spin, cards to be turned over or dice to be rolled, so that a single bet can be won or lost in a matter of seconds. Games of skill such as poker and blackjack, on the other hand, tend to last longer, due to their greater degree of player involvement. Here, a round is lengthened by the gambler taking time to make decisions and choose between alternatives, so that a game of poker can last for hours, blackjack up to ten minutes. The crowdedness of the table further effects the length of a game, simply because the greater the number of players, the greater the time taken dealing cards, collecting bets, making payouts and so on. Up to fifteen people can play baccarat, so that by the time all fifteen have placed their bets, dealt and turned over their cards, a game can have lasted three or four minutes. With fewer than five players, a game
will be over with mercurial swiftness in a matter of seconds. A crowded roulette table may have more than ten people counting out chips and shuffling them around the board as they make up their minds about their bets, and when the outcome of a spin is resolved, the dealer will have to remove and pay out chips for all these people. Meanwhile, at a less busy table, a game will be over almost as quickly as it takes to spin the wheel. The rate of play of a busy roulette table is around 60 spins an hour, when quiet, it is nearer 120. In the timeless void of the casino, the length (or rate of play) of a game thus becomes the gambler's measure of time and is determined by factors such as the structure and degree of skill in a game, the crowdedness of the table and the size of the stake in relation to the player's bankroll.

The heart of the casino - the gaming hall - is pure spectacle, a dizzying emporium of noise, movement and colour. Upon entering, the gambler finds himself plunged into another world, a vast playground insulated in a timeless void from the flow of everyday life outside it.

Casino light is not susceptible to the vicissitudes of night and day, for the exclusion of clocks and windows banishes daylight and, in a perpetual twilight, all measure of time is lost and the time of the casino set apart from that of the everyday world. Artificial luminescence obliterates the sense of time passing, and disorients the gambler in both space and time, contributing to what Tom Wolfe called the cities' 'quixotic inflammation of the senses' (Wolfe 1981, p20). Such an 'inflammation' is not confined to Las Vegas however, but is characteristic of casinos everywhere, as Scott and Venturi explain: 'The interior of the casino] never connects with outside light or outside space. This disorients the occupant in space and time. He loses track of where he is and when he is. Time is limitless because the light of noon and midnight are exactly the same. Space is limitless because the artificial light obscures rather than defines its boundaries. Light is not used to define space... Space is enclosed but limitless... Light sources... themselves are independent of walls and ceilings... The lighting is antiarchitectural' (Scott and Venturi 1972, p44).
Despite their direct participation in table games, casino gamblers appear to each other as anonymous, transient individuals, for their relation is with their invisible opponent in every game - the casino - and not each other. No inter-player interaction is required in any game, and so they play on, oblivious to any presence but their own. The perpetual twilight and the labyrinthine organisation of the casino discourages social contact and contains a mass of individuals who, although noisy, are seldom found actually communicating with each other. When not playing, gamblers tend to wander singly from table to table, so that little contact, beyond that regulated by play, goes on. Even the social focus of the refreshments bar is dissipated by waitresses serving drinks to members as they play. Casino design itself works to reinforce this a-social atmosphere, creating an apparently chaotic and disquieting landscape, whose confusion is mitigated only by play. Rows of tables and machines run into each other, forcing the gambler to retrace his steps time and time again and making travel in a straight line impossible. Since no 'natural' pathways or aisles have been created to assist movement, every empty space appears immeasurably small for the quantity of people trying to congregate in it. There is nowhere to sit - the only seats are around the tables - and nowhere to stand without being swept along by a tide of people wandering haltingly in all directions. Crowds mill around in chaos, bumping into each other as they side-step machines, squeezing through narrow rows of slots and navigating around banks of tables. The distraction created by this lack of organisation and design make it very difficult for the individual to do anything. He may enter the casino with a purpose, but by simply walking through the gaming arena, relinquishes any hope of achieving it. In his ever more vague peregrinations he gradually loses his sense of direction and time as his attention is fragmented by the sensory maelstrom whirling around him.

Both the labyrinthine organisation of the casino and its effect on consciousness resemble the nature and effect of what Benjamin describes as the metropolitan experience: the ‘distracted manner’ and ‘trancelike dream consciousness’ with which individuals absorbed the sensations of the metropolis and the department stores of nineteenth century Paris (Benjamin, in Buck-Morss 1990, p252). Like the Paris streets which, ‘with their uniform streets and endless rows of buildings have realised the dreamed-of architecture of the ancients: the labyrinth’ (Benjamin, in Buck-Morss 1990, p254), the casino, with its uniform slots and endless rows of tables, presents another phantasmagoric landscape. Its
effect on consciousness is also similar. For Benjamin, the prototypical nineteenth century urban experience was to be found in the Arcades where 'the commodities are suspended and shoved together in such boundless confusion that [they appear] like images out of the most incoherent dreams' (Benjamin, in Buck-Morss 1990, p254). In the twentieth century however, such an intensification of experience finds its most extreme form, not in arcades filled with commodities, but in arcades of chance, where it is games that are 'suspended and shoved together' in a 'boundless confusion' that resembles the imagery of dreams.

The gambler is disoriented in time and space, cut off from the outside world and overwhelmed by a barrage of impressions which descend upon him with lightening speed, one after the other, never lingering long enough to become a focus of attention. Stimulation comes at him from all angles; the rattle of the slots and the roar of the tables a cacophany of sound against a backdrop of flashing lights, bright colours and frenetic movement. Nothing, however, remains with him long enough to create a lasting effect, and, as his attention splinters into a myriad of points, he is unable to find any single feature to fix onto and concentrate on. The nature of the casino's 'quixotic inflammation of the senses' is fleeting and transitory, and creates in the player a confusion that turns to fugue-like distraction as he gradually stops trying to engage with his surroundings and allows himself to be swept along by the commotion that threatens to overwhelm him. The experience of the casino is similar to the intensification of experience in the metropolis, which Simmel describes as the 'rapid telescoping of changing images ... and the unexpectedness of violent stimuli' (Simmel 1971c, p325). The 'rapidly shifting stimulations of the nerves' which lends to mental life the character of the 'shock experience' (Simmel 1971c, p329) also gives rise to a feature of modern life which Simmel describes as 'the blase attitude'. This occurs when the over-stimulated nerves adjust to the 'profound disruption' of the metropolis 'by renouncing the response to [it]' in such a way that the stimuli themselves appear 'homogenous, flat and gray' with nothing to distinguish one from another (Simmel 1971c, p330).

It is a form of this blase attitude as well as the trancelike dream consciousness described by Benjamin that the gambler experiences when he ceases to react to the sensory assault of the casino. Unable to cope with its continual, violent bombardment, he lapses into a daze
and, as if on 'automatic pilot', no longer reacts to anything at all. Like a sleepwalker, he wanders through the labyrinth, his mental faculties blunted in a protective defence against the confusion around him.

Slowly, the gambler begins to sense a source of gravity in this chaos. Barely perceptible at first, he finds himself drawn to a table, watching the exquisite skill of the dealers as they deploy a steady flow of cards and chips and organise the paraphernalia of play into elegant, repetitive rituals. These highly stylised actions become ever more fascinating to the circulating gambler and he becomes drawn to the bold simplicity of the table design itself. Boxes and squares divide the green baize into discrete 'spaces of play' which instruct the novice, in simple unambiguous terms, of the fundamental rules of play. The committed gambler, Jack Richardson, was struck with the mathematical certainty of the tables, writing: 'A craps table is like a medieval chart of the elements, an involved design that contains all the categories of chance a pair of dice can create. It is covered with squares within squares, numbers within boxes and circles and phrases in hermetic jargon that describe the nature of the bet each area of the table accommodates'. In the 'classical order' of the roulette table 'thirty-six variables are neatly arranged, coloured and classified and... like the square root of two or some other Pythagorean embarrassment, zero and its ambiguity are banished outside the main order of things...' (Richardson 1980, p42-3).

With the emergence of repetition, the world becomes ordered again. Chips are stacked, the wheel spins, the ball is released - it spins - bounces - stops; the chips are swept off the table; a pause and the action begins again; repeated without variation all 'day' and all 'night'. When he focuses on a single machine, the player realises that even the amorphous babble of the slots is made up of distinct voices, each with its own tone. The coins are dropped, the handle pulled, the machine lights up and wheels revolve, stop, and the action is repeated, interrupted only by the occasional rattle of a payout. Although initially, the solemn actions of blackjack players appear to the novice as some kind of esoteric ritual, he soon realises that it is one into which he can be easily initiated, for the semicircular table is laid out with geometric simplicity: squares for card places, circles for chips and insurance payoff odds printed in crisp white on the smooth surface. Bets are placed and cards dealt in a speedy arc to players evenly-spaced around the crescent table. The dealer turns over
his cards, deals more, collects and pays out chips, gathers cards and then begins the whole process again.

The ritualised action of the tables and machines and the fixed expressions of dealers and players signifies regularity and contrasts sharply with the chaotic formlessness of the casino floor. Out of its labyrinthine confusion, the gaming tables emerge as oases of order with a hypnotic appeal of their own. As the player gravitates towards a table or machine, his attention and actions become focused and the imperatives of the game gradually relieve him of the responsibility of deciding what to do. All he need do is sit down and play and, in the simplicity of this resolve, his world becomes ordered again.

SEPARATE WORLDS

After looking at the distinctive atmospheres of the various phenomenological sites, it is time to turn to those features which create an experience of play common to all.

To this end, we must look again at separate sites. Such sites are special, for they provide a concentrated instance of a gambling environment and involve a physical crossing of a threshold out of the ordinary world and into the world of play.

Moreover, on another level, all sites share this characteristic of 'separateness'; literally in the case of separate sites and metaphorically in integrated ones. The physical act of stepping into the bookmakers or the casino has its counterpart in the symbolic stepping out of the real world implied in the participation of all games of chance. At this point we can turn to the work of Huizinga and Caillots, whose delineations of the formal properties - and especially the separate nature - of play are strikingly similar.

Note, for example, the radical sequestration of Herman Hesse's ultimate game of chance, The Glass Bead Game.
Huizinga describes the fundamental characteristic of all games: 'All play moves and has its being within a playground, marked off beforehand, either materially or ideally... (Huizinga 1949, p10). Such play has its own peculiar nature. It is not 'ordinary' or 'real' life, but is rather a stepping out of 'real life' into a temporary sphere of activity with a disposition all of its own' (Huizinga 1949, p8). This point is reiterated by Caillois, who writes that 'All play presupposes the temporary acceptance of a closed, conventional and in certain respects, imaginary universe' (Caillois 1962, p19). Similarly, games, for Goffman, are a sub-division of the broad category of encounters, and are 'world building activities' whose events constitute 'a field for fateful, dramatic action, a plane of being, an engine of meaning, a world in itself, different from all other worlds...' (Goffman 1961, p25).

Encounters - and therefore games - are bound by 'rules of irrelevance' which are binding for the duration of the encounter and create a kind of blindness - an 'effortless unawareness' - to the everyday world (Goffman 1961, p24). Goffman cites the fugue of chess players as an example of 'the elegance and strength of this structure of inattention to most things of the world' (Goffman 1961, p19)

Play is both spatially and temporally separate from the rest of the world. Thus secluded 'it is played out within certain limits of time and space being distinct from ordinary life both as to locality and duration' (Huizinga 1949, p9). Every playground - and every gambling site - is for Huizinga a 'concentrated', 'forbidden' spot, 'isolated, hedged round, hallowed, within which special rules obtain' (Huizinga 1949, p10). The arena of play is strictly delineated and reserved so that 'the game's domain is... a restricted, closed, protected universe: a pure space' (Caillois 1962, p7). Such concentrated spaces are bound by temporal limits too. Play 'interpolates itself as a temporary activity, satisfying in itself and ending there'. It is 'an intermezzo, an interlude in our daily lives' (Huizinga 1949, p9), which, for Caillois, changing the metaphor 'ends as inexorably as the closing of a parenthesis' (Caillois 1962, p43). This limitation in time has its counterpart in repetition. Every game, and every gambler, can be repeated ad infinitum either immediately upon completion of a round, as in slot machine play, or after a spell has elapsed, as in the lottery. In the faculty of repetition 'lies one of the most essential qualities of play. It holds good not only of play as a whole but also of its inner structure' (Huizinga 1949, p10).

Gambling in general can be endlessly repeated and this repetition also makes up the
structure of each separate round in each separate game' (Huizinga 1949, p10). As the gambler enters the world of play, he leaves the conventions of the everyday world behind and moves into a universe bound by a different set of rules. The rituals of play make the gambling environment a cohesive, structured alternative reality with the ability to draw the individual in and create a (temporarily) viable world. The 'profound affinity' between play and order arises from the fact that play 'creates order, is order. Into an imperfect world and into the confusion of life it brings a temporary, a limited, perfection. Play demands order absolute and supreme' (Huizinga 1949, p10). By creating rhythm and harmony, play enchants and captivates, 'it casts a spell over us' (Huizinga 1949, p10). In the 'temporary abolition of the ordinary world' a 'stepping out of common reality into a higher order' takes place (Huizinga 1949, p13). In this higher order, the rules of play are 'absolutely binding': 'Inside the circle of the game the laws of ordinary life no longer count. We are different and do things differently' (Huizinga 1949, p12).

Just as the magical world of play is animated by a set of rules different from those which govern everyday life, so the player himself is animated by a different set of motivations from those of his everyday routines, so that for Cailllois, play consists of 'becoming an illusory character' (Cailllois 1962, p19). With the interruption of habit and routine and the removal of familiar surroundings, the reference points of the personality disappear. As the traditional categories of orientation loosen and shift, so the gamblers' axes of identity become less fixed and allow for the investigation and creation of new roles. As Cailllois explains, when the player leaves the everyday world behind he also leaves himself behind: 'In one way or another, one escapes the real world and creates another. One can also escape oneself and become another' (Cailllois 1962, p19).

As we have seen then, as worlds of play, the phenomenological sites are separate universes, limited in space and time and governed by a peculiar order. Having described the physiognomy of these sites and the experience of gambling peculiar to each, it is time now to look in more detail at the features which are common to the experience of play in general. This will be the subject of the next Chapter.
CHAPTER FOUR: THE EXPERIENCE OF PLAY

THE EXPERIENCE OF PLAY

Intensity
Boredom
Repetition

THE CATEGORIES OF PLAY

Time
Space
Money

ASPECTS OF THE THRILL

PLAY-IN-ITSELF
THE EXPERIENCE OF PLAY

The gambling arena imparts its own peculiar qualities to consciousness. The setting apart of the sphere of play against the outside world of utilitarian aims, just like that of the sacred enclosure, creates a rarefied atmosphere in which the mental world of the gambler assumes a strange new physiognomy. We must be careful to note, however, as Gadamer does, that the play world is no mere state of mind, but constitutes, rather, a specific mode of being. Thus: ‘play does not have its being in the consciousness or the attitude of the player, but on the contrary draws the latter into its area and fills him with its spirit’ so that, ultimately, ‘the player experiences the game as a reality that surpasses him’ (Gadamer 1975, p89).

The ‘normal’ relation of the individual to the world is mediated by the conscious experience of the categories of time, space and cause in a structure which gives form to reality. It is important to recognise, then, that ‘consciousness is not a thing, it is a structure’ upon which experience is built, so that ‘our experience gains its “actuality” by being related to this structure’ (Ey 1978, p87). The perception of the categories of time, space and cause can be seen as the co-ordinates upon which the distinctly architectural structure of consciousness rests. Organised into a coherent whole, this formation comprises a Gestalt, a ‘total structure of experience’ (Ey 1978, p94), which lends to perception the dimensions of a spectacle (Ey 1978, p107). The phenomenological sites can assume spectacular form both, as we have seen in Chapter Three, in their physical structure, and also in their representation in the field of consciousness of the gambler. In the latter, the gambler moves through his field of consciousness as if bewitched, for this structure of perception is no ordinary one. Ey points out that, despite their dependence on perceptual experience, a variety of conscious states
exist. Many of these states are destructured ones, a result of the destructuration or disorganisation of their perceptual co-ordinates. Ey describes such a destructuration of consciousness as a process which 'draws consciousness into an increasingly profound collapse into the imaginary...' (Ey 1978, p84). This type of process is the central interest of various phenomenologists' attempts to peer into the minds of schizophrenics, manic-depressives, children and 'primitives', and although the terminology of the authors' descriptions may vary, the central theme remains the same.

It is such a destructuration that the gambler is subject to when he plays, for here, as we shall see, his perceptual co-ordinates of time, space, cause and, (unique to the gambling world), money, become bewitched in a magical world of chance. While playing, the gambler no longer perceives his surroundings in the ordered, logical manner of rational consciousness, but as a barrage of information; to use Cassirer's phrase, in a 'rhapsody of perception' (Cassirer 1953, p21). To apply another phenomenologist's description of this destructuration to the gambler, we can quote Straus on the depressive: 'The basic structure of space and time... is altered. Familiar surroundings become estranged, everything shows a new, bewildering physiognomy. The relations of the patient to the world are changed' (Straus 1966, p290).

For Devereaux the 'rhapsody of perception' encountered during play is characterised by an overwhelming state of tension. The gambling situation, he writes, is 'full of promise, but it is also full of mystery and danger and meaning'. Most importantly it is 'fraught with strain, the conflicting valences and ambivalences of hope versus fear, risk versus security and faith versus doubt are playing complicated melodies within [the gambler's consciousness]'. The result, Devereaux explains 'is an intolerable - but not wholly unpleasant - state of tension' (Devereaux 1949, p695). One gambler described the sense of expectation characteristic of his encounters with chance in a particularly vivid metaphor: 'Imagine going into a dark room. When the lights are turned on the room could be empty or it could be filled with the most extraordinary objects you've ever seen. A game of cards is like that' (in The Observer 25-6-95, p12). It was a similar state of tension upon which another gambler's experience of play was founded: 'My feelings when I play roulette are of tension - partly painful, partly
pleasurable and expectant... ' (in Bergler 1970, p83), and which defined the exquisite agony of Tolstoy's relation with roulette, of which he wrote 'it is a long time since anything tormented me so much' (in Barnhart 1983, p110).

This strange, ambivalent state of tension is conditioned by the rate of play, size of bet and degree of chance in a game. It begins the moment the bet is placed and ends when the outcome of the round is known. In-between, the gambler waits in anticipation, and in this state of suspended animation 'the conflicting valences of fear or hope run in tingling arpeggios' up and down his spine (Devereaux 1949, p699). This constitutes what Bergler calls 'the mysterious thrill' in gambling, a sensation which we can see is not a uniform experience, but rather is dependent on the formal characteristics of a game outlined above. It can be protracted over a long period, as in the lottery, or experienced as a series of peaks and troughs, like the bursts of excitement generated by races. The player can be gripped in a rigour of constant tension in slot machine play, or held in thrall through a rapid succession of peaks in games like roulette. Common to all these games is a peaking of tension, an intensification of experience into which are crammed all the sensations of gambling. As he awaits the turn of the card or the end of the race, the player experiences a sensory maelstrom. A racetrack gambler describes the cycle. The thrill 'hinges on the last few minutes of the game... Then it becomes the ultimate, the extreme in excitement... As soon as the game is over, you go down because you've experienced everything in that moment' (in Leiseur 1984, p45).

Common throughout the literature on the experience of gambling is the treatment of this state of tension - the 'thrill' of play - as a static unitary phenomenon when in fact it is a process unfolding through various degrees of intensity. For example, when Goffman writes that as the individual 'releases himself to the passing moment... a special affective state is likely to be aroused emerging transformed as excitement' (Goffman 1969b, p137), he conflates the

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1 This error is avoided most notably by Martinez (1976) whose notion of 'conscious moods' as identity-defining experiences includes risk-taking, immediacy, fantasy, euphoria and mysticism as separate stages in dynamic interaction with each other.
dynamic of several states into a single one - excitement. Bergson on the other hand, understands the multifarious perception of intensity, describing it as a 'wholly dynamic awareness of the gradual alterations which take place in the confused heap of co-existing psychic states' (Bergson 1910, p9). Such states, he writes, may vary in degree and encompass both affective and physical dimensions, but always remain as 'so many varieties of a single species' (Bergson 1910, p43). The thrill of gambling is not so much a 'confused heap' as a fluctuation of sensation and perception in the consciousness of the gambler. As a Gestalt it is a 'rhapsody of perception' composed of the various states of dreaminess, delirium, vertigo and transcendence, all of which co-exist as 'so many varieties of a single species' - the experience of intensity. In this Chapter these will be described separately although it should be borne in mind that they occur more or less simultaneously and are experienced by the gambler as an undulating, repetitive rush of sensation for the duration of play.

This brings us to a methodological problem of how to describe something as intangible as a state of consciousness; a phenomenon which by definition we have no access to. A similar problem was encountered by Otto (1925) in his description of religious sensation, an experience he defined as something 'Wholly Other', and also by Storch (1924) in his phenomenological analysis of mental states. Both authors came up against the bias towards rationalism which is inherent in language and which therefore forces description of any state - 'rational' or otherwise - to bend to its strictures. As Storch expresses it: 'it is impossible to undertake a formal analysis of mental experiences or thought structures without making use of rational forms and ideas ... even though the context of the phenomena to be described is predominantly irrational' (Storch 1924, ix). The difficulties faced by writers like Storch and Otto when trying to describe something which is 'Wholly Other' are similar to those encountered in our attempt to penetrate the inner world of the gambler.

A route out of this methodological impasse has been suggested by Ey, who believes a partial solution to the problem of description lies in the very nature of the thing being described: the inaccessible state. The tendency to create spectacles, he points out, is implied in the organisation of lived space as a field and is something that we are all familiar with. This
fundamental tendency of human consciousness can thus be seen as a kind of 'bridge' between an inaccessible mental state and an image we can all recognise. To validate his claim, Ey points to the allusions to spectacle in the work of poets and phenomenologists, allusions which we can recognise because 'we well understand how speaking of consciousness as a representation, a scene, inevitably involves us in a sort of theatricality or drama of its spectacular experience' (Ey 1987, p107). Hence the effectiveness of one gambler's striking description of the experience of play as a spatial panorama, as an entering of a room filled either with wonderful objects or nothing but darkness. Thus, Storch applies the techniques of 'emotional participation and sympathetic understanding' to enter the world of the schizophrenic (Storch 1924, x), while phenomenologists like Straus and van der Leeuw rely on poets and writers to find expression for what is unique and peculiar in language which nevertheless finds common ground in the experience of the reader.

In this study we too shall use the insight of phenomenologists and writers (as well as the comments of players themselves) to describe the phenomenal field of the gambler in an attempt to render that which is Wholly Other intelligible in terms of everyday experience. We are fortunate in that the phenomenal world of gambling has captured the literary imagination of many great writers, including Turgenev, Pushkin, Balzac, Baudelaire and, of course, Dostoevsky. The latter is perhaps its most eloquent spokesman, for as well as being a great analyst of human motivation, Dostoevsky was an inveterate gambler who thus wrote from the privileged position of having actually experienced first hand that which he fictionalised. This position lent his description of the gambling experience an authenticity and verisimilitude absent from subsequent, more 'scientific' accounts.

Dostoevsky's disastrous tour of the gambling capitals of Europe, fictionalised in the novel The Gambler, was described as 'a wrenching of biography into fiction' (Wasiolek 1972, xxxviii), which reveals with dramatic insight the 'rhapsody of perception' experienced within the magic circle. All the urgency of play is compressed into Alesky, a typical gambler and a representative of Dostoevsky himself. He is alive... all his vital sap, all his energies, rebellion, daring have been channelled into roulette' (Dostoevsky 1863, in Frank and Goldstein 1987.
p186). Alesky relates his actions retrospectively as a dream-like period of temporary insanity. Upon arrival at Roulettenburgh, he underwent a ‘strange, dramatic and miraculous’ episode which ‘all flashed by like a dream’ (Dostoevsky 1992, p225). In the weeks that followed he was swept through the casino on a sensory and emotional whirligig, tossed up on exuberant waves of winning and dashed down in the despair of losing. He describes his experience of the magic circle as of living in a ‘whirlwind which caught me in its vortex and then threw me out somewhere. At times I still feel as if I am spinning round in that vortex and that, at any moment, the storm will come tearing by again, carrying me off on its wings as it passes and once again I will lose all sense of order and proportion and I will start spinning, spinning, spinning...’ (Dostoevsky 1992, p225,6). So great is the sensory maelstrom that Alesky’s frenzied being has merged with the game, leaving him spinning, disengaged from his surroundings and disorientated in space and time, as though caught in the very rotation of the wheel itself.

This ‘rhapsody of perception’ is a paradigmatic account of the experience of gambling, the separate instants of which will be examined next. After the general sensation of play, the destructuration of the specific categories of time and space, and of the medium of the gambling world, money, will be looked at. The destructuration of the perception of cause will not be considered here, but will instead form the subject of the Fifth Chapter.

**Intensity**

The thrall of the magic circle settles on the gambler like a haze for the duration of play. Overtaken by the ‘Spirit of Gaming’, he succumbs to what Balzac describes as ‘a passion more fatal than disease’ that exercises a ‘dazzling fascination over the senses’ (Balzac 1977, p22-26). Preoccupied, he is gradually dissociated from reality and overcome by a ‘ridiculous absence of mind’ (Steinmetz 1870, p49), in which he becomes engrossed in the intricacies of play to such an extent that he undergoes a destructuration of his field of consciousness. As his field of attention narrows to focus fully on the action immediately in front of him, his concentration is so intense ‘that almost all else is blocked out’. As Leiseur puts it ‘It is a
"twilight zone" or "dream world" (Leiseur 1984, p14). Thus possessed, the gambler succumbs to a dream state; a sense of unreality and distance from his surroundings, described by Baudrillard as a 'dream-like situation, where one moves free of reality' (Baudrillard 1990, p132). Jacobs (1988) and Brown (1994) have described this feature of gambling as the experience of dissociated states, which range from 'mild dissociation such as may occur in the narrowing of attention associated with preoccupation, through mystical experiences, ecstatic religious states déjà vu experiences, feelings of depersonalisation, hypnotic states, trance states... somnambulism [and] fugue to the phenomena (sic) of multiple personality' (Brown 1994, p3). Common to all these states they found the 'quality of separateness or apartness, 'differentness' or disconnection from the normal flow of mental life' (Brown 1994, p3).

We can regard these dissociated states as a specific form of the destructuration of the field of consciousness which Ey calls 'oneiric states' and in which the individual is in a condition of 'pathological dreaming'. Neither asleep nor awake, he experiences a kind of 'awake dream' 'which unfolds as if outside of himself' (Ey 1978, p65). Thus 'enchanted', the subject feels disembodied, and, looking on at himself from without, he 'lives a spectacle to the degree that he is transformed into a spectator' (Ey 1978, p65). It is in this sense that Jacobs found a large number of gamblers who reported the frequency of their feeling 'outside' of themselves, as though in a trance, watching themselves play (Jacobs 1988). It is clear then, that the gambler becomes totally absorbed in the game, and this is part of the nature of oneiric states, for their experience 'demands its absorption in the gaze which observes it' (Ey 1978, p66). Play thus assumes the form of a spectacle, not in the endlessly self-referential sense of Debord's spectacle, but as that which is perceived when the consciousness of the gambler merges with the game and appears as an entity outside of himself. Such a spectacle was manifest during a horse race in which tension was so great that spectator-gamblers actually experienced a sense of absorption into the event. The usual individualism of gambling was overcome and something approximating a group experience, a collective conscience, appeared. Recollecting the final moments of the race, one punter said 'People were just possessed by this event. The atmosphere was so powerful it was almost eerie'. This spectacle, into which the gambler is
absorbed and in which he is also an observer, is experienced by him as an awake-dream in which various other mental states, such as vertigo and transcendence, come and go.

Entering the magic circle is an adventure and, as Simmel has shown, an adventure can assume the properties of a dream: 'the more adventurous an adventure, the more dreamlike it becomes' (Simmel 1971b, p188). This peculiarity is caused by the occurrence of the adventure outwith the usual stream of life. As the world of play is a 'stepping out' of real life (Huizinga, 1949) so the adventure is a 'dropping out of the continuity of life' (Simmel 1971b, p187). The 'otherness' of the magic circle lends it the quality of an adventure, while the strangeness of the stimuli inside contribute to the dreamlike nature of the experience within it. Entering the casino has thus been described as a 'fantasy trip' (Boyd 1976, p371) in which the gambler embarks on an adventure to a foreign land. The soporific effect induced by this deliberately exotic environment resembles the trance states induced by divination ritual where communion with the sacred induced in the supplicant strange forms of consciousness.

The absence of mind experienced by gamblers in the oneiric or dream state is in fact indicative of an absence of the subject, for while he is a spectator in the game which he is playing, the subject 'is there without being there' (Ey 1978, p65). One horse-race gambler reported such an absence of the self: 'You're not in reality... no part of reality' (in Leiseur 1984, p15). This 'lived experience', Ey writes, is like that of dreams. It 'will not be retained or will be only poorly retained [and] cannot be re-lived... or can be re-lived only with great difficulty'. In this way, 'the “world” of oneiric states does not have any more existence than that of dream states' (Ey 1978, p65). As he succumbs to this dream-like absence of mind, Dostoevsky's gambler Alesky also loses awareness of himself as subject, and cannot recall what has passed. He relates: 'I lost track of the amount and order of my stakes. I only remember as if in a dream' (Dostoevsky 1992, p241). This dream-like absence of subject characterises the experience of a patient of Bergler, who recounted 'What's really uncanny is I feel as if I were in a daze' (Bergler 1970, p45). Transfixed, one player feels separated from a reality he can no longer comprehend: 'I was incapable of articulate thought...' (Richardson 1980, p129). An aspect of the dream state is the dimension of amazement, the sensation of which renders the
gambler immobile. One player was overcome, in this state, by a mixture of amazement, horror, dread and a sense of inevitability, saying 'it's the same feeling you'd get if you looked at a statue and suddenly saw it move' (in Bergler 1970, p45). Turgenev recognised the same feature in a group of gamblers whom he described as 'figures crowded round the green blazed tables with the same dull and greedy look of something between amazement and exasperation... which the gambling fever imparts to all...' (Turgenev 1970, p3). Such a fever of amazement crashed down on one punter, pinning him to the table: 'You get what's called a "red mist". You can't leave the table, you're frozen to the table... you can't move'. According to Bergson, such immobilisation is typical of the sensation of extreme intensity. It is recognisable he tells us, 'by the irresistible reflex movements which it incites' and by the 'powerlessness with which it effects us' (Bergson 1919, p40).

The apex of the gambling experience is the moment when the gambler is gripped by the fever of play and plays on and on, unable to stop, oblivious to his surroundings, to his losses, to the passage of time and even to himself. Intoxicated, he plunges into the game again and again in an eternal present that brings him to the edge of insanity. This is the experience of what Caillois calls ilinx. Derived from the Greek 'whirlpool' or 'vertigo', it is a governing principle of Dionysian or pre-rational societies, and can also be found in a type of play which consists of an 'attempt to momentarily destroy the stability of perception and inflict a kind of voluptuous panic on an otherwise lucid mind'. It is a 'case of surrendering to a kind of spasm, seizure or shock which destroys reality with sovereign brusqueness' (Caillois 1962, p23). This vertigo seizes players so that 'they are no longer aware of fatigue, and are scarcely conscious of what is going on around them. They are entranced by the question of where the ball will stop or what card will turn up' (Caillois 1962, p23). Swept along by the frenzy of play, the gambler experiences excitement to the point of disorientation, in the grip of a vertigo that 'paralyses, fascinates and maddens the player' (Caillois 1962, p23). The attraction of a game and its seemingly supernatural hold over a player lies in the seductiveness of this vertiginous flight. Baudrillard describes its hypnotic appeal: 'By itself each throw produces only a moderate giddiness, but when fate raises the bid... when fate itself seems to throw a challenge to the natural order of things and enters into a frenzy or ritual vertigo, then the passions are
unleashed and the spirits seized by a truly deadly fascination' (Baudrillard 1990, p147). In this sensory maelstrom, perceptions of time and space are shattered. Time freezes, and the gambler becomes absorbed in a total orientation to the immediate Here and Now. In this state, he becomes a creature of sensation; seeing, but not really aware of his surroundings, perceiving, but not truly cognisant of what is going on. Turgenev describes a gambler in this condition, who, seduced by the game, played like an automaton, with 'incomprehensible, compulsive haste... staring blankly in front of him' as he 'scattered with a perspiring hand gold coins on all the four corners of the roulette table' (Turgenev 1970, p4). Another describes his thoughts, shattered into incoherence by the intensity of the game '... your brain or your way of thinking is completely nil... You can't think of nothing and yet you can't ease your mind. If you only knew how to ease it for one half second you could get your senses back. Man, your mind is blown' (in Martinez 1983, p364). As a creature of sensation, the gambler apprehends the world only through feeling, not thought. The relation between sensation and reflection is dissociated, the physical feeling of an event separate from the understanding of it. Such a phenomenon is illustrated by a moment in Alesky's play when, in a flash of insight, he temporarily reverts to lucid comprehension: 'With horror I felt and momentarily realised what it would be like to lose now' (Dostoevsky 1992, p241). Total physical turmoil accompanies what Martinez calls this 'peak experience', and describes as 'a body rapture marked by buoyancy and vigour' (Martinez 1983, p359). When tension peaks in this way, pandemonium takes over. One punter felt 'everything break lose' when she won the lotto, while another related: 'I thought I'd gone mad; I'd completely flipped... I don't think I've ever come close to another experience that produced as much adrenaline... it was a near death experience'. Utyeshitelny, in Gogol's The Gamblers described a sensation of similar intensity, saying: 'The loss of money is not so important as losing one's peace of mind. The mere agitation experienced during play, people may say what they like, but it obviously shortens one's life' (Gogol 1926, p228).

It is during this stage that physiological changes such as increased respiration, heart rate, blood pressure and adrenaline have been found to occur in gamblers, changes which provide the strongest evidence for the notion of gambling as a physiological addiction. Bergson has
identified the correspondence between the experience of intense emotion and that of physical sensation (Bergson 1910, p20-36); a correspondence frequently found in gamblers' reports of sensations like flushes, palpitations, tremours and light-headedness. Having staked - and won - at roulette, Dostoevsky's Alesky experienced a degree of excitement so intense as to be a visceral sensation: 'I was a gambler; I felt it at that very moment. I was trembling from head to foot, my head was throbbing' (Dostoevsky 1992, p203). Similar physical upheaval accompanied the thrill of play for Disraeli's Young Duke: 'His hands and feet were like ice, his brow like fire; his ears rang with supernatural roaring and a nausea had seized upon him' (in Steinmetz 1870, p77). Similarly, when Lucien wins at roulette in Lost Illusions, 'he felt as if he had live coals inside him' (Balzac 1976, p431). In the 1949 film of Dostoevsky's The Gambler (significantly re-titled The Great Sinner!), the thrill of play is given an explicitly physical dimension when the Alesky character narrates: 'At last I was beginning to feel this passion. It was almost sensual. I would see a number - eight - I desired it, I placed my bet... it had to come to me'. When it does, he plays on, reeling 'I was numb, blind, dizzy'. Finally, Dostoevsky gives perhaps the definitive account of the vertigo of play in Alesky's penultimate bet at the roulette tables. He stakes everything, flinging his money down at random; then there is 'one moment of waiting in which my impressions were perhaps similar to those experienced by Madame Blanchard when she plunged to the ground from a balloon in Paris' (Dostoevsky 1992, p241).

His choice of the plunging analogy is revealing, for it is one used by Caillois to describe the sensation of vertigo. Children's spinning games and whirling dervishes, he writes, create states of ecstasy, disorientation and hypnosis (much like those of the ecstatics and diviners we saw in Chapter Two), as do physical activities like rapid accelerations and 'falling or being projected into space' (Caillois 1962, p24). Alesky's feeling of hurtling through space is the sensation of such vertiginous disorientation; a mental sensation transposed into a physical one and caused not by physical exertion but by the sheer intensity of play. This sensation can be regarded as an aspect of the oneiric states we saw earlier. The loss of the subject which is inherent in such states is felt as a peculiar kind of disorientation in which the individual falls into the abyss which has opened up where the presence of the subject used to be. Ey's description of this
Destructuration of consciousness is strikingly redolent of Dostoevsky's fictionalised plunging. He writes of the individuals' 'intoxicating urge to... cease being someone, to keep leaning until he falls outside himself' and likens this pathological experience to a more routine one, experienced by us all, the moment of waking when 'we no longer know who or where we are, and for an instant stand aghast before this gaping abyss of nothingness' (Ey 1978, p66, 67). In such moments of intense physical and perceptual disorientation, the gambler's link with reality is tenuous, and loosens still further as he surrenders himself to the immediacy of the present. For Boyd, he is 'lost in a world of his own... There is no longer an outside reality... Even time is non-existent, and in a certain sense he is insane' (Boyd 1976, p372). Alesky certainly wonders if he has gone mad, so intense does his play become. 'Had I taken leave of my senses at that time, and was I not sitting somewhere in a madhouse and perhaps that is where I am now...' (Dostoevsky 1992, p225). The narrator of The Mahabharata observed a similar effect on gamblers 'drunk with playing dice' who 'prattle[d] like madmen of things they had not seen asleep or awake' (The Mahabharata 1975, p136). In a few moments of play, Alesky experiences the gamut of gambling experience, plunging through a dream-like state of unreality, physical vertigo and the perceptual disorientation of time and space. As if in a dream he stakes all his money: 'I moved the whole pile of money onto red - and then I suddenly came to my senses! ... an icy fear crept over me, making my hands and legs tremble. With horror I felt and momentarily realised what it would be like to lose now! My whole life was at stake!' Then, when he wins, in a state of euphoria, he feels 'fiery goose pimples breaking out all over my body' (Dostoevsky 1992, p241).

As well as his fractured senses, his perceptions and his emotions, the very core of the gambler - his ego - is sucked into the whirlpool of play. An aspect of the experience of 'dissociated states' is the 'state of altered identity' in which the gambler, in his trance, undergoes a shift in persona (Jacobs 1988, p29). In this sense, gamblers often talk of becoming someone else when they play; an experience inherent in the nature of play for, as Caillois has pointed out, all games consist in becoming an illusory character: 'the subject makes believe... that he is someone other than himself. He forgets, disguises or temporarily sheds his personality in order to feign another' (Caillois 1962, p19). Rosenthal found such an alteration of identity common
amongst pathological gamblers, many of whom went so far as to call each of their play 'selves' by a different name! (Rosenthal 1986, p109).

This protean gambling identity can be better understood when we situate the conception of self in its field of consciousness, which is constructed and held in more or less fixed relations by the perceptual parameters of time, space and causation. The destructuration of these vital orientations, which we shall see occur in the course of the gambling event, results in a similar destructuration of the parameters of selfhood; the organisation of the ego. Ey describes how, in certain pathological states, individuals can experience peculiar forms of self perception, in which they 'can be aware of themselves only in the mirrors of a casino or of a fun house in which only the fantasies of the game are reflected'. Here, 'the fluid authenticity of their selves arises recklessly in their non self-conscious being. The self, then, appears without definite outlives or character' (Ey 1978, p218). This 'fluid authenticity' is typical of the gambler and is cinematically portrayed in Fritz Lang's eponymous film of _Dr Mabuse, The Gambler_. Mabuse is portrayed as an individual with no fixed character, appearing in every scene in disguise. Just as the gambler of the eighteenth century was perceived as an individual of 'no distinct physiognomy', Mabuse's constant changes reveal his chameleon-like personality, his refusal of any fixed characteristics.

The fluid identities of the gambler in play are ones in which his everyday self is left behind and he becomes an extraordinary individual, full of potential and self-assurance. When winning, this confidence is vindicated as his ego becomes buoyed up by waves of transcendence. In the 'conscious mood' which Martinez calls fantasy, the gambler finds himself imbued with a special kind of power. 'It is literally dream power. In the mind of the deeply involved subject, control over destiny becomes possible through fantasy. I am what I imagine I am in the self-edifice that emerges' (Martinez 1983, p357). In this fantasy the mind dreams 'luscious dreams' not usually generated by everyday routine in which 'a surreal fantasy configuration of mind, self and society is created which renders high self esteem to the self' (Martinez 1983, p357). Such high self esteem was manifest in the absolute conviction of Alesky that he would win - _had_ to win - at roulette: 'at times the wildest of ideas, the most impossible looking idea becomes so
entrenched in one's mind that in the end one assumes that it is feasible... Moreover, if the idea coincides with a strong, fervent desire, then perhaps one may accept it as something fated, inevitable, pre-destined, as something that simply must be, and must happen.' Such absolute certainty derives from an enhanced sense of the self, from 'some kind of exceptional strength of will, a self-intoxication by one's own fantasy...' (Dostoevsky 1992, p239). It is this unshakeable faith that removes the gambler from subjection to the iron laws of probability. Alesky considered his chances of winning 'not as a chance event which could be numbered among others (and which consequently might also not happen) but as something that was absolutely certain to happen' (Dostoevsky 1992, p240). In such a state of grace, the gambler can do no wrong; like Simmel's sleepwalking adventurer, he is possessed of a blind certainty. When the anticipated outcome occurs, the gambler feels completely vindicated. In his own private world, he is master of his fate for his ego has expanded to such an extent that anything is possible. Triumphant, he feels like a great hero. Both Dostoevsky and Richardson express the aftermath of such a win in remarkably similar terms. On winning 6000 florins, Dostoevsky wrote 'I already looked like a conqueror. I was afraid of absolutely nothing' (Dostoevsky 1992, p241). For Richardson, the walk to the cashier's booth after winning $500 was 'a conqueror's road in which I could stroll at leisure' (Richardson 1980, p56). Walking home with his winnings, Dostoevsky writes 'my mind was blank, I felt only some sort of frightful delight - success, victory, power' (Dostoevsky 1992, p244). Richardson left the casino in 'an orgy of exultation', a 'hallowed and overwhelmed frame of mind' (Richardson 1980, p60). When Balzac's protagonist, Raphael, in The Wild Ass's Skin wins a game of cards, the primary sensation is one of relief: great waves of tension are released and he feels as though he has been granted salvation: 'My muscles had been tensed in agony; now they relaxed in joy. I felt like a condemned man who meets a royal procession on the way to the scaffold' (Balzac 1977, p95). The enhancement of the gambler's ego is such that he feels a supreme sense of control; he is invincible, ebullient, superhuman. Although losing filled him with the 'blackest feelings', Richardson was virtually transcendent when he won: 'I felt as if a constellation of my image should appear in the morning sky' (Richardson 1980, p21). Steinmetz relates an incident in which a young gambler won so enormously as to transcend his self; 'he thought he
was no longer an ordinary mortal', and required his valets 'to do him extraordinary honours, flinging handfuls of gold to them' (Steinmetz 1870, p58).

Having left the confines of his normal personality behind, the gambler enters a state of transcendence in which his ego expands to fill the cosmos, or at least the casino. This is what Balzac describes as the 'delicious sensation which comes to all gamblers once their terrible excitement is over' (Balzac 1976, p431). With transcendence comes a sense of order and well-being; a realisation of the self. He is sure of himself and of his place in the scheme of things, and is fulfilled, 'centred' and serene. Richardson was aware of being 'very much in the present' in this state, telling himself in an inner dialogue: 'You are more in the world at this moment than you have ever been before' (Richardson 1980, p94). Martinez describes, somewhat incoherently, a moment of great intensity 'when the gambler experiences most of his identity where the real self is closest at hand' (Martinez 1983, p359). More lucid for having lived it, Richardson relates: 'I felt I had truly acquired a presence that drew the world to it, and the disjunctions of thought and surroundings, of my past and location, began to fade' (Richardson 1980, p235). In the sensation of immediacy, the world coalesces into an order in which the gambler is at the centre. He has 'being in the world', he becomes whole. Richardson was 'certain that I was a very substantial occupant of my particular time and space'. for 'weight, colour, fever, extension and all the other properties about which the imagination builds a persona, were self-evidently mine' (Richardson 1980, p95).

For Dostoevsky, such feelings of transcendence resulted in self-actualisation; after a bout of gambling, his creative energies were cathartically released and he concentrated fully on his work. His wife wrote that: 'after these exciting emotions, after satisfying his craving for risk, his passion for gambling, Fidor would return home calmed, and... then... he would sit down with renewed strength to his novel, and in a couple of weeks would make good his losses' (Mme Dostoevsky, in Koteliansky, ed 1926, p135).

The state of transcendence is thus one of supreme order for the gambler. He is calm, elevated, buoyant, his existence is confirmed.
Boredom

Just beyond the 'kind of pain' of play hovers another kind of pain - boredom. The thrill is short-lived, for a sensation of such intensity can only be sustained for a few, fleeting moments, like a flame which burns brightest before it is extinguished altogether. In the inevitable let-down that follows, reality appears dull and colourless; the gambler is deflated, for the converse of the vertigo experienced during gambling is the torpor felt when not at play; the existence of one reinforcing the sensation of the other. Thus Shohnev, in Gogol's *The Gamblers*, describes how, between games, a gambler feels 'just like a general when there is no war! It's simply a deadly interval' (Gogol 1926, p224).

The gambling arena appears as a bright spot shrouded by the drab greyness of everyday life. Stepping outside, the player finds the real world unutterably dull in comparison to the one he has just left. Pascal recognised the threat of boredom that lingered behind the excitement in games of chance, warning 'a man enjoying a happy home-life has only to spend... five or six pleasant days gambling, and he will be very sorry to go back to what he was doing before' (Pascal 1987, p51). That is why for Pascal, gambling was such a useful, but dangerous, diversion from boredom; useful because it agitates and so diverts us, dangerous because it exacerbates the tedium of the initial condition.

Such boredom exists as a perennial problem of modernity; a state that 'hovers over every secure life like a bird of prey' (Schopenhauer 1970, p53). For de Jong, the problem has its roots in the nineteenth century when the breakdown of a sense of metaphysical order gave birth to the distinctive feature of the modern age - the syndrome of intensity. The desire to experience intense sensation - of which gambling is typical - replaced the pursuit of meaningful activity and had as its converse the existence of apathy and boredom (de Jong 1975).

Benjamin was amongst the first writers to realise the true horror of this contemporary malaise, declaring after Strindberg: 'Hell is not something which lies ahead of us, - but this life, here' (Benjamin 1985, p50). By secularising it and changing its temporal location from the
remoteness of the afterlife to the immediacy of the present, Benjamin brought hell to earth and announced boredom as a fundamental condition of modernity.

Boredom is characterised by the agony of slowness, and its stasis contrasts with the speed of modernity. Since today, technology means that 'the present demand is for a quick forward movement, for a summary, for life at the speed of intensest thought' (Bellow 1975, p198), the embodiment of boredom by slowness is all the more acute.

As the chief poet of modernity, Baudelaire understood very well the existence of boredom as hell on earth:

'Nothing is slower than the limping days
when under the heavy weather of the years
Boredom, the fruit of glum indifference
gains the dimension of eternity'
(Baudelaire 1982, p75)

He recognised too, the desire to banish its aching emptiness in its polar opposite - excitement, and in particular, the excitement of gambling. His gamblers are essentially degraded characters, and desperate to feel anything rather than nothing. What he calls these 'ancient whores' with their 'lipless faces', and 'toothless jaws', are possessed of a 'stubborn passion', a 'deadly gaiety':

'Horrible that I should envy those
who rush so recklessly into the pit,
each in his frenzy ravenous to prefer
pain to death and hell to nothingness!'
(Baudelaire 1982, p101)
Pushkin's portrayal of *Eugene Onegin* also draws on the association between gambling and boredom. Eugene is a 'superfluous man' who has no place in the rush of modern life and despite all his travels and distractions finds himself supremely bored:

‘nothing caused his heart to stir
and nothing pierced his senses blur’
(Pushkin 1983, p52)

Like Baudelaire's gamblers, Eugene occasionally escapes boredom through play, his 'senses blur' is pierced by card games:

‘pursuits of a monstrous breed
begot by boredom out of greed’
(Pushkin 1982, p149)

The continued association between boredom and excitement is encapsulated in gambling. Just as gambling embodies de Jong's intensity cult, so it embodies the converse of intensity - boredom. Play itself embodies 'life at the speed of intensest thought' in the thrill, and 'the agony of slowness' in the aftermath. Seeking release from monotony, the gambler plunges into the intensity of the game, only to come face to face with the everyday world and all its attendant tedium, when he re-emerges from play.

**Repetition**

Kierkegaard wrote that 'all life is a repetition' and used the story of a young poet's doomed love affair to illustrate the point in both its particular, individual and universal, human forms. As a category of modern human existence, repetition gives form to life and is a means of self-actualisation: 'when one says that life is a repetition, actuality, which has been, now comes into existence'. Without it 'all life dissolves into an empty, meaningless noise' (Kierkegaard 1983, p149). As Ferguson puts it, the very possibility of existence 'depends on a continually
renewed "leap" from moment to moment' so that 'the "self" is thus a continuous and inexplicable "repetition" of itself' (Ferguson 1995 p103). In this way the act of repetition gives both form and content to life by continually re-creating the future from what has gone before. It thus gives the new 'absolute significance in relation to what has gone before, is qualitatively different from it' (Kierkegaard 1983, p307).

Just as Kierkegaard used a specific event to illustrate the various aspects of repetition, so the specific phenomenon of gambling can be regarded as an instance of social life in which both the particular and the universal nature of repetition can be discerned. In this section we will look at the nature of repetition insofar as it relates to the form of specific games of chance, while in the next chapter, its broader application as a feature of the human condition will be examined.

For Gadamer, repetition is the essence of play: 'The movement which is play has no goal which brings it to an end; rather it renews itself in constant repetition' (Gadamer 1975, p93). This formal structure is more important than the individual who is involved in it: 'The movement backwards and forwards is obviously so central for the definition of a game that it is not important who or what performs this movement... it is irrelevant whether or not there is a subject who plays' (Gadamer 1975, p93). This structure in fact takes over the individual, is greater than him, and makes him act in accordance with its strictures. Gadamer writes: 'The structure of play absorbs the player into itself, and thus takes from him the burden of the initiative, which constitutes the actual strain of existence. This is seen in the spontaneous tendency to repetition that emerges in the player and in the constant self-renewal of play' (Gadamer 1975, p94).

This 'constant self-renewal' is a necessary feature of play, for its fleeting nature requires constant repetition. The gambler plays in order to experience the breathless moment of expectation that constitutes the thrill, but because it is over almost as quickly as it occurs, it must be continually repeated to maintain the sensation of play as an experience with some element of duration. As an intrinsic feature of a game, then, repetition 'holds good not only of
play as a whole but also of its inner structure’, making Huizinga tells us ‘the elements of repetition and alternation... like the warp and woof of a fabric’ (Huizinga 1949, p10. See also Caillois 1962, p5). The phenomenological sites reverberate to the drum of this steady repetition. In the casino bets are made, cards shuffled, dealt and collected over and over again, dice are shaken and rolled *ad infinitum*, like Nietzsche’s ‘iron hands of necessity’ shaking ‘the dice box of chance for an infinite length of time’ (Nietzsche 1982, p81). Roulette wheels spin for eternity on unchanging, regular axes, while balls tumble out of the lottery drum week after week and month after month in a ritual which, like all those of the phenomenological sites, is unflinching in its exact repetition of what went before.

Baudrillard sees in this tendency to repeat a movement which annihilates the relation between cause and effect by an eternal return that proceeds directly from fate. Like the authors considered so far, he too regards their capacity to repeat as a definitive characteristic of games of chance: ‘Their true form is cyclical or recurrent. And as such they... put a definite stop to causality... by the potential return (the eternal return if one will) to an orderly conventional situation’ (Baudrillard 1990, p146). This eternal return, for Baudrillard, is an important factor in the generation of vertigo. Insofar as ‘the game’s recurrence proceeds directly from fate’, the player experiences ‘the vertigo of *seduction*, the vertigo that comes of being absorbed in a recurrent fate’ (Baudrillard 1990, p148). Walter Benjamin shares with Baudrillard the image of gambling as a phenomenon whose fundamental structure denies the relation of cause and effect. However, the implications of this denial are very different for Benjamin, for while Baudrillard sees a seductive vertigo as the mode of experiencing an a-causal universe, Benjamin's universe is made up of the austerity of hard work and the divorce of the gambler from the fruits of his production. Such a distinction can be seen as analogous to the different responses of the Protestant-bourgeois and the gambler to chance, which we saw at the end of Chapter Two. For Benjamin, repetition is the factor which connects gambling with the production line. The former shares with the latter: ‘the futility, the emptiness, the inability to complete something which is inherent in the activity of a wage slave in a factory. Gambling even contains the workman's gesture that is produced by the automatic operation, for there can be no game without the quick movement of the hand by which the stake is put down or a
card picked up'. The lines of slot machine players, adeptly operating their machines, is a panorama Benjamin could never have seen, and yet it is the visual apotheosis of his comparison. He goes on: 'The jolt in the movement of a machine is like the so-called coup in a game of chance. The manipulation of the worker at the machine has no connection with the preceding operation for the very reason that it is its exact repetition. Since each operation at the machine is just as screened off from the preceding operation as a coup in a game of chance is from the one that preceded it, the drudgery of the labourer is, in its own way, a counterpart to the drudgery of the gambler. The work of both is equally devoid of substance' (Benjamin 1977, p179). Although he effectively highlights its repetitive, insubstantial nature, Benjamin is mistaken in equating the drudgery of work with the excitement of play. For him, all gambling is like the punishment inflicted on Claudius: 'useless labour... an illusory hope of gratifying some desire' (Seneca 1986, p232). Benjamin's mistake stems from his implicit conflation of games of chance with those based on skill for, as we shall see, if anything it is the calculation and self-restraint involved in games of skill that represent such drudgery. Certainly, both unskilled labour and games of chance involve repetition, but here the similarity ends, for games of chance are animated by the affective excitation of the thrill, a sensation entirely lacking from the dull routine of factory labour. Thus, the category of repetition does not bring gambling into the realm of work, since such work as Benjamin outlines and the structure of gambling share only their repetitive forms. The subjective response to each is quite different, and, as Kierkegaard has pointed out, repetition contains the qualities of self-realisation and transcendence, making it amenable to a response of seductive vertigo rather than austere drudgery. This former option, as outlined by Kierkegaard and Baudrillard, will be considered further in Chapter Five.

THE CATEGORIES OF PLAY

In the magic circle, the articulation of the gambler's field of consciousness breaks down so that perception of the fundamental categories of space - according to Kant, the form of our 'outer experience', time - the form of our 'inner experience', cause and money are distorted. In the
arena of chance, as though under the sway of a magnetic field, the passage of time freezes into repetition, space contracts and the value that accrues to money is obliterated. The basic categories of the gambler's world thus become enchanted, and assume a bewildering new physiognomy, which constitutes a perceptual Gestalt and ultimately sustains the state of play-in-itself. The examination of the categories of time and money will show how this state is brought about; the analysis of the perception of time illustrating how its empty, repetitive nature is maintained by the gambler's urge to continue the pursuit of play as an end in itself, and the analysis of money showing that the gambler plays not for pecuniary gain but again, for the sensation of play-in-itself.

**Time**

In the magic circle, the gambler's perception of time is radically distorted in a manner which both affects and is affected by his experience of play.

It is a phenomenological axiom that the experience of time is a medium for experience in general. Thus, for Straus, changes in temporal experience 'determine other kinds of experience, thoughts, actions and affects through their dependency... on such modifications' (Straus 1966, p3). This insight was made possible by Bergson's distinction between two different 'types' of time - 'homogenous and independent Time' and 'true duration, lived by consciousness' (Bergson 1911, p275). The former absolute, Newtonian time is the time of the physicist. It is 'that homogenous and impersonal duration, the same for everything and every one, which flows onward, indifferent and void, external to all that endures. This imaginary, homogenous time is... an idol of language, a fiction...' (Bergson 1911, p274). The lived time, the durée, which we experience, is quite different however: 'In reality there is no one rhythm of duration; it is possible to imagine many different rhythms which, slower or faster, measure the degree of tension or relaxation of different kinds of consciousness' (Bergson 1911, p275). Thus Bergson opens up a relativistic notion of time, the experience of which is contingent on different states of consciousness.
The case-studies of phenomenological psychologists such as Minkowski and Straus illustrate the non-homogenous nature of personal, 'lived' time. It can pass quickly or slowly depending on the situation, actions and mood of the subject. A 'discordance' exists between 'the variable order of our historical becoming' and 'the uniform time of the clock' (Straus 1966, p293). Everyone has experienced such a discordance: 'On a boring day, times passes slowly, but, in retrospect the day appears to be short. On an eventful day, time passes quickly, but the distance between morning and night appears to be long' (Straus 1966, p293). The perception of time has an active and an affective component; how we experience it depends on what we 'fill' it with, what we are doing, and how we feel about it. In turn, experience itself 'receives its specific significance, its specific value, from its temporal position' (Straus 1966, p292). Experience in general, and the particular experience of time exist in a dynamic relation, each one containing and effecting the other. As an example of the effect of temporal position on experience, Straus cites imminent death; the night preceding a battle or a condemned man's last dawn. 'With such transitions from indefiniteness to finality, everything changes its physiognomy' (Straus 1966, p292). He does not elaborate, but we know from Raskolkinov's walk to give himself up in Crime and Punishment, that the subject, seeing the world for the last time, is fully aware of its every detail, avidly drinking in the minutiae of life and engrossed in every fleeting second (Dostoevsky 1951, p535-6). Minkowski relates another perception of time, this one relative to the experience of life in the trenches. Cut off from 'the continuity and usual routines of life' his brigade forgot the date and day of the week. Since such facts were of no relevance to them anyway, 'we substituted another 'calendar' for them, more appropriate to the situation: we simply counted the days that had passed since we came to the front and those which separated us from our return to the rest camp' (Minkowski 1970, p14). Minkowski also describes a case in which a patient identified his personal time, his durée, with homogenous time, and, regarding his watch as the literal embodiment of the latter, shot it with a revolver in order to 'kill' time! (Minkowski 1970, p15). This gesture, which we would regard as symbolic, highlights the distinction which we take for granted between the two 'types' of time separated by Bergson.
The 'normal' experience of time, Straus tells us, occurs in individuals who are in a state of *becoming*. However, when their temporal perception becomes so disoriented that 'the context and continuity of time crumbles' then a disjunction between the individual and his orientation to the world is opened up, and a 'pathology of becoming' exists (Straus 1966, p293).

Like any other individual, the gambler's time is 'true duration, lived by consciousness', and its nature is dependent on what he doing and his emotional state while he is doing it. In turn, his experience of play receives its specific value from its temporal position. The gambler's perception of his time is central to his experience of play, for 'time is the material into which the phantasmagoria of gambling has been woven' (Benjamin 1992, p137).

The nature of time in the magic circle of play is two-fold. On the one hand, it is a perception in the mind of the individual gambler, measured by his rate of play and dependent on factors such as the type of game he is playing, the size of the stake in relation to his total bankroll and the crowdedness of the table. As we have seen, a gambler with a limited bankroll, playing high stakes at a deserted roulette table will have a shorter experience of play than one with a large bankroll, playing low stakes at a busy blackjack table. Since the experience of time is coloured by the situation of the subject, he will perceive it moving quickly or slowly depending on the length of his period of involvement in play. Such a perception of time is unique for each gambler, distinguished ever so slightly from all his other games and those of all other gamblers' by the particular combination of many factors.

Over and above the specific nature of time in each game played can be discerned a general experience of time; a set of characteristics that come to light through the frequent playing of many games. This perception of time, common to all gamblers in all games, is of a constant repetition of a fleeting present.

In play, the gambler experiences the immediacy of the now; the concentrated time of a moment so super-charged with intensity that self consciousness is lost in a surge of vertigo (de Jong 1975, p142). This is the moment Benjamin talks about, in which 'gambling converts
time into a narcotic' (Benjamin 1992, p54), and in which the time of the gambler is closest to that of the adventurer, where the 'perspective on the future [is] wholly obliterated in the rapture of the moment' (Simmel 1971b, p190).

The concentrated instant is a present in which one lives and feels more fully, as if all life were crammed into one moment. Benjamin quotes a gambler for whom this sensation of intensity is paramount. The pleasures of play 'come too quickly to make me weary, and there are too many for me to get bored. I live a hundred lives in one' (Benjamin 1992, p138).

Straus has described how the context of experience effects the perception of time, so that when death is imminent, a state of heightened awareness and intensity prevails. The condemned man notices every blade of grass and every passer-by on his way to execution, just as Richardson was aware of every sound in the casino when playing. Flitting out from beneath the turmoil of play, he experienced a sudden clarity, an extraordinary sensory sensitivity. 'Now my senses were opened: I could hear every sound in the casino, discern every face that was watching the play at the table' (Richardson 1980, p126-7). As we saw earlier, Raphael in *The Wild Asses' Skin* experienced such a moment of intensity in which he felt as if he had just escaped certain death. Immediately after this sensation, he underwent a moment of clarity similar to the one described by Richardson. Despite the noise of the casino - 'the buzz of voices', 'the chink of coins' and 'the strains of the orchestra' - Raphael related that: 'thanks to a privilege accorded to the passions which gives them the power to annihilate space and time, I could distinctly hear what the players were saying' (Balzac 1977, p95) Dostoevsky too, described these moments of lucidity during intense play, and, as someone who had experienced such moments of finality during his mock execution as a political prisoner, was well placed to relate the two experiences to each other. His description of gambling is imbued with the sense of urgency and intensity he would have felt during what he thought were his final moments; a sensation he re-created at the gambling table.

The 'Now' the gambler lives in during play is the experience of the eternal present. It is not the present of physics - 'that inaccessible point', but the present of experience - a single stretch of
consciousness: 'The real present for us is an act, a state of a certain complexity which we grasp in a single act of consciousness... There is a mental faculty which one can call 'presentification' and which consists in making present a state of mind and a group of phenomena' (Janet, in Minkowski 1970, p34).

Each round, each draw, each race is utterly absorbing and self-sufficient. Each one is independent of any context and exists as an island in time. Immersed in the isolation of this island, the gambler remains in a state of 'presentification', a state of intensified reality. Richardson felt he 'existed in a sharp, exhilarating present that refreshed itself over and over again' (Richardson 1980, p86). He lives entirely in the present, in the instantaneous Now. The past is of no interest to him, for its outcome has no bearing on the future; it is past, and the future has not yet arrived. The field of his attention is defined by the unfolding of the event on which he has his stake. However long the rate of play, the resolution of the risk is over in an instant. It is the moment the lottery ball bounces out of the drum; the moment the dice fall, the moment the roulette ball slips into the pocket. In an instant, the uncertain becomes known, the future becomes the present. It is this instant that the gambler lives in; this is the Now of the eternal present. This breathtaking expectation is, for Minkowski, 'only a flash, an instantaneous suspension of life'. In it, he writes 'I live instantaey... I live only for the future, which as such, tends to become present' (Minkowski 1970, p89). Expectation resembles the phenomenon of sensory pain (Minkowski 1970, p88); it is one half of the gambler's 'pleasure-pain' equation; and is a sensation of temporality. It 'englobes the whole living being, suspends his activity and fixes him, anguished, in expectation. It contains a factor of brutal arrest and renders the individual breathless. One might say that the whole of becoming concentrated outside of the individual swoops down... attempting to annihilate him' (Minkowski 1970, p87). This state of perennial expectation, in which the future is compressed into the present, is an instance of what Straus would call a 'pathology of becoming'. Because it is always collapsing into the present, the experience of the future is rendered inaccessible, and because its content has no bearing on the present, the past is irrelevant to the experience of the round being played. In the frozen instant, in which the gambler lives only for the moment, time has lost its articulation.
Because, as we have seen, the experience of the future is always more or less immediate, and because, in games of chance the past has no bearing on the present, the experience of the Now in gambling is of an insubstantial, isolated and fleeting moment. Almost as soon as the uncertain future collapses into the present, then it passes on into the past. Here, the once-uncertain event loses its mysterious appeal as it becomes the object of knowledge. The gambler immediately loses interest and focuses on the new present that quickly takes its place. The instant which the gambler inhabits is thus a fleeting, transient one.

Baudelaire captures this fleeting moment, which is the essence of gambling, and also, for him, of modernity, in The Clock:

'Thirty six times in every hour
The second whispers: Remember! and Now replies
In its maddening mosquito hum: I am Past,
who passing lit and sucked your life and left!'

(Baudelaire 1982, p82).

The problem of the fleetingness of the present has occupied philosophers since Augustine, remaining virtually unchanged since Censorinus's expression of it in the seventeenth century: 'the past is without entrance, the future without exit, while the intermediary present is so short and incomprehensible that it seems to be nothing more than the conjunction of past and future, it is so unstable that it is never the same and whatever it runs through is cut away from the future and carried over to the past' (De die natali, in Elias 1992, p77).

Bergson partially resolved the problem with his notion of durée. This 'lived time' contains the past, as memory, within the future. His durée involves both 'past and present melting into one another and forming an organic whole' (Bergson 1910, p128). The past survives in the present because 'Perception is never a mere contact of the mind with the object present, it is impregnated with memory - images which complete it as they interpret it' (Bergson 1911.
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p170). For Bergson, the present is not an isolated instance, but part of an organic 'melting' of past, present and future: 'a perception of the immediate past and a determination of the immediate future' (Bergson 1911, p177). The role of memory is instrumental in this process, for it is the mechanism by which 'the past tends to reconquer, by actualising itself, the influence it had lost' (Bergson 1911, p169).

Unfortunately, Bergson's solution is completely inapplicable to the gambler. Whilst at play, the latter's experience of time lacks the historical element of durée, for in games of chance, Bergson's all-important past has no place. Each act is an island, independent of the one that went before; a perception of time made up of a succession of unrelated instants and absolutely opposed to the flowing organicism that is the lived time of the durée. In Bergson's formulation, the gambler is the man of impulse: 'To live only in the present, to respond to a stimulus by the immediate reaction which prolongs it, is the mark of the lower animals, the man who proceeds in this way is a man of impulse' (Bergson 1911, p198).

The past can never 'actualise' itself in gambling, for it requires the operation of memory to do so, and the abolition of time in gambling means the abolition of memory too. In a world of chance, the past has as little relevance for the future as the future does for the past. The only thing which can transcend the timelessness of this contingent world is the passage of time itself, whereupon the law of large numbers can take effect and some semblance of order be restored. This uncompromising law of probability is given lyrical expression by Baudelaire:

'Remember! Time, that tireless gambler, wins on every turn of the wheel. That is the law'
(Baudelaire 1982, p82)

The gambler, however, caught in the particular instant, is, by his simple corporeality, denied such a vantaged position. Forever bound to the outcome of a single round, of a single moment of play, he exists as an individual without memory; 'a creature entirely unmoved by experience' (Bergler 1970, p3). The nature of chance means that 'gambling invalidates the
standards of experience’ and that betting works as ‘a device for giving events the character of a shock, detaching them from the context of experience’ (Benjamin 1992, p136). As a result, the gambler’s ‘frame of mind is such that he cannot make much use of experience’ (Benjamin 1992, p136). Simmel recognises, in his lack of memory and invalidation of experience, the uniquely modern nature of the gambler. As a type of adventurer, he is ‘the extreme example of the ahistorical individual, of the man who lives in the present. On the one hand, he is not determined by any past ... nor on the other hand, does any future exist for him’ (Simmel 1971b, p196).

Experienced in a timeless void, the thrill of gambling is an essentially insubstantial sensation, and one which leaves no traces for the gambler to hold on to and recollect. Thus ‘the price the gambler pays for his paradisiac condition of eternal present is zero recall’ (de Jong 1975, p163). Nothing is produced, nothing changes, nothing really happens, - there is therefore nothing to anchor memory on to in play. It is because of this feature that Mr Astley observes of Alesky by the end of The Gambler: ‘“You've become dull... you've not only renounced every aim whatsoever in your life, you've even renounced your memories”’ (Dostoevsky 1992, p269). But then this is all part of the appeal, part of the enchantment of gambling. For Baudrillard, the game's fascination is this ‘crystalline passion that erases memory traces and forfeits meaning’ (Baudrillard 1990, p135).

The advertising campaign of the British Lottery’s scratch cards utilises the appeal of this feature in a particularly apposite slogan. ‘Forget it all for an instant[s]’ which encapsulates the instantaneity of the gambling experience in tones of hedonistic abandon.

The repetition of the ever-same in the mind of the gambler corresponds to the repetition of the ever-same in the economic realm of play. Nothing is ever produced in gambling, and in lieu of any such creative activity we have the endless circulation of money. Money changes hands, but nothing substantial is ever produced, and the endless cycle of this money in the economic sphere is perceived as an endless cycle of the ever same in the mind of the gambler. The constant repetition of the ever-same in the magic circle implies a cycle of no real change.
Nothing occurs to distinguish one night in the casino, one day at the bookmakers, from any other. Nothing out of the ordinary disturbs the ebb and flow of winning and losing. No landmarks appear to signify change in the monotonous sea of repetition. With no real change, it becomes impossible to measure the passage of time, and so play goes on, suspended in a timeless void. The narcotic effect of gambling Benjamin talks about is experienced as an escape from time.

This state of timelessness reaches its apogee in the removal of clocks from the casino. Clocks exist as markers of a shared, objective temporal consensus, imposing order on the flux of human relations and their surroundings. In this, they symbolise the victory of absolute Newtonian time over human time. However, the order of such scientific time is absent from the casino, banished since the nineteenth century as a distraction from the world outside. In a London club of this period, a couple of gamblers playing ecarte were asked to leave after closing time. 'Their only answer was to stop the clock, an irritating reminder of the fleeting hours' (Neville 1909, p19). With the removal of the clock went the last vestige of the outside world, and the last fragment of memory tying the gamblers to it. In the twentieth century, no such removals have to be made, for clocks are never present in casinos. Their absence signifies the breakdown of temporal articulation altogether. Unchartered by measurement and with nothing to differentiate it, the experience of time is of an eternal present, recurring at various speeds, in the mind of the gambler. In giving license to the experience of subjective temporalities, the casino exists as a physical embodiment of the dramatic action of the patient who shot his watch with a revolver in order to kill time.

In the magic circle, the gambler has closed off the outside world, shed his personality and forgotten his past, thus freezing himself in a present which, without reference to the past and without enjoying real change, is empty. He occupies this insubstantial moment of time as the supreme example of the ahistorical individual. His is the experience Benjamin was concerned with when he described how an 'unconscious expression of social forces' was distorting the experience of temporality, creating 'empty time, a discrete present cut adrift from past and
future'. Genuine experience was thus being eroded, replaced with an experience of a present, 'a Now which is incessantly emptying, always already past' (Spencer 1985, p61).

The insubstantial time of the gambler is an extreme instance of the empty time of modernity, and is perceived more as Schopenhauer's 'succession of transient, present moments' (Schopenhauer 1970, p53) than as the organic wholeness of Bergson's durée.

**Space**

In games of chance, space, the form of our 'outer experience' undergoes a destructuration coeval with that of time, the form of our 'inner experience'. Hence Ey writes: 'The psychopathologies of lived space and temporality are inseparable. Nothing is lived as a spatial dimension without being integrated into the process which gave rise to the temporality configurations in this space' (Ey 1978, p78). For us then, the cessation of duration has its counterpart in the contraction of space in the mind of the gambler. Just as time freezes and loses its articulation, so space shrinks and loses its articulation in a destructuration of consciousness in which the Now is conjoined with the Here.

Spatial perception is a fundamental mode of existence which, according to Merleau-Ponty resides at the core of the subject's being and provides 'a communication with the world more ancient than thought' (Merleau-Ponty 1981, p254). Like time, our perception of space is not homogeneous, for 'lived space is not the homogeneous space of the world of objects' (Ey 1978, p347), and, contrary to the Cartesians who spoke of a 'natural geometry', spatial perception must be grasped *from within*. There are a great many ways of experiencing this kind of space, which Merleau-Ponty conceives as existing in an essentially dynamic relation with the individual: 'To experience a structure is not to receive it into oneself passively: it is to live it, to take it up, assume it and discover its immanent significance' (Merleau-Ponty 1981, p258). Lived space is not geometrical space then, but can be conceived as a 'field of consciousness', or to use Husserl's term, an 'inner horizon': 'that zone of indeterminacy and ambiguity found in lived experience' (Ey 1978, p90).
The gambler's experience of space is conditioned by the parameters of the present. his inner horizon stretches no further than the circumference of the roulette wheel. In the intensity of a game, his perception of space contracts to encompass no more than the physical dimensions of the highly charged area of play. Such spatial disorientation is inherent in the sensation of intensity itself, the latter of which contains, for Bergson, 'the image of a present contraction and... of a compressed space' (Bergson 1910, p4). This intense concentration destroys the harmony of perspective to the extent that the centre of the visual field is magnified and the surrounding space of the periphery obliterated. This is the 'sudden, intense gravitation' of space in play, 'which implodes in a flash to become so dense that it escapes the traditional laws of physics - its entire course spiralling inwards towards the centre where the density is greatest' (Baudrillard 1990, p135). All that is perceived is that which contains the action, and it is because the gambler's gaze is so limited in this way that the stage upon which the spectacle of gambling is played out is so correspondingly small.

What we can call this 'gambling space' is not the typical experience of space, for the former is predicated on the unique conditions of play and the gambler's experience of time, and is thus subject to what can be described as a 'pathology of being'. The nature of such a pathology becomes clearer when we are made aware by Merleau-Ponty that the contours of the inner horizon are defined by the situation of the body in time, and its dynamic movement in space. He writes that 'if the world is atomised or dislocated, this is because one's own body has ceased to be a knowing body and has ceased to draw together all objects in its one grip; and this debasement of the body into an organism must itself be attributed to the collapse of time, which no longer rises towards a future but falls back on itself' (Merleau-Ponty 1981, p282-3).

Ey describes the same thing, in more metaphorical language, writing 'the representation which plays upon the scene... can borrow its space only from the kaleidoscope of a succession which has been cinematised in time' (Ey 1978, p104).

Just as time needs the unfolding of events to mark its passage, space requires points of orientation to delimit its parameters, for an empty space is also a formless space. However,
with everything external to the action obliterated, the gambler is oblivious to the passage of
time, to his surroundings and even to himself. Absorbed to such an extent in the game, he is
subject to a degree of indissociation with his surroundings, a phenomenon which is apparent
in one individual's description of the experience of the play-world in general: 'You are so
involved in what you are doing, you aren't thinking of yourself as separate from the immediate
activity... you don't see yourself as separate from what you are doing' (in Csikszentmihalyi
1975, p46). The gambler has no sense, as in the normal structure of consciousness, of the
presence of other bodies in space, or of the physical dimensions of his own corporeality. In
fact, he is stimulated by an antithetical sensation - the urge to 'cease being someone'
altogether (Ey 1978, p66). The disorientation endemic to play which we saw described as the
experience of 'plunging' is a manifestation of the loss of perspective and of self awareness,
which are characteristic of the destructured consciousness. Involved in play to the extent that
the distinction between the game and himself breaks down, the gambler loses his 'centre point',
his spatial co-ordinates and is swept along with the game, whirling inside the roulette wheel
and tumbling along with the dice. This was the experience of Alesky when, engrossed in the
game, he lost track of his normal perceptual co-ordinates and, rootless in space and time,
found himself in a 'whirlwind which caught me in its vortex... spinning, spinning, spinning...'
(Dostoevsky 1992, p225,6).

Since spatial perception is a primary mode of existence and guarantees the security of the
body in space, when it breaks down or becomes destructured, disorder reigns and the
sensation of plunging, so common to gambling, is experienced. Merleau-Ponty describes how
the instability of perception 'produces not only the intellectual experience of disorder, but the
vital experience of giddiness, and nausea, which is the awareness of our contingency and the
horror with which it fills us' (Merleau-Ponty 1981, p254). With no physical reference points,
the gambler's space is devoid of everything except action which is played in a timeless,
 perspective-less void, for perspective is created in relation to things and 'when the world of
clear and articulate objects is abolished, our perceptual being, cut off from its world, evolves a
spatiality without things' (Merleau-Ponty 1981, p283). The gambler's 'cinema' then, is a blank
screen which no-one is watching!
The primacy of movement in the field of spatial orientation has been emphasised by many phenomenologists, but is given perhaps its simplest expression by Ey when he states that space 'is in movement... is nothing but movement' (Ey 1978, p104). Physical motility is a means of orientating oneself and establishing a direct spatial relation with the world, and as such 'is on the same footing as perception' (Merleau-Ponty 1981, p111). However, one of the most striking features of gamblers in action is their indifference to their surroundings and to their own physical comfort; an indifference manifest in immobility. Most will not tolerate interruption and ignore, with single minded concentration, the distractions of the world around them. At one time, legend has it, Las Vegas almost became the scene of a disaster when players, oblivious to fire alarms, had to be forcibly removed from a burning downtown casino. Slots players are frequently so stationary for long periods that when they eventually move they suffer excruciating cramps and dizziness. Adding to this picture of immobility is one blackjack player whom I have seen have a drink spilled accidentally and violently on his leg. His eyes did not leave the table, nor did he move or in any way acknowledge the mishap, continuing to play on until the end of the round whereupon he got up and absently dried himself off.

We can see from all this that gamblers' space is not a dynamic one conditioned by movement, but is rather characterised by a breakdown of such movement (witness the gambler who was persistently 'frozen to the table'), by stasis. This is a part of the breakdown of the articulation of space in which space shrinks into a single point and loses its extensity.

Such a breakdown of lived space is, for Merleau-Porty, fundamental in the breakdown of sanity, and the character of the breakdown he describes is exactly that of the gambler's destructuration: 'What protects the sane person against delirium or hallucination is not his critical faculty, it is the structure of his space... Like myth, hallucination is brought about by the shrinking of lived space' (Merleau-Ponty 1981, p291). We have already seen that the gambler becomes temporarily insane in the intensity of play, an intensity of the order of what Ey calls the 'delirious event'. The author then goes on to give us a wonderfully eloquent description of the breakdown of the articulation of space in such an event, a breakdown of
which the gambler's shrinking of space is a part. The delirious event, he explains, 'unfolds as a flow of the fantastic which thwarts the logic of space... Indefinite spatial divisions refract and reflect an infinite multiplicity of mirrors, of ricochets and of echoes. In this telescoping of sizes and perspectives, all its symbolic metaphors, allegories and images advance, withdraw, merge together, fade, weave, hide, rise or fall in the unreality of their unprecedented modality' (Ey 1978, p68). The perception of space is related to other modes of experience, and in particular the pathological shrinkage of space effects the perception of causation. This is apparent in the gambling arena when, in the frenzy of the moment, the usual relations between cause and effect become disjointed in the gambler's mind. The particular form of this disjunction will be considered in the next section; for now it is sufficient to entertain it, after Merleau-Ponty, as a possible mode of perception. 'The shrinkage of lived space... leaves no room for chance. Like space, causality, before being a relation between objects, is based on my relation to things. The 'short circuits' of delirious causality, no less than the long causal chains of methodical thought, express ways of existing...' (Merleau-Ponty 1981, p286). The gambler does not move and does not avert his gaze from the immediate spectacle of the action in front of him, with the result that the surrounding space loses its extensity and its articulation. Insofar as he is a part of such space, the gambler too loses his extensity, becoming absorbed in that upon which he gazes, until he 'ceases being someone' and has no presence at all.

In this sense, the gambler's destructuration of space can be called a 'pathology of being'.

Money

Although Benjamin thought that 'it is obvious that the gambler is out to win' (Benjamin 1992, p136), gamblers do not in fact play to win.² Nor, as psychoanalytic theory would have it, do they play out of a masochistic desire to lose. The intentions of the gambler are not to be found between these two extremes, for he is altogether indifferent to the possibility of winning or

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² Cheating is an exception. This is the pursuit of pure profit, a form of work which attempts to impose a rational order on chance. Its calculative attitude removes it from the sphere of play, and so cheating can be disregarded as gambling proper. Caillois (1962) discounted it as a 'perversion' of the spirit of chance, as did Baudrillard (1990), for whom it was a 'refusal of the vertigo of seduction'.
losing *per se*. The aim of the gambler is simply to experience the thrill of play itself, and so his main goal is thus the indefinite continuation of play. As Spanier expresses it, 'win or lose, everyone feels the thrill' (Spanier 1992, p.13).

Because nothing tangible is ever produced in play, the desire to experience the thrill is manifest in an endless round of consumption, whose object is the continued experience of the instant of play. This unequivocal purpose, although straightforward in itself, lends complexity and ambiguity to the role of money in the magic circle of play. The perception of money in the mind of the gambler is distorted; its value and use radically altered as though viewed through a prism. In the course of play, money is devalued, its usual deification in the capitalist economy debased as it becomes subservient to the higher goal of the experience of the thrill in ever-repeated play.  

Despite its devaluation, the presence of money in play is important. Having overtaken the gold and land of the feudal nobility around the seventeenth century, the money of the capitalist bourgeoisie became the measure of value in the modern west. Correspondingly, it became the medium through which the gambler registered his involvement in a game. In modern gambling, money is both a means of communication and a tangible symbol of the player's presence. The ritual of risk, penalty and reward is couched in the language of money so that in games like poker it eloquently expresses 'every subtle nuance of meaning' (Alvarez 1991, p.174). In this sense, its presence is vital for the unfolding of a game, for it is the universal equivalent, the dynamo of play. Money is necessary for the generation of the affective tension - the thrill - in games of chance, for at stake in a game is not simply the financial value of the gambler's wager, but what it represents - his opinion, his judgement, his very ego. In this way 'the stake is a summons, the game a dual: chance is summoned to respond, obliged by the player's wager to declare itself either favourable or hostile' (Baudrillard 1990, p.143). With the

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3 A possible exception to this rule is the instance of the lottery, where players often buy tickets in the hope of winning a fortune. However, despite their overt intention, and given the astronomical odds against them and the uses to which their ticket money *could* be put, it could be argued that for these gamblers too, money is devalued. Supporting such a claim is the existence of lottery winners who continue to play after winning enormous jackpots! Thus in America we have the improbable existence of twice-over multi-million dollar winners, while in Britain the most common use of a £10 prize is reinvestment in more tickets.
placement of his bet, the gambler becomes vicariously involved in the game: the fate of his wager becomes a test of character and a player who manages to control himself and shrug off his losses in the face of adversity demonstrates strength of will or what Goffman calls 'face' (Goffman 1969a).

The gambler experiences his vicarious involvement in play via his wager - without it, there is no tension, no thrill. A casino owner explains: 'Gambling is a manufactured thrill - you intensify the anticipation of the event by putting money on it... once you insert your money the outcome becomes very important to you' (Jack Binion, in Alvarez 1991, p121). Without the involvement of money, the gambler would have no presence, no representative in play. Any game can be played with a measure other than money, but the thrill will not be experienced. Playing poker for matchsticks is perceived as child's play because without the existence of an authentic measure of value, the gambler cannot enter wholeheartedly into the game. As a measure of the degree to which he is prepared to back his opinion, the wager is a measure of the gambler's integrity, and so must be represented by something worthy of him - hence Richardson regarded his chips as the embodiment of himself, his 'tokens of specialness' (Richardson 1980, p121). To have himself embodied in something as worthless as matchsticks would be demeaning to the gambler, for it would be to render himself equally as worthless, an object of ridicule. Insofar as money exists as a measure of self esteem then, winning it validates the gambler's self worth. It is in this sense that Rosenthal writes 'the more money one has, the more substance to oneself, the more one is' (Rosenthal 1986, p112). Without a subjectively valuable stake, the game will be substantially less meaningful. A veteran poker player explains the necessity of money thus: 'If there's no risk in losing, there's no high in winning' (in Alvarez 1991, p123).

The role of money in gambling however, is ambiguous. On the one hand, it can be seen to be vital, both as the language of play and as a constituent of the thrill. On the other, it is not a sufficient reason for play itself and, paradoxically, once in a game, it becomes instantly devalued. Such a contradiction led Baudrillard to state that: 'The secret of gambling is that
money does not exist as value' (Baudrillard 1987, p86). What then does it exist as? To answer this, we must look at the effect of money on the gambler at play.

Dostoevsky was adamant that: 'The main thing is the play itself. I swear that greed for money has nothing to do with it' (Dostoevsky 1867, in Mayne 1914, p119), while Richardson gives a more considered account of his relation to money, writing that gambling had invested it with 'the quality of a medium necessary to the conditions of life. It was not that I wanted to do anything with it, any more than I wanted to do something with oxygen or sunlight; it was simply that cash had become the element I needed for my personal evolution' (Richardson 1980, p75).

It would appear then that gamblers do not play to win but play with instead of for money. In fact, when they continue to win in games that offer little real challenge, they become quickly bored. Jack Richardson went through such a period of playing poker solely for gain. The result? - 'I grew tired of winning every day... The game had become nothing but empty labour' (Richardson 1980, p201). Without the element of chance, the risk of losing all, the game lost its thrill and became mere monotonous work. This effect is evident in the behaviour of top poker players who, after winning large sums of money through concentrated effort and rational play at games of skill, go out and destroy it betting on things they have no control over' (Myers, in Alvarez 1991, p37).

Pascal was well aware of the ambiguity of money in games of chance, realising that it was not only the money or only the play itself that made gambling such an effective antidote against boredom. In the Pensées he imagines a hypothetical life in which boredom lurks at every corner: 'A given man lives a life free from boredom by gambling a small sum every day. Give him every morning the money he might win that day, but on condition that he does not gamble and you will make him unhappy. It might be argued that what he wants is the entertainment of

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4 Such actions contradict Benjamin's assertion that games of chance exist as the counterpart to the drudgery of the machine labourer. If anything, as we have already stated, it is the calculation and self-restraint involved in games of skill that represent such drudgery.
gaming and not the winnings. Make him play then for nothing, his interest will not be fired and he will become bored, so it is not just entertainment he wants either' (Pascal 1987, p70).

Money must be present in games of chance, but it cannot be important. In fact, contrary to its apprehension in the outside world as a desirable medium of value, in play, money is apprehended as a thing that is virtually worthless in its own right. As such, it is devalued in the mind of the gambler. In order to play without reserve, the gambler must be unconcerned with money for its own sake. As he plays, a gulf opens up in his mind between the value of money in the world outside and its value (or lack of) in play. As this gap widens, and the 'real' value of money recedes ever further from the game, the gambler plays with increasing insouciance. Chip Reese explains the mechanism of this devaluation: 'Money means nothing. If you really cared about it you wouldn't be able to sit down at a poker table and bluff of $50,000. If I thought about what that could buy me I wouldn't be a good player. Money is just the yardstick by which you measure your success. You treat chips like play money and don't think about it 'til it's over' (in Alvarez 1991, p42).

This devaluation is one of the 'tricks' gambling plays on value, and it is in this, according to Baudrillard, that its truth is to be found. Gambling is 'immoral' because 'it bears no relation to the reality of money... in the heat of the moment, the idea of winning or losing is relatively unimportant compared to the seductive sequence of events' (Baudrillard 1987, p86-7). This is the crucial relation for 'In gambling, money is seduced... [it is] no longer a sign or representation once transformed into a stake. And a stake is not something one invests...' but as we have seen, something which is presented as a challenge to chance (Baudrillard 1990, p139). Removed from the realm of material necessity, money becomes a part of the means of play, a plaything devoid of economic value. Its seduction is even embodied in the language of gambling where stakes, wins and losses are always euphemistically couched in the neutral adjectives of volume and weight as 'heavy', 'large' or 'small', thus avoiding the harsh imperatives of economic reality, of financial profit and loss.
Such devaluation is instrumental in creating the sense of unreality that is a feature of the general thrill of play, and the use of chips in the casino is the apotheosis of this devaluation. Money is changed into chips at the beginning of play; and chips back into money at the end. In the interim the chip is the unit of value. A piece of plastic, with no exchange value outside the casino, in the casino it is nevertheless the medium of play, the currency of chance. Money - the ultimate measure of value in the world outside - is dethroned in the gambling exchange. It is worthless, its magical effects on the everyday world are redundant here and its role thus inverted, it must be transformed into chips for play to commence. The act of changing money into chips changes the way the gambler thinks about the latter for the duration of play. As if by magic, the arena of play transforms the sober, prosaic and familiar character of money into something fun, fantastic and strange. Alvarez describes this magical transformation of money in the casino: 'The chip is like a conjurer's sleight of hand that turns... a necessity of life into a plaything, reality into illusion. Players who freeze up at the sight of a $50 bill, thinking it could buy them a week's food at the supermarket, will toss two green chips into the pot without even hesitating if the odds are right' (Alvarez 1991, p44-5). The value of the real world, measured in drab green and brown paper becomes a toy of the play world measured in shiny bright plastic. Looking at the chips on the table in front of him, Richardson 'felt for a moment that they were radiant things. Gold, green, orange, they encased, like pearls in amber, rusty undulations of colour beneath their surface, gay fusions of light and shadow that made one's thoughts reckless and playful' (Richardson 1980, p254). The manufacture of these magical discs from plastic is a particularly suitable combination, for plastic itself is 'the stuff of alchemy' (Barthes 1973, p97). In his essay on its metaphysical properties, Barthes wrote that plastic is a 'miraculous substance' which, like the chip as a temporary representative of value, has no real character of its own. It is a uniquely modern substance for it has no origins and is thus, according to Barthes a 'universal equivalent' just as the chip is the universal equivalent of value in the casino.

The less 'real' the chip seems, the less real the world it operates in appears to the gambler. As one player explains: 'The better adjusted to them you are, the further reality recedes' so that eventually playing with them 'is no longer a business transaction, it is magic' (in Alvarez 1991.
At the same time, the outside world seems immeasurably distant, for as the perception of the value of money recedes, so the world that money is efficacious in recedes from the gambler’s mind.

The gambler’s orientation to the chip as a measure of value is to a plaything, something that is not quite real. As a result he loses track of the value of the flow of coloured discs streaming through his hands. When money is turned into plastic it is no longer perceived as an efficacious part of the real world but an inconsequential counter in a play world, and so he lets go of his usual pecuniary reserve and abandons himself to the flow of play. He plays extravagantly, no longer regarding money as a practical tool of his everyday life, but as just another piece of the paraphernalia of play. Its use is directed, not by an awareness of needs which may arise in the future, but by the imperatives of the next round of play.

In the moment of staking, the economic value of money is far outweighed by the excitement it creates in play. Here the gambler is like Simmel’s spendthrift, for whom ‘the attraction of the instant overshadows the rational evaluation of either money or commodities’ (Simmel 1971a, p182). For Simmel the immoderation of the miser and the spendthrift stems from the same source, the same ‘daemonic formula’ whereby every pleasure attained increased the desire for more in a spiral that can never be satisfied. Such a formal identity suggests a ‘capricious interplay’ between the two tendencies, which explains why ‘miserliness and prodigality are often found in the same person, sometimes in different areas of interest and sometimes in connection with different moods’ (Simmel 1971a, p186). This is a tendency found in gambling, where the inversion of its value lends a dual nature to money in the mind of the player: a ‘capricious interplay’ of miserliness and prodigality. Gamblers frequently refuse to ‘waste’ money on necessities, instead hoarding every penny to save enough for enormous bets on games of chance. This orientation was recognised by Richardson, who wrote of himself: ‘I began taking a strange attitude toward money. Though I would carelessly toss it away in a game of poker, I began to keep meticulous records of where each bit of daily expense went’ (Richardson 1980, p21). Balzac also noticed this tendency, describing the ‘strange indifference to luxury’ in people who came to the casino to ‘perish in their quest of the fortune that can
buy luxury’ (Balzac 1977, p23). Such a blend of parsimony and extravagance is institutionalised in Las Vegas, where casinos absorb the hundreds of thousands of dollars saved for high stakes play by gamblers living in budget hotels and eating only the cheapest food.

In games of chance money loses its intrinsic value and becomes instead a measure of play. In the capitalist economy, the accumulation of money is pursued as an end in itself, but in the gambling economy, money is only desired insofar as it allows continued play. It is a means to an end - ever repeated play. ‘Money is no longer money to the professionals; it is like a wrench to a plumber - a tool of the trade’ (Alvarez 1991, p44). Caillois relates an incident in which a group of children robbed local stores for money to play slot machines. They stole $1000, but were only interested in dimes and nickels, which could be used in the machines. Bills were used merely for wrapping the coins and were later thrown away as refuse. (Caillois 1962, p183). The value of money was irrelevant to this group, and the coins that were retained were kept purely for their functional use.

The aim of most gamblers is not to win per se but to win enough to enable the indefinite continuation of play. Ostensibly, they play to win, but only because winning facilitates further play and not as an end in itself. The repetition of play is evidence of this goal for even when winning vast amounts, gamblers play on, swept along by the sensation of intensity. As we have seen, repetition is an intrinsic element of both the form and the content of play, and one that prevails whether the outcome of a round is loss or gain. A common sight in slot machine arcades and the casinos of Las Vegas is slot machine players emptying their winnings from a previous round back into the machine, thrusting handfuls of coins in as fast as they pour out, in the pursuit of further play. Even million dollar lottery winners play on, one remarking wistfully: ‘it'd be nice to get one more win’. Money is only a means of staying in the game. According to top poker player Doyle Brunson ‘In order to play high stakes poker you need to have a total disregard for money. It's just an instrument and the only time you notice it is when you run out’ (in Alvarez 1991, p43). A gambler explains: ‘The whole point of money is to
allow you to remain in the action. Once you have no money, it's axiomatic 'You're out of the action' (in Martinez 1983, p361).

As a measure of play, money is also a measure of time, for the two exist in an intimate relation. As seen earlier, low intensity play (ie long games with low stakes) makes the gambler's money, and therefore his playing time, last longer. Leaving aside the vicissitudes of luck, a player can gamble longer at a table which costs $1 a game than at one which demands $500. This is strikingly evident in slot machines, where minimums range from 25 cents to $100. Nothing interrupts the gaze of the enraptured player until, forced to look down, he sees there are no coins left in his basin, and play is over. Here, money measures time: the more he has, the longer the gambler plays. This relation is strikingly evident in the casinos of Las Vegas, who reward time spent at play with a sliding scale of free goods and services. At the Flamingo, breakfast is free for the gambler who has played a $5 slot machine for an hour or a 25 cent machine for eight hours. He is presented with a complimentary hotel room after four hours on the $8 machine or twenty hours on the 25 cent one. Table awards range from a complimentary room for placing $10 bets for four hours, to free room, food, beverage and health spa for the gambler and his guests for playing for four hours at a table which takes $500 bets. The casino draws attention to its policy, and inadvertently articulates the conflation of time and money in play: 'Excess playing time reduces the average bet requirement and higher average bets reduce the playing time requirement. Consideration for airfare reimbursements are based on a minimum of twelve hours playing time' (The Flamingo Casino Guide).

It can be seen then that money is necessary in gambling as the dynamo of play. As the currency of the magic circle, money itself assumes magical properties, becoming an insubstantial chimera that contributes to the sense of unreality and the affective tension experienced by the gambler during play. Once in play however, it is immediately devalued in the mind of the gambler, becoming merely a means of sustaining or prolonging play. Without this mental devaluation, the gambler's reckless plunge into the game is inhibited by the rational, parsimonious behaviour money enforces upon him in the world outside.
Like the aristocratic gambler of the seventeenth century, or the Roman with his pignus, the modern gambler does not play to win, but for the sheer sensation of play in itself.

The seventeenth century gambler played with an inner insouciance that displayed his contempt for money and projected an ostentatious image of honour. The nonchalance with which he handled large sums of money - especially when losing - demonstrated his contempt for the petty pecuniary values of the bourgeoisie, and his status as a true aristocrat. Despite the victory of the money relation in modern western society, represented in the figure of Dangeau, in modern gambling, money has no intrinsic value and is only required at all insofar as it is a means to a more important end.

Alvarez's description of the role of chips in play encapsulates their function, not as representations of pecuniary value, but as embodiments of the gambler's honour. Chips are 'the final, purest expression of the [high rollers] attitude to money'. They are 'like rapiers in a fencing match - instruments to attack, parry, counterthrust until one or the other of the duellists delivers the coup de grace' (Alvarez 1991, p74). His fencing analogy is particularly appropriate, for the aristocratic code of honour was bound up with gambling and duelling as means by which the noble could demonstrate his moral superiority to bourgeois notions of value and legality. It is in this light that Mme Dostoevsky's reminiscence of how her husband took twenty gold pieces 'which he wanted to lose in order to show that he did not go there with the object of winning, but in order to stake big amounts and to lose' (Mme Dostoevsky, in Koteliansky, ed 1926, p88) should be understood.

The devaluation of money makes the gambler play recklessly, unconcerned for his future needs and motivated only by his immediate desires. This orientation highlights one of the most striking characteristics of play; its essentially unproductive and non-utilitarian nature. No wealth or goods are ever created in its endless circulation of money and in this sense 'Play is an occasion of pure waste, waste of time, energy, skill and often money...' (Caillois 1962, p5). Despite the tone of residual Puritanism in many statements about its unproductive nature, it is undeniably true that with its flamboyant squandering of devalued money, gambling is such an
occasion of pure waste, or what Bataille calls ‘unproductive expenditures’, activities (like the potlach) which are pursued for their own sake and whose principle is waste. Contrary to bourgeois rationality which recognises ‘the right to acquire, to conserve and to consume rationally’ (Bataille 1985, p117) exists the notion of non-productive expenditure - the waste, destruction or conspicuous consumption of wealth in activities which have no end beyond themselves. ‘A certain excitation’ animates these activities which is ‘comparable to toxic states’ and ‘can be defined as the illogical and irresistible impulse to reject material or moral goods that it would have been possible to utilise rationally (in conformity with the balancing of accounts)’ (Bataille 1985, p128). Such ‘economically non-utilitarian expenditure’ describes the role of money in gambling, and the toxic states of excitation which accompany it are the economic corollary to the affective frenzy of the thrill of play. This expenditure exists as the converse of creation and production and represents the fundamental human need to ‘use up’ wealth (Bataille 1985, p121). Bataille cites sacrifice, potlach and gambling as examples of this broadly non-utilitarian, anti-bourgeois approach to wealth. The obligation to expend accompanies the possession of wealth, and, he says, the two have always existed harmoniously until the ‘fairly recent’ ascendancy of the bourgeoisie in economic life, when such obligations broke down as the principle of ‘restrained expenditure’ began to dominate. Now ‘everything that was generous, orgiastic and excessive’ has disappeared, overtaken by a bourgeoisie who ‘having obtained mediocre or minute fortunes, have managed to debase and subdivide ostentatious expenditure, of which nothing remains but vain efforts tied to tiresome rancour’ (Bataille 1985, p124).

By ‘restrained expenditure’ Bataille means the rationalist orientation developed by the bourgeoisie in the seventeenth century, coming to power out of the humiliating shadow of a more powerful, noble class. This orientation defined the nature of the bourgeoisie: ‘This rationalism meant nothing other than the strictly economic representation of the world’ with the result that their hatred of expenditure became ‘the raison d’être and the justification for the bourgeoisie’ (Bataille 1985, p124). Such economic rationality opposed those passions and excitations unleashed in the once-general unproductive expenditures. Their narrow rationality made the existence of the bourgeoisie ‘a sinister cancellation’ of all that had gone before, ‘the
shame of man'. Their character was reflected in 'a sordid face, a face so rapacious and lacking in nobility, so frighteningly small that all human life, upon seeing it, seem(ed) degraded' (Bataille 1985, p125).

Bataille's notion of expenditure is the economic counterpart to the affective thrill of the gambling frenzy. It represents the desire to 'plunge', realised in primitive and feudal social groups, and negated in the economic utilitarianism of bourgeois society. The ascendance of the bourgeoisie and of the money relation in the seventeenth century, is inverted in the magic circle of gambling, an atavistic pocket within modern society where a non-capitalist disregard for money prevails. While in the gambling arena, the player's orientation to wealth is contained in the notion of 'unproductive expenditure'. Without concern for the rational accumulation of wealth, he plays intensely in the moment. In not holding back in this way, he reveals himself, for without reserve and calculation he is more fully human than ever before. The seventeenth century noble demonstrated honour in his wholehearted pursuit of play, and in his disinterest in its base, pecuniary potential. In the same vein, the modern gambler demonstrates character and realises his self in his pursuit of play as an unproductive expenditure; an activity in itself.

Bataille's description of such expenditure is a description of the gambling economy. 'If I am no longer concerned about “what will be” but about “what is”, what reason do have I to keep anything in reserve? I can at once, in disorder, make an instantaneous consummation of all that I possess. This useless consummation is what suits me, once my concern for the morrow is removed. And if I thus consume immoderately, I reveal to my fellow beings what I am intimately: Consumption is the way in which separate beings communicate. Everything shows through, everything is open and everything is infinite between those who consume intensely' (Bataille 1988, p59).
Plunging into intensity is not the automatic response of all gamblers: we only have to remember Dangeau and his 'bourgeois' play at the court of Louis XIV to be aware that different styles of play exist, each with its own rationale and social affiliation.

The polarisation between 'bourgeois' and 'aristocratic' play which emerged in the seventeenth century produced a form of gambling based on a patrician disdain for money, as well as a 'bourgeois' mode of play whose aim was pecuniary gain. In the nineteenth century wave of commercial and democratic expansion, another style of play emerged whose dynamic was based neither on winning nor on the ostentatious display of wealth, but simply on participating in the game. As we have seen this latter style of play is present in the contemporary gambler's attitude to money. A distinctively 'aristocratic' mode is also present however, for, ironically, by playing simply for the pleasure of participation, that gambling style that emerged out of a wave of democratisation appears in action as an attitude akin to the patrician disdain for money once held by the seventeenth century aristocrat.

Dostoevsky is illustrative of the opposition between what can be termed bourgeois or utilitarian play for financial gain, and what appeared first as aristocratic and later, and with different motivations, as 'democratic' play for its own sake, for although he was involved in the latter camp, he remained unaware of the existence of such an opposition. At first he appears to demonstrate a remarkable lack of awareness of the laws of probability, and even of the rules of gambling themselves, for he is convinced that with prudence and calculation he can win and that it is only when he becomes excited that he gets 'carried away' and loses. This may be useful advice for those playing games of skill, but Dostoevsky was playing roulette where such tactics would have made absolutely no impression on the outcome of a game. This gambler's (mis) application of the betting ethos to games of chance which can only be played is interesting, less for what it tells us about his knowledge of probability than for what it reveals about his notion of the nature of play itself. In the catalogue of disaster that is the content of his published letters, Dostoevsky explains the infallibility of his system: 'I have
observed as I approached the gaming table that if one plays coolly, calmly and with calculation it is quite impossible to lose! I swear - it is an absolute impossibility! It is blind chance pitted against my calculation; hence I have an advantage over it... If you gamble in small doses every day, it is impossible not to win. That is true, absolutely true and experience has proved it to me twenty times over' (Dostoevsky 1867, in Frank and Goldstein 1987, p345,6). Dostoevsyk is convinced of the efficacy of his system: to win one must simply remain calm and rational, his problem is that he quickly loses his reason when he plays, instead of holding back, plunges into the game - and into disaster. Having won a small amount by staking one or two gulden at a time and sensibly allowing his profits to accumulate, he reflects 'that was the moment to have stopped and left... so as to calm one's excited nerves'. But he cannot restrain himself: 'I lost my composure, became tense, started to take chances, became exasperated, laid my bets haphazardly because my system had broken down - and lost (because anyone who plays without a system, relying on sheer chance is a madman)' (Dostoevsky 1867, in Frank and Goldstein 1987, p246).

Dostoevsky aspired to the success of Dangeau - 'the scientific man, the average man, the economic man' - and thought he knew how he could achieve it. By maintaining the bourgeois imperative of reason in the face of disorder and passion, he believed everything would fall into place and the world and, more importantly, the game, would become as ordered as he was. The advice of Robert Houdin epitomises this bourgeois approach to play: 'A player should approach the gaming table perfectly calm and cool - just as a merchant or tradesman in treaty about any affair' (in Steinmetz 1879, p255).

The problem for Dostoevsky was that he could never play in this way, for he despised such 'bourgeois mentality', and was overcome every time by his aristocratic disregard for winning and desire for sensation. Lamenting his losses to Anna Suslova he wrote: 'What could I possibly have done to deserve this? Is it my disorderly ways? I agree I have let quite a disorderly life, but what is all this bourgeois morality!' (Dostoevsky 1865, in Frank and Goldstein 1987, p219). He sees this distinction in the casino, and although he cites it as a distinction between games, it is in fact a difference between two types of play; one is
gentlemanly and the other plebeian, mercenary, the game for any sort of riff-raff. In the latter, he abhors 'their respect for the occupation, the seriousness, even reverence with which they cluster[ed] round the tables' (Dostoevsky 1992, p137). The true gentleman, he believed, plays 'simply for the sake of the game itself, only for amusement... not out of a plebeian desire to win' (Dostoevsky 1992, p138). Another Russian - also a gambler, Turgenev - was sensitive to the distinction in playing styles; and, like Dostoevsky, reduced it to the class of the participants. In his description of a game of cards at Baden Baden, the magnanimity and aristocratic status of the players is evident in their every move, and contrasts sharply with those of their bourgeois opponents: 'Human language has no words to express the dignity with which they dealt, won tricks, led clubs, led diamonds... they were statesmen indeed! Leaving to the small fry, aux bourgeois, the jokes and proverbial sayings usual at cards, the generals uttered only the strictly necessary words' (Turgenev 1970, p129).

Dostoevsky could never stick to a 'system' which embodied the values of that which he hated so much. When Alesky cannot decide which is more repulsive Russian 'lack of discipline or the German method of saving money by honest work' (Dostoevsky 1972, p34), we know which side he is on, for nothing is more repugnant to him than a nation of shopkeepers. Consequently, he is almost proud of the heroic scale of his loss of control for it vindicates his 'aristocratic' nature. This orientation means that Dostoevský will always plunge, always lose control and experience the thrill of gambling instead of remaining aloof, holding back and coolly calculating his gains. He chooses (as does any gambler who experiences the thrill) the sensation of play-in-itself over pecuniary gain, abandon over restraint, the aristocratic over the bourgeois ethic.

In this aristocratic plunging, we see a disregard for money, an affirmation of chance and a realisation of the self: values which are encapsulated in Nietzsche's allegorical 'dice throw'. In a philosophy which rejects as slavish the values of bourgeois morality and which upholds the masterful ones of aristocratic excess, the dice are thrown onto the earth and fall into the sky; 'for the earth is a table of the gods... trembling with... the dice-throws of the gods' (Nietzsche 1969, p245). These two tables are the two moments of the player who, when playing.
temporarily abandons life in order to fix his gaze upon it from above (Deleuze 1983, p25).

The good player must be as anti-rational as Nietzsche himself, repudiating reason and logic and actively courting chance itself, for 'to play from formula or mathematical speculations is the opposite of gambling as a calculus to chance' (Bataille 1992, p86). Rules and systems must be abolished and chance affirmed in one, single, heroic throw. Inspired by Nietzsche's master-slave morality, Bataille declares 'Any activity whose object is simply what can be wholly measured is powerful but slavish' (Bataille 1992, p111). Thus the gambler whose object is precise pecuniary gain is subject to the slave mentality, while he who plunges into chance with abandon is the master. Since 'chance needs to be gambled away, risked in its entirety...', then life is 'a leap, an impulse whose strength is chance. At this stage... if I lack chance, I collapse' (Bataille 1992, p90 and p113,4). To know how to affirm chance is to know how to play and will necessarily produce the winning number. Players lose because they do not affirm strongly enough, counting on a great number of sensible, cautious throws to win. 'Timid, ashamed, awkward like a tiger whose leap has failed: this is how I have often seen you slink aside... A throw you made had failed. But what of that, you dice throwers! You have not learned to play and mock as a man ought to play and mock' (Nietzsche 1969, p303).

Gambling in twentieth century Las Vegas, Richardson displays an almost intuitive understanding of his role as a modern dice thrower. Whilst ostensibly aware of probabilities and odds, in a more profound sense he feels that real winning, as opposed to the various rational calculations which ultimately only ever amount to loss minimisation, can only be achieved by a single, brave gamble. In keeping hold of himself, he writes 'I thought I was displaying admirable self-control but I was really afraid to face the risk of a large gamble, to submit again to the full force of chance and feel my entire being at stake in the encounter' (Richardson 1980, p153). He cannot find the strength to affirm chance strongly enough 'I kept demanding to win, but still could not find the courage to make winning possible' (Richardson 1980, p168). Thus he loses, over a period of days, his entire bankroll.

In a sense, then Nietzsche is right: given finite funds in commercial games of chance, one all-or-nothing bet at least contains the possibility of a big win. Otherwise, the longer a gambler
plays with small stakes, the longer the house edge has to eat into his bankroll, gradually taking its cut and reducing him to penury. One large bet at least has the chance of winning a sum untouched by this steady, relentless erosion.

Those who have 'collapsed' in such an unheroic bourgeois manner as Richardson are showered with contempt by Zarathustra: ‘For I would rather have noise and thunder and storm curses than this cautious uncertain feline response; and among men too, I hate most all soft walkers and half-and-halfers and uncertain, hesitating passing clouds’ (Nietzsche 1969, p185). Such hesitant calculation is typical of the slave mentality the 'bourgeois moralists' whom Dostoevsky despised so much. They are fearful, worried and nervous. Like the tiger whose leap has failed, ‘the bourgeois tries to shrink back and is still constantly afraid of something’ (Dostoevsky 1955, p93). As a class as a whole 'servility seeps increasingly into the very nature of the bourgeois and is increasingly taken for virtue' (Dostoevsky 1955, p88). These are ‘self appointed moralists who first and foremost advise the necessity of self control... Unable to trust instinct or spontaneity, they are always on the defensive... how unbearable even to themselves they are - how impoverished, how isolated from the soul's utter and lovely randomness... For indeed we must lose ourselves for a time so as to learn about existences that we AREN'T...’ (Nietzsche, in Bataille 1992, p145).

Opposing this collapse is an heroic, aristocratic rising to chance; a movement which those with the 'greatest souls', 'the largest souls' partake of. Dostoevsky, with his passions and generosities, is a soul of this kind. In a letter to Maikov he writes ‘I have a vile and overly passionate nature. Everywhere and in everything I drive myself to the ultimate limit, all my life I have been overstepping the line’ (Dostoevsky 1867, in Frank and Goldstein 1987, p 252), and in The Gambler: ‘I am not mean; I think I am even extravagant’ (Dostoevsky 1992, p267). These souls are the antithesis of the calculation that plots outcomes, they plunge bravely, affirming chance and redeeming themselves in the process. These are the criteria by which top poker player Jack Strauss judges other players. Not mathematical ability but 'heart' - 'the courage to bet all their money' - when the odds are in their favour are the qualities that make a great player (Alvarez 1991, p31).
Dostoevsky speaks like Zarathustra when Raskolnikov says 'He who dares such is right and he who dares more than anyone else is more right than anyone' (Dostoevsky 1951, p431). It is this daring that redeems Alesky, for Dostoevsky writes of him that 'deep down he feels that he is despicable although the need to take risks enables him in his own eyes' (Dostoevsky 1863, in Frank and Goldstein 1987, p186). He is ennobled by his aristocratic plunging, his (successful) affirmation of chance. When at his lowest ebb, Alesky risks his last 60 gulden and, staking again and again wins 1700 gulden in less than five minutes. His heroic affirmation of chance is rewarded. 'I had achieved this at the risk of more than my life. I had dared to take the risk and now I was once again among the ranks of men!' (Dostoevsky 1992, p267, my italics).

Such ennoblement is only realised in the aristocratic mode of play: by plunging into the intensity of play, into 'disequilibrium, intoxication, dementia', and redeeming the self in the radical affirmation of chance (Bataille 1992, p85). Plunging is a mark of greatness: 'To risk is to touch life's limit, go as far as you can, live on the edge of gaping nothingness!' (Bataille 1992, p86), and 'the essence of the dramatic hero is a welling up, a rising to [this] chance' (Bataille 1992, p110). This willingness to take risks is expressed by Gogol's Utyeshitelny, who declares: 'the chief zest lies in the risk. Where there is no risk, anyone is brave, if the result is certain, any paltry scribbler is bold ... ' (Gogol 1926, p236). The careful, rational play of the bourgeois cannot enoble the player in such a fashion. Rather, it makes him an object of contempt - 'bleary eyed, bent over, ever holding back, lacklustre, accepting infinities of boredom, lacking pride - that is what you do with possibility... you love possibility in books but I see in your eyes a hatred for chance' (Bataille 1992, p95-6). By not risking all, this gambler will never lose all, but not will he ever gain anything of value. His greatest reward will be a few pennies, carefully won in an eternity of sensible, cautious play.

Despite the victory of the bourgeois ethos, represented in the seventeenth century by the winnings of Dangeau, subsequent generations of gamblers like Dostoevsky and Richardson have not played to win, but rather for the continued experience of plunging, for the thrill of
play-in-itself. The orientation of the modern gambler can be seen to be an essentially chance-affirming one, inspired not by the bourgeois goal of financial gain, but rather by ever-renewed play. Thus the abandonment of reason embodied in Dostoevsky’s plunging parodied the bourgeois style of play; a style eternally constrained by the discipline of self-consciousness over oblivion and restraint over excess.

The attitude embodied in the modern gambler is a combination of elements which have appeared in earlier historical manifestations. On the one hand, we see traces of the extravagance and disregard for pecuniary gain typical of the seventeenth aristocrat. On the other, the desire for ever-continued play reveals a different expression of the same disregard for money, this one originating in the nineteenth century institutionalisation of gambling as a commercial leisure pursuit.

PLAY-IN-ITSELF

The rationale of the repetition of play, and the fundamental aim of the gambler, is the ever-continued pursuit of play. He attempts to sustain the fleeting sensation of the thrill by repeating his actions, striving for a state that cannot be - the continual sensation of the thrill. For Gadamer, the essence of all play is that it is divorced from the realm of utilitarian ends and pursued entirely for its own sake. Thus ‘the being of all play is always realisation, sheer fulfilment, energia which has its telos within itself’ (Gadamer 1975, p101). Win or lose, play is all; it is an end in itself and so the goal of the gambler is simply to remain in play. The outcome of a game is not so important as the possibility of its being brought to a conclusion, for this means that that particular round is over. So, having won or lost, the gambler is frustrated by having brought the game to an end and to recreate the sensation of play must repeat his actions again and again. The repetition of such activity so engrosses the gambler that his very being becomes absorbed in it; as Steinmetz puts it: ‘the gamester lives only for the sensation of gaming... All the rays of [his] existence terminate in play; it is on this centre that his very existence depends’ (Steinmetz 1909, p49).
In trying to hold on to the elusive sensation of play, the gambler is caught in the eternal repetition of the ever-same. Time freezes, space contracts, and the player hangs, it could be said, in a state of suspended animation. He possesses no past, and is unable to consider the future beyond the next round which is collapsing into the present. Caught in a 'pathology of becoming', he presents an image of an a-historical individual suspended in a timeless, unchanging void. Forever pursuing the fleeting sensation of play - a sensation which vanishes almost as soon as it is reached - the gambler is caught in a state akin to Schopenhauer's state of becoming and never being. For Schopenhauer, it is not the end but the sensation of striving for it that satisfies us. Any pleasure we experience ceases as soon as we reach our goal and so pleasure can only be found in striving. Hence the more distant the goal the better, for its very distance gives us the illusion that its eventual attainment would satisfy us. He writes that 'we take no pleasure in existence except when we are striving after something in which case distance and difficulties make our goal look as if it would satisfy us (an illusion which fades when we reach it)' (Schopenhauer 1970, p54).

Thus by the time a game has been won or lost, it is over, the thrill is dissipated and the gambler must begin again to recreate it. In this he repeats a cycle of continual desire without satisfaction, in a state of 'continual becoming without being' (Schopenhauer 1970, p51). The gambler experiences a moment of 'being' in the state of euphoric transcendence which is a component of the thrill, but the sensation is unstable and fleeting, for he is chasing a sensation which fades as soon as he reaches it. Such a tantalising predicament was understood by Balzac when he described one gambler as a 'modern tantalus, one of those men who live just out of reach of the enjoyments of their times... a kind of reasoning madman who consoles himself by nursing a chimera...' (Balzac 1977, p25). This state of perpetual becoming demonstrates Schopenhauer's 'vanity of existence', and it also describes features of the gambler's existence. It is revealed in 'the fleeting present as the sole form which actually exists; the contingency and relativity of all things; continually becoming without being; continual desire without satisfaction; the continual frustration of striving of which life consists' (Schopenhauer 1970, p51).
In the temporal nature of desire, which 'opens up the future'. Minkowski saw a similar tendency which, in its forceful simplicity, gives form to life itself. In the thrill, the gambler feels this metaphysical desire with the utmost intensity: 'if desire opens up the future... at the same time it surpasses the particular sphere of the latter in always going beyond. I cannot desire what I have at hand, I cannot desire what I already have and as long as I live I desire more than I have - this is the true meaning of life' (Minkowski 1970, p96).
CHAPTER FIVE: THE MAGICAL-RELIGIOUS WORLDVIEW

THE REJECTION OF PROBABILITY

THE MAGICAL WORLDVIEW: PARTICIPATION

Dreams and Omens

Animism and the Omnipotence of Thought

The Belief in Luck:

Mana
Luck

Mana and the Total Representation of Magic

THE RELIGIOUS WORLDVIEW: TRANSCENDENCE

The Dualism of Luck

The Apprehension of Power.

The Religious Experience of Power:

Questioning
Answering (Losing, Winning)
Repetition
We have already seen the destructuration of the experience of time, space, money and, within the category of repetition, of causation, in the mind of the gambler. Now we shall turn to look in more detail at the nature of the breakdown of the relation between cause and effect, and at its relation to the experience of play as a whole. Strange modes of thought overtake the gambler in the magic circle of play, for here his mental life is uniquely adapted to the peculiar nature of his environment. Thoughts banished from the outside world as superstitious and irrational are here given credence and provide a framework which organises and explains the vagaries of play and the gambler's perceptual and sensational disorientation. The magic circle of play affects not only the way the gambler experiences his surroundings, the way he feels and the way he acts; it affects also the way he thinks. The most obvious feature of the gambler's cognitive outlook is his rejection of that tool of gambling practice - probability theory. Despite the insights it provides, gamblers continue to play when the odds are against them, behaving as though they could influence games of pure chance and stubbornly expecting to win in the midst of catastrophic defeat.

The rejection of probability has caused consternation amongst psychologists trying to uncover some rationale for gamblers' behaviour. The latter's determined disregard for modern mathematics flies in the face of conventional rationality, with the result that gamblers have been accused of suffering from a variety of 'irrational beliefs' (Gadboury and Ladoceur 1989), including an 'illusion of control' (Langer 1975) and a 'biased evaluation of outcomes' (Gilovich 1983). From a functionalist perspective, Devereaux has suggested that the gambler's superstition exists 'to fill the gaps in positive knowledge... and hence overcome the inhibiting anxieties induced by a feeling of ignorance and helplessness' (Devereaux 1949). These
‘pathology’ models, which treat gambling belief as an individual disorder of cognition designed to ‘cope’ with an untenable situation, do not address the fact that, firstly most gamblers are aware of the conditions of play and are not ridden with ‘gaps of knowledge’, and, secondly, that the overriding impression one gets from gamblers at play is one of certainty and confidence. The determination of most players actually stems from their firm conviction of the possibility of winning - certainly not from feelings of ignorance and helplessness.

Far from being simply and prosaically ‘irrational’, the mental life of the gambler appears as a concatenation of beliefs encompassing magical notions of the efficacy of dreams and omens, ‘primitive’ ideas described by anthropologists as the notions of animism and mana, and a range of broadly religious beliefs about the existence of a single omnipotent Deity.

Two broad currents of belief can be discerned running through this labyrinth: one magical, the other religious. These are not strictly separate, but often merge into one another, their spheres of efficacy overlapping in an inchoate flux which, typical of magical belief in general, forms ‘a living mass, formless and inorganic’ whose ‘vital parts have neither... fixed position nor... fixed function’ (Mauss 1972, p88). Contrary to the evolutionist assumptions of those who consider magic a ‘primitive’ form of religion (e.g. Taylor, Veblen), it can be safely asserted that in general, and particularly in gambling, the two constitute components of a single belief. To this effect Levi-Strauss has described religion as the anthropomorphism of nature and magic of the physiomorphism of man. Thus ‘there is no religion without magic any more than there is magic without at least a trace of religion’ (Levi-Strauss 1989, p221).

The magical component of this worldview is concerned with efficacy in general and the efficacy of the individual gambler in particular. Such efficacy refers to the impersonal power of the subject which exists in an indissoluble relation with its surroundings. The power of the individual participates in the world, and is most obvious in the notions of mana and the omnipotence of thoughts. The religious aspect of the gambler’s worldview is concerned with the operation of power outwith the subject, who exists as an entity separate from its surroundings. In this orientation, power is regarded as a thing imbued with moral properties.
not merely as impersonal force. The operation of such force is laden with metaphysical
significance, and in this respect, the religious dimension of gambling belief is concerned with
being. These two currents converge in their habitation of the realm of the sacred, a realm
which, according to Otto, is grounded in a *sui generis* existential state which is impenetrable
to rational analysis. The apprehension of the sacred or the holy cannot be strictly defined, and
certainly not rationalised: attempts to do so are only indicative of our arid 'intellectualising
tendency', the subject of Luther's rage against the 'whore Reason' (Otto 1925, p1-3). In
contrast to the inadequate intellectual understanding of the sacred stands its *emotional*
apprehension. Here, nothing is without meaning and even the accidental and the fortuitous are
possessed of significance. In such a worldview, real meaning lies elsewhere: 'Things and
events do not now simply signify themselves but have become an indication of something
“other” something “transcendent”' (Cassirer 1953, p252).

It is in this postulation of some transcendent realm that the gambler finds a worldview so
emotionally compelling as to allow the full scale rejection of the procrustean force of
probability theory. For the gambler, as for his historical predecessors engaged in religious
divinatory drama, there is no such thing as chance. The random event, the unexpected and the
unusual is taken as a *sign*, and both groups search for its meaning and ultimate significance
outwith the immediately given. The gamblers' interest in the gambling event, as we saw in
Chapter One, is in the unit event, the *next* round, the specific individual outcome of a game
and its relation to his wager. However, probability theory speaks only of the general, the many
and the long term and is 'forever mute' as to what is most crucial - what will happen next.
Because it tells the gambler nothing about what he most wants to know, probability theory -
the rational scientific victor in the struggle to tame chance - has a hollow triumph in the field
of its greatest application, and the individual to whom it should be indispensable, disregards it
entirely. As Baudrillard says, in tones of condescending disbelief, 'only our culture has
invented the possibility of a statistical response... [a] *dead* response' to chance. This
hypostatisation of chance, is, he says, quite simply 'demented': 'When one thinks about it, the
assumption of a contingent universe..., the idea that the world of things is subjected to a
molecular and *objective disorder*... is insane' (Baudrillard 1990, p145-6).
Probability creates order out of randomness, but not for the gambler. Since it cannot predict any single outcome, its secular insight is ultimately just as emotionally meaningless as the chaotic operation of pure chance. Consequently, the gambler rejects its explanatory force, regarding the gambling event, not scientifically as an unexceptional occurrence within a broad dispersal of indifferent occurrences, but as an exceptional individual event imbued with meaning in its own right. The former outlook is representative of the scientific rational consciousness which has banished the mystery of chance with its iron laws of probability. The latter is representative of the magical-religious consciousness for which the piecemeal, singular explanations of probability theory are insufficient.

In his monumental work, Religion in Essence and Manifestation, van der Leeuw describes the latter orientation which, as well as being religious in the broadest sense, also encompasses the 'magical attitude' by virtue of its definitive characteristic of participation. The principle of participation opposes the rational, scientific approach to the world. Here things do not encounter each other 'solidly in space', but have some share in one another and may mingle with, and appear in place of, each other. Accordingly, man does not conduct himself 'objectively towards the world' but 'he participates in it, just as it does in him' (van der Leeuw 1967, p543). This world is a world of indissociation, in which elements are not separated. Rather 'a single, undivided totality is represented - a totality in which there has been no 'dissociation' of separate factors, particularly of the factors of objective perception and subjective feelings' (Cassirer 1953, p46). The consciousness involved in this worldview is not concerned with dissection or abstraction, 'but deals with the whole, grasps it concretely, connects together its essentials and experiences participation' (van der Leeuw 1938, p544). Each part of the world participates in every other part, and, most importantly 'There is in fact no other in any actual sense, just as there is no such thing as chance' (van der Leeuw 1967, p381).

The lack of differentiation of the constituent elements of the world has far reaching implications for notions of causality, for since a 'true indifference' between the whole and its
parts exists, neither can be singled out and granted causal priority. In examining these notions, we shall see how their foundation in the consciousness of the gambler implies his rejection of the rational causation behind probability theory, and his alternative understanding of the world through *magical* notions of causation.

Empirical thought (of which probability theory is a branch), is directed towards establishing an 'unequivocal relation between specific causes and specific effects' and in so doing 'dissects an event into constant elements and seeks to understand it through the complex, mingling, interpretation and constant conjunct of these elements' (Cassirer 1953, p47). Such an orientation, of which probability theory, with its procrustean 'taming' of the diversity of chance events, is a prime example, subsumes the diversity of the world to the homogenising force of universal explanation.

As we saw, however, its solution to the problem of chance leaves out that which we most want to know, for in its creation of general laws, empirical thought obliterates the individual and the specific. It is this latter that concerns the contents of magical-religious thought. With its 'true indifference' of the relation of the whole to the part, this orientation is concerned only with the *individual*, which at the same time, is both whole *and* part, general *and* specific.

Whereas scientific thought takes an 'objective' attitude towards its object, the magical consciousness knows no such opposition and therefore addresses every entity as a singular occurrence: 'Instead of being bound by the schema of a rule, a necessary law, each object that engages and fills the mythical consciousness pertains, as it were, only to itself, it is incomparable and unique. It lives in an individual atmosphere and can only be appreciated in its uniqueness, its immediate here and now' (Cassirer 1953, p74). This is precisely the orientation of the gambler's consciousness as he awaits the outcome of a game. The unfolding of any game is 'incomparable and unique', and, as we have seen, can only be apprehended in the immediate here and now. The understanding that follows from this consciousness is similarly directed towards the individual. In contrast to this we find the generality of scientific thought which, in the example Cassirer gives of the death of a man, is emotionally unsatisfying.
because of its failure to address the specific instance, so leaving unexplained 'precisely what holds the interest and attention of myth, namely the here and now of the particular case, the death of precisely this man, at this particular time' (Cassirer 1953, p49). It is this type of knowledge that concerns the gambler - the outcome of this game at this time - and so he looks away from the explanations offered by scientific thought, inclining instead towards that which grasps the specific as well as the general, the magical-religious consciousness. Because, in this worldview, individual events become understandable only when they are reduced to 'something no less individual, to a personal act of the will which... requires and is susceptible of no further explanation' (Cassirer 1953, p49) chance once again becomes meaningful as a sign of a higher will. In the 'insanity' of a secular, disenchanted universe, games of chance operate to deny the very existence of chance, replacing it with an 'inter-connected, propitious... and non-contingent universe - a charmed universe..., a universe of seduction' (Baudrillard 1990, p144). Thus, the gambler disregards probability theory, within whose formulae modern chance became a meaningful constituent of the world. Removing it from the equation that gave it ontological status, and so removing it from the mundane here and now, he personalises the outcome of a game and elevates chance to transcendental significance. Instead of retaining an 'objective' distance from the aleatory, and using the insights of probability as a tool upon it, the gambler engages in a direct, personal relationship with what is no longer 'an abstract expression of statistical coefficient, but a sacred sign of the favour of the gods' (Caillois 1962, p126). Far from existing as mere secular randomness, chance is here indicative of a strict order which, according to Cassirer, replaces the 'purely causal principle' with the 'principle of purpose' - the notion that nothing happens by accident, but rather by conscious purpose. Such purposiveness is the 'lawfulness of the accidental' (Cassirer 1953, p49), and is a feature noted by Simmel when he describes the method whereby gambling superstition draws chance into a teleological system 'thus removing it from its inaccessible isolation and searching in it for a lawful order, no matter how fantastic the laws of such an order may be' (Simmel 1971b, p191). Within the 'principle of purpose' chance regains its ancient function as a cypher; an earthly sign of some transcendent, conscious purpose. By wholeheartedly plunging into a world where rational, scientific explanation cannot follow, the gambler plunges into another order in the search for a different level of knowledge. A more
profound understanding. He leaves behind a system of thought which has 'conquered particularity without affording us the totality' (Straus 1966, p323). Insofar as he rejects the particularism of probability theory, the gambler rejects the rational, secular framework upon which it is based in favour of a broader one more pertinent to his situation: 'Homo-religiosus thus betakes himself to the road to omnipotence, to complete understanding, to ultimate meaning' (van der Leeuw 1967, p680). In this, he continues the quest of human thought which bears 'witness to man's incessant struggle to secure a grasp on the whole, to rise above particularity and tentativeness' (Straus 1966, p321).

THE MAGICAL WORLDVIEW: PARTICIPATION

The specifically magical aspect of the gambler's worldview is concerned with the efficacy of individual entities and events and their indissoluble relations with each other. In this way, Levi-Strauss characterises magic as the belief 'that man can intervene in natural determinism to complete or modify its course' (Levi-Strauss 1989, p221). Thus, the 'core of the magical worldview' is 'saturated with this atmosphere of efficacy, which is indeed nothing more than a translation and transposition of the world of subjective emotions and drives into a sensuous, objective existence' (Cassirer 1953, p157). Because everything in the magical worldview submits to the omnipotence of thought and desire, 'the I exerts almost unlimited sway over reality: it takes all reality back into itself' (Cassirer 1953, p157).

This worldview is not peculiar to the gambler: it characterises the consciousness of the primitive (Levy-Bruhl), the child (Piaget), the compulsive (Freud), the poet (van der Leeuw), and even ourselves, when we dream (Straus). The participation that it is based on is an attitude 'deeply rooted' in human nature, and is indicative of an active attitude which is 'oriented towards the world in contrast to merely observing it' (van der Leeuw 1967, p544). The idea that 'I can influence the world therefore just as the world can influence me' is an attitude which, in its magical-archaic form, exists as 'an underlying current of waking-day thinking' within every modern' (van der Leeuw 1967, p545). It is also a current in
unconscious thought, and in this we *all* have experience of the world of participation. For as Straus points out, the world of magic is the world of the dream. 'Like the dream, the worldview of magic and magical techniques are situated in that intermediate realm of correspondences between hidden and manifest characteristics - the realm of their analogous confusions and exchanges. In the magical world, the typical indeterminacy of hidden characteristics becomes ubiquity, while the lack of spatial boundaries results in a transcendence of all distances' (Straus 1966, p323). Van der Leeuw is careful to point out that the magical attitude is no mere survival - it is not 'a structure of the spiritual life merely of the past, of which only meagre vestiges now persist for us; nor again is it a degeneration nor childish malady; it is neither primitive science nor elementary technique'. Rather, it is a 'primal attitude... as vital among ourselves as it ever was and as evidence, van der Leeuw cites its recurrence under certain conditions among children and neurotics (van der Leeuw 1967, p543). Of course, the *gambler* in his magic circle of chance presents us with perhaps the ideal instance of such a predominance of the magical attitude.

The notion that 'everything has something in common with everything else and everything is connected with everything else' (Mauss 1972, p73) makes possible the belief in the efficacy of dreams, omens and lucky times, places and things. In a kind of 'magical pantheism' the world is animated by unseen powers which have dispositions that are sometimes favourable, sometimes unfavourable, to the individual. Because everything participates in the whole, signs of the orientation of these powers may appear, and may be influenced by lucky entities imbued with similar power.

It is to interplay of these magical powers that we now turn. They will be treated separately, although it should be borne in mind, after Mauss, that the 'vital parts' of magical belief 'have neither a fixed position nor a fixed function' but 'merge confusedly together' (Mauss 1972, p88).

It must also be remembered that, despite the apparent homogeneity of these beliefs, every gambler has his own special relation with chance; a private contract in which he tries to
fathom the secrets hidden in the random play of aleatory events. Thus, the gambling sites reverberate with a thousand private rituals and secret incantations muttered under the breath of every gambler: the magical undercurrent that activates play.

In the following sections, we examine firstly, the efficacy of dreams, omens and mysterious forces, followed by the belief in animism and the omnipotence of thought. The belief in the various forms of luck is examined next, before turning to their relation with the dynamic of gambling itself - the religious postulation of a deity whom the gambler faces during play.

**Dreams and Omens**

In his 'magical pantheism', the gambler inhabits a world in which, for him, as for the primitive 'Every accident is a revelation, for there is nothing fortuitous and the slightest departure from ordinary occurrence shows that occult forces are at work' (Levy-Bruhl 1966, p123). Along with the paranoiac, the player sees meaning everywhere; nothing is as it seems 'everything... is full of significance, everything can be interpreted' (Freud 1939, p318).

The gambler lives surrounded by a miasma of forces which, due to his transposition of subjective emotions into objective, sensuous existence, assume qualities favourable or unfavourable to the success of his wager. These forces are rendered tangible in their manifestations as dreams and omens. As they can appear at any time, the player must study the minutiae of the gambling situation, ever alert to clues as to the outcome of the game. Since the dream is 'a revelation coming from an unseen world' and omens are 'revelations which are produced spontaneously' (Levy-Bruhl, 1966, p109,122) these two forms of communication from the immaterial realm are of particular interest to the gambler and he ponders their appearance with fanatical assiduity.
Omens

The gambler plays in a state of hyper-charged sensitivity, his senses straining to apprehend the interplay of the mysterious powers around him. Such a state of heightened awareness is an intrinsic part of the gambling experience and distinguishes the magical perception of the gambler from the mundane awareness of other individuals. Richardson boasts: 'although a rational mind must insist that the grimace of a stranger or a moment of intestinal agony has no causal link to the way the cards will fall, it is nevertheless true that a gambler's instinct comprehends relations that are perhaps too subtle for ordinary modes of observation' (Richardson 1980, p127). Such mystical sensitivity is manifest in the gambler's perception of currents and powers that animate the world with a magical causality, and his belief in his own intuitive awareness of the order of things, the 'connections' between events.

A sudden win on the slots just as he was about to stop gambling altogether convinced Richardson he was the recipient of an ex machina intercession: 'Naturally, it was not the amount, but the way of obtaining it, that made me feel certain I'd been given the sign I'd waited for during the weeks of slow, grinding descent' (Richardson 1980, p170). Omens can also indicate the course a game will take, and to this effect the gambler makes associations between some symbolic event or action, which is indissolubly linked as a sign to the outcome of play. Like the diviner he views the satisfaction of certain ritualistic criteria as prophetic for the future course of events - 'if x happens, then I'll win, if y, I won't'.

The literature on gambling is littered with examples of this tendency. One bettor declares 'If I see a car from New York I'll bet the Giants tomorrow. If I don't, that's a bad omen. Don't bet 'em. Sick' (in Leiseur 1984, p32). Cohen describes a player whose decision-making ritual bears a striking resemblance to the Azande's consultation of the termite oracle. The gambler would place a spider in a matchbox, one side of which was painted red, the other black. He then backed whichever colour the spider crawled out of. In a similar procedure, the Azande would dig a stick into a termite mound, and depending on whether the termites ate it or not, interpret their answer accordingly (Evans-Pritchard 1991, p165). It is not only the primitive
with whom the gambler shares a belief in the efficacy of these prophetic rituals, for Piaget has shown that they are common to the child, who also inhabits a magical world of participation.

Like the gambler, the child frequently associates the outcome of an activity with the fulfilment of some later condition. Piaget quotes one individual who, as a child, to succeed in some activity such as winning a game, would test himself by engaging in a certain pattern of behaviour. If successful in this, he felt assured of success in the other, more important area. ‘I would hold my breath and if I could count up to ten... I felt sure of gaining what I wanted’ (Piaget 1977, p160). In these examples, the operation of counting is both sign and cause, just as it is for the gambler who set ‘walking races’ with unwitting individuals on the way to the betting shop. Like the child who failed to reach his number and therefore was denied the great secret, the gambler censures his bet if he loses his race. ‘If the rival reached a preset point... before the gambler then the selected horse would lose and the bet was not placed’ (Brown 1993, p11).

For the gambler, the fulfilment or non-fulfilment of his rite is both sign and cause. As we have seen, in the magical consciousness ‘cause’ and ‘effect’ are not distinguished and so these rites or omens, function as both cause and effect at the same time. The prophetic ritual and the event it is concerned with exist in an indissoluble relation so that what happens in one will happen in the other. Using our terminology of cause and effect, Levy-Bruhl explains how omens function as both in the primitive consciousness. A desired situation possesses the qualities of an omen in the world of the primitive, and, as good omens ‘not only announce the desired success; they are a necessary condition of it. They guarantee it and they effect it’ (Levy-Bruhl 1936, p47), so that important ventures will not be undertaken until the requisite signs have appeared. The good omens upon which the gambler bases his decisions are important then, not simply because they reveal what will happen, but rather because what happens would not take place without them.

The gambler, the child and the primitive share the belief in the efficacy of omens, derived from the magical worldview of participation, and, with our continued enactment of what Huizinga
calls the 'futile auguries' of childhood, so do we. Piaget lists instances of 'spontaneous magical ideas' in adults (Piaget 1977, p184-9), while Rousseau is prey to one he describes somewhat shamefacedly as both childish and insane, in his Confessions. One day, throwing stones at trees, he decided to draw 'a sort of omen' from it, to allay his anxiety about the course of his life. If he hit the tree, he decided, all would go well with the rest of his life; if not, it would not (Rousseau 1967, p231). In a similar fashion, the judge in Tolstoy's Resurrection carried out a magical ritual which he deemed prophetic. As he walked into the courtroom, he told himself that he would be free of stomach pains that day if he reached his seat with a certain number of steps (in Huizinga 1949, p57).

To succeed in the situation we have set up for ourselves is the fulfilment of a ritual which is indissolubly linked with the successful realisation of a more important one - for the gambler, the outcome of a game. The success 'becomes the sign that the thing desired will happen'. Then, because the gambler lives in a world of magical participation, 'the symbolical action takes on powers of its own, insofar as these signs are all regarded as one with the things they signify' (Piaget 1977, p180).

Because this symbolic action or omen is a part of the unseen world, and because it causes as well as announces an event, the gambler's reliance on omens to guide his actions is a reliance on the efficacy of the powers of the transcendental realm. His faith that the outcome signified by the omen will occur is as absolute as if he had been told so by God himself.

Dreams

Tatyana shared with full conviction
the simple faith of olden days
in dreams and cards and their prediction
(Pushkin 1983, p134).
The belief in the significance of dreams and the practice of oneiromancy is ubiquitous, occurring throughout history in almost every part of the world. In the modern world, Nietzsche was aware of the 'archaic fragments of primitive life which persist in dreams' (in Storch 1924, vii), while Freud directed us towards the relation of dreams to the subconscious mind. Since the content of a dream was believed to derive from outwith the self, its nature was apodictically more problematic and more significant than the experiences of waking life. Coming from the immaterial realm of forces and spirits, the dream was regarded as a direct message from the gods and so played an important part in inductive divination. When the body slept, the will relaxed and allowed the soul to enter communication with the transcendent realm. In sleep, the dreamer was freed from the restrictions of consciousness and could pass easily into the sacred. In a world in which involuntary gestures and 'accidental' occurrences were regarded as being imbued with deeper significance, the dream was thus the vehicle of supernatural meaning \textit{par excellence}.

Because of their intimate association with the spirit world, and the belief in their corresponding possession of privileged and predictive information, the interpretation of dreams is regarded as providing information of the same order as that of signs and omens, and has existed throughout history alongside the activity of gambling.

As we saw in Chapter Two, the Huron Indians would fast before playing games of chance in order to induce a dream in which the winner would be revealed. The individual who dreamt he had won was certain of doing so, for his dream was regarded as a prophetic revelation from the realm in which such matters were decided. Thus a dream of winning 'is equal to possession of a charm which will assure success' (Levy-Bruhl 1966, p 123).

In Pushkin's \textit{Queen of Spades}, Hermann is similarly convinced of success when the dead Countess Fedotovna appears to him in a dream-like visitation and gives him the secret of the winning cards. In the waking world of life, nothing would compel the Countess to reveal the secret; it is only in the twilight world of dreams and the dead that she finally does so.
A lottery player believed himself subject to a similarly prophetic dream in which his dead daughter told him, 'I'd like to bring you a little happiness, why not play the numbers?'. Believing her party to privileged information, he did so, and was convinced of the efficacy of the dream when he won on her ticket (The International Lottery Magazine No 2, p30).

As messages from the beyond, the contents of dreams are pored over by gamblers, in an attempt to prise the secrets of winning from their bewildering images. Few dreams are as obliging to the gambler as Hermann's in which the Countess simply appeared and recited the winning combination, and so the technique of dream interpretation has been developed almost into an art form. Significance can still be found in a dream which does not specifically refer to gambling, by translating its individual images into numbers which are then deemed efficacious in number games like lotteries. The British lottery magazine hints suggestively at the possibility: 'Perhaps you HAVE seen those winning numbers before - in your sleep!'. 'Dream books' realise the 'meaning' of dreams, by 'interpreting' them and converting their visual representations into numbers, which are believed propitious for the dreamer in games of chance. The form of these books has remained virtually unchanged since the very earliest list of dreams and their interpretations which were used around the second century A.D. for divinatory purposes (Cryer 1994, p220-1). The seventeenth century explosion of numeracy saw the assignation of specific numbers to dream images, and the establishment of the definitive form of dream books for the next three centuries.

Despite Freud's insight that dreams do in fact have a meaning that can be interpreted - albeit one that is to be found within the dreamer - in the twentieth century the group most ready to attribute meaning to their dreams still search for their significance outwith the self. Dream books for lottery and policy players are published throughout the western world, and a myriad of methods for 'calculating' the numbers of dreams exist. In a worldview in which every 'meaning' is reducible to number, these books offer, for the personal, fleeting images of dreams, knowledge expressed in the quantifiable universals of number, a process which one dream book boasts, takes the 'raw' dream and realises its significance in a 'sophisticated computer algorithm' (The California Lottery Dream Book 1994, p3).
Animism and the Omnipotence of Thought

Animism

Because they inhabit a world of magical participation, animated by ‘a homogeneity of essence in all persons and things’ (Levy-Bruhl 1936, p92), gamblers are aware that they are surrounded by unseen forces, possessed of dispositions or natures. These ‘dispositions’ reside in all the material paraphernalia of play - cards, dice, tickets, roulette wheels and slot machines - which the gambler subsequently regards as living and even as possessing human characteristics. In the former, we find an instance of animism, the later, anthropomorphism: both are a result of the gambler granting ‘to the lifeless and soulless object Will and Form’ which ‘together constitute personality’ (van der Leeuw 1967, p89).

Freud considered this animism the first human Weltanschauung, and cites Hume’s identification of it as a fundamental trait in human thought. In his Natural History of Religion Hume writes ‘There is a universal tendency among all mankind to conceive all beings like themselves, and to transfer to every object those qualities with which they are familiarly acquainted and of which they are intimately conscious’ (in Freud 1985, p134).

Having animated the objects around him, the gambler proceeds to attempt to influence them by talking to dice; cajoling cards and reprimanding a whole range of gambling equipment as though it were alive and responsive to his will.

Henslin studied a group of craps players who believed that ‘It is possible to control the dice by verbal and non-verbal gestures, by words and actions’ (Henslin 1967, p319). Such control is possible through the influence the gambler can exert on the wills of the dice. To get the point (number) he wants, a player must persuade the dice to supply it. One advises Henslin, ‘Talk to ’em! Talk to ’em when ya shoot!’ Sometimes the dice will comply but sometimes they become
'contrary' and refuse to yield the desired point (Heslin 1967, p319). It is through his knowledge of their capricious natures and moods that the player can attempt to control them. As such they are as much the subject of anthropomorphic as animistic belief, indicated in a statement from Pierce: 'The die has a certain 'would-be'... a property quite analogous to any habit that a man might have' (in Mellor 1971, p66). Slot machines are notoriously subject to the most extreme forms of animism and anthropomorphism, as is vividly apparent in this comment from Hansant: 'What is more, they assume human traits, like the greedy mouth, the pot belly and the sphincter from which spills a diarrhoea of coins' (in Walker 1992, p68). Such personification is apparent in the attribution of character to machines. Some are regarded as generous - 'hot', some parsimonious - 'cold', in their payouts. As he stares at it, the alert gambler gradually 'gets to know' its nature: manifestations of the iron laws of probability become idiosyncrasies of an entity which reveals its personality in the outcome of every spin. Players frequently talk to their machines, and attribute motivations to them. 'The machine's laughing at me now', 'it knows what I'm thinking' (Griffiths 1990a). After a long sequence, one gambler was convinced the devil was in the machine and had spelled out SATAN on the screen! (Walker 1992, p74). After a time, gamblers can develop a 'rapport' with their machine, believing it surrounded by an aura and zealously guarding it from other players (Griffiths 1990a).

Animism (and anthropomorphism) is a general tendency shared by the gambler with primitives and children, and sometimes even exercised by ourselves, for 'even the reflective man, returning for the moment to his instinctive state, loses his temper with the table into which he bumps' (Ribot, in Piaget 1977, p265).

The animism of the child is such that 'anything may be endowed with both purpose and conscious activity (Piaget 1977, p242). Like the gambler, the child's tendency to regard objects as living and endowed with will gives purpose to those wills so that objects such as the 'contrary' dice of Henslin's craps players act 'to suit their pleasure and nothing is impossible to them' (Piaget 1977, p259).
Freud attributes animism to projection. "To project internal perceptions outside is a primitive mechanism, which our sensory perceptions for example undergo in the same way and which consequently plays a principal part in our representation of the external world" (in Piaget 1977, p265-6) although Piaget disagrees and offers another explanation of animism based on the idea of participation. Put simply, he argues that projection can only take place when boundaries between the self and the world exist. In the world of participation however, there are no such boundaries for as we stated earlier, man does not conduct himself 'objectively towards the world; but participates in it, just as it does in him'. In individuals who participate in this orientation the objective and the subjective worlds are not distinguished. Piaget terms this phenomenon indissociation, which takes a primary and a secondary form. Primary indissociation, which we shall turn to later, occurs when names and the thing named are not dissociated in the child's mind. Secondary indissociation refers to animism and 'consists in attributing to things characteristics similar to those which the mind attributes to itself' (Piaget 1977, p268). Projection cannot then be said to occur in a consciousness which regards the world 'as a continuous whole that is both psychical and physical at the same time' (Piaget 1977, p267). The development of self-consciousness means the child eventually abandons animism. As he becomes aware of himself the subjective and objective worlds become separated, and 'he refuses to allow a personality to things' (Piaget 1977, p269).

While playing, the consciousness of the gambler resembles this state of secondary indissociation. In the various stages of the thrill he loses track of his surroundings, of time and even of himself. In the 'dissociated states' that we saw in Chapter Four, the gambler forgets who he is and sheds his personality until, during the phase we called 'transcendence', his ego diffuses throughout the material world around him. When his personality merges with the game in this way 'there is no longer an outside reality, his consciousness blends into his surroundings, and magical participation is possible. The boundary between the objective and subjective worlds dissolves, leaving 'an absence of differentiation between the world and the self', from which arises 'the feelings of participation and the magical mentality that results' (Piaget 1977, p367).
The Omnipotence of Thought

The corollary of the attribution of wills to inanimate objects is the possibility of influencing those objects by words or magical thoughts, for as Freud put it: 'the technique of the animistic mode of thinking, is the principle of the omnipotence of thoughts' (Freud 1985, p 143).

Such influence is made possible by the magical power of the gambler's words, thoughts and wishes. Like the primitive when he acts on his environment, the gambler, when he plays acts as a magician imbued with power, so that 'his words, his gestures, his glances, even his thoughts are forces in themselves' (Mauss 1972, p. 33).

As well as participating in the world, he attempts to mould it to his desires: 'through the magical omnipotence of the will the I seeks to seize upon all things and bend them to its purpose' (Cassirer 1953, p158). Because there is nothing that can withstand the omnipotence of thought and desire, 'the I exerts almost unlimited sway over reality: it takes all reality back into itself' (Cassirer 1953, p157).

The magical power of the I is expressed in language, hence the efficacy of the utterances of Henslin's craps players. Their most effective verbalisation is to command the dice to deliver the point by uttering the desired number - "Five it" or "Six it" or "Eight it Dice!" (Henslin 1967, p320). The power of language is manifested in articulated sound, where each word 'governs a specific realm of being, over which it may be said to exert unlimited and sovereign power' (Cassirer 1953, p40). Consonant with this tendency, Richardson observed a roulette player who leant over the wheel and 'would scream orders at the small white ball as it bounded along the numbered grooves; shouting last minute warnings and reminders' (Richardson 1980, p246). Such specific directions rely on the omnipotence of words within what Mauss calls 'sympathetic magical rites' in which 'it is only a matter of naming the actions or things in order to bring about the sympathetic reaction' (Mauss 1972, p54). The gambler exerts his will over the objects of play; thus he will bet less money after the fall of the dice.
without knowing the result, than beforehand (Strickland et al. 1966) for once it has fallen, the opportunity to influence it no longer exists. Because the omnipotence of words exerts an influence on animistic objects, the possibility of propitiating and cajoling the properties resident in those objects exists. So, if a player is having difficulty making his point, it is sometimes necessary to persuade the dice to yield it by making them a promise. Henslin writes that 'The shooter is promising a future bet to the dice and is in a sense buying their favour... It is as if the dice do not need to respond and therefore if they respond it is gratia, and this carries with it a reciprocal obligation in the subsequent betting' (Henslin 1967, p322).

When Richardson's game was not going well, he tried to prevent total bankruptcy through magical words: 'I created incantations in my mind, semi-audible dronings that I hoped would protect me from further misfortune' (Richardson 1980, p130). His dronings are 'the enigmatic mutterings of spoken rites' whose aim Mauss describes as 'to coerce actions and locutions' (Mauss 1972, p58).

Levy-Bruhl was struck by the attribution of power to words and thoughts among the Huron Indians; a habit which led him to consider the role of the wish in such power. He quotes Preuss's description of the natives: 'They attribute quite extraordinary power to words and thoughts... Everything that is done is referred not merely to external activity but considered as the result of reflection also... Words are regarded not merely as a means of expression but as a method of influencing the gods' (Levy-Bruhl 1966, p346). He then draws attention to Preuss's use of the German Machdenken and Gedanke: reflection and thought, words both designated by 'wish' in English (Levy-Bruhl 1966, p347). Obviously the desire for something to happen lies behind attempts to make it happen, and it is the potency of his wishing in a world in which everything is a part of everything else that motivates the gambler's magical thought power - 'the I knows no barrier that it does not strive to leap - sometimes successfully' (Cassirer 1953, p222). In The Great Sinner, Fedja is overcome by an almost sensual desire for his number to win, and concentrates his will with such force, that it appears to him that it has no option but to come up. 'I would see a number - eight - I desired it... eight - eight - eight - it had to come to me'.
Piaget noticed a similar tendency among children: the idea that reality can be modified by a word, a thought, or a look. This is a case of primary indissociation mentioned earlier, where participation is believed to exist between things and thoughts, between names and the thing named...’ (Piaget 1977, p164). In his famous example, Piaget cites the childish belief that it is possible to make the sun, the moon and the clouds move merely by willing then to do so (Piaget 1977, p169). He also records the tendency of children deliberately to think the opposite from what they want ‘as if reality made a point of intentionally foiling their desires’ (Piaget 1977, p165). Gamblers behave in the same way, wooing the caprice of Fate. Scodel interviewed one who would try to ‘trick’ Fate, saying ‘If I pretend that I am going to lose, Fate will be placated and will be kind and I will win’ (Scodel, in Herman 1967, p162).

For Freud, the belief in the omnipotence of thought is attributable to desire, and, ultimately, to narcissism. Underlying all magic he suggests is a special affective quality - desire - coupled with extreme egotism. This characteristic is found among obsessional neurotics, who, along with children, believe they only have to think of something to make it happen. The basis of such an attitude is ‘the narcissistic overvaluation of one's own psyche and one's power to determine events’ (Neu 1991, p273). In this formulation, the desire that lies behind the words of the gambler is ultimately reducible to narcissism. But we know that the gambler experiences the fragmentation and dissolution of his ego during play; how, then can he be accused of narcissism? Piaget has a similar problem for the child, and his criticisms of Freud on behalf of the latter are also valid for the gambler. Piaget points out that Freud's theory attributes adult self-consciousness to the child ‘as if the infant could clearly distinguish his self from others’ (Piaget 1977, p175). But, as we have seen, the child and the gambler participate in a world in which the boundary between the self and the external world does not exist. ‘The enhanced feeling of self’ which expresses itself in the magical worldview is not egotism, for ‘it indicates actually that at this stage there is as yet no true self’. The self is in fact ‘still totally dominated,

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1 Adults indulge in the same kind of magical ideas: Piaget lists five pages of examples, including the specific case of card players (Piaget 1977, p184-9). See also Storch on the omnipotence of thought in schizophrenics. (Storch 1924, p24 and 37).
totally 'possessed' by things' (Cassirer 1953, p158). Neither the infant nor the gambler
distinguish between a self that commands and a not self that obeys' (Piaget 1977, p178).
What prevents us from expecting the automatic realisation of our desires is the fact we have
self consciousness: we know our desires are subjective and distinct from the objective order of
the world. The child and the gambler make no such distinction. In a world in which 'scarcely
any tension is felt to exist between the simple desire and the object toward which it is directed'
(Cassirer 1953, p212), they assume the ubiquity of desire in a world of primary indissociation.

The belief in the omnipotence of thought in the participatory worldview implies a reversal of
Humean causation. According to Cassirer, magical notions of causation are nourished by
man's experience of the world around him and in the influence he exerts over the movements
of his own body. This type of causation posed a problem for Hume, who, advocating instead a
series of constant conjunctions, declared that it was no more comprehensible to assert that my
will moves my arm than it is to state that it stops the moon in its course (Cassirer 1953, p212).
The magical worldview reverses the radical separation implied in constant conjunction:
'because my will moves my arm, there is an equally certain and equally understandable
connection between it and all other happenings in 'outward' nature'. The mere act of willing
immediately apprehends the result of the willing, and links the two together. It is only as these
two factors move apart that a 'separating medium intervene[s] between wish and fulfilment'
(Cassirer 1953, p212).

When he plays, the consciousness of the gambler merges into his surroundings: into the other
players and into all the material paraphernalia of the game. For him, there is no 'separating
medium' between wish and fulfilment. His will flows outwards in a single participatory gesture
to embrace all of reality. Unaware of any gulf between his self and the external world, he acts
as if everything around him were as amenable to his will as his own body. For the child, as for
the gambler: 'If he is in love with himself, it is not because he knows his self, but because he
ignores all that is outside his dreams and his desires' (Piaget 1977, p175).
The Belief in Luck

Of all the magical notions involved in gambling, the belief in luck is perhaps the most pervasive. The notion of luck is the centre around which magical notions of efficacy gravitate, and it is luck which guides the gambler through every game he plays, absolutely certain that this time he will win. His belief in the power of his own luck is a tireless guide and support to the gambler who knows that the laws of probability are stacked against him, but also in a more profound sense knows that his magical good fortune can overturn them.

We can distinguish two broad forms of the belief in luck - the belief in the lucky properties of material and immaterial things, and the belief in the lucky properties of individuals. These forms overlap and coalesce into a belief in the efficacy of luck in general.

'Luck' can be invoked to explain aspects of gambling behaviour otherwise described as 'irrational beliefs'; the literature on which is considerable. However, since it is also misleading, I will outline it only briefly before going on to look at the notion of luck in more detail.

Langer defined the 'illusion' of control as 'an expectancy of personal success probability higher than the objective probability would warrant' (Langer 1975, p313). Such expectancy is an illusion generated by misperceiving opportunities for the intervention of skilled behaviour in games of chance. Subjects in her experiments believed themselves more likely to win when they were allowed to participate (and therefore presumably, imagine they were effecting some kind of control) in a game. Thus, subjects given active involvement in games believed they could effect a game by physical manipulation; those given passive involvement believed they could still exercise control, albeit by 'thinking' and 'developing strategies' (Langer 1975, p318-22).

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The overestimation of skill is concomitant with the illusion of control, since it is through his supposed skill that the gambler believes he can influence a game. Many players, then, act as though they could influence the outcome of games of chance by their own skills alone (Furnham and Lewis 1983). Griffiths found this tendency particularly marked among fruit machine players, who believed a variety of ‘skills’ were relevant to play (Griffiths 1993, p1001).

Linked to the overestimation of skill is what is described by Gilovich as a ‘biased evaluation of outcomes’ (1983). The author found that gamblers attributed different causes to the outcome of races depending on whether they had lost or won. Wins were attributed to skill and effort whereas losses were put down to factors outwith his control, for example distractions and bad luck.

While these studies contribute to our understanding of individual gamblers’ behaviour, they provide only piecemeal explanations for actions which inevitably appear as sporadic, ad hoc solutions to difficult situations the gambler ‘finds’ himself in. Such impulsive reactions can only appear irrational. However, we know that the gambler does not simply ‘fall into’ the gambling situation, but actively seeks it out and, moreover, through systematic action, expects to win whilst he is in it. A more comprehensive framework must be sought, a ‘cognitive map’ in which the various actions, expectations and beliefs of the gambler can be located. The notion of luck - or mana - can be used as a co-ordinate upon which to situate these phenomena.

A recent study by Ladouceur (1995) demonstrates the problem common to much research in this field. He found that subjects neither perceived nor conceived randomness, and, believing random events to be non-independent, relied on past outcomes to make future decisions. From the premise of the obvious (and widespread) existence of the misapprehension of the stochastic, Ladouceur leaps to the conclusion of the existence of a (completely unproven) ‘illusion of control’. Many psychologists do this, and it should be pointed out each time that the misapprehension of randomness (a trait, incidentally, not confined to gamblers) does not automatically imply the orientation to action which is the illusion of control.
Mana

The anthropological notion of *mana* describes the vital aspects of the gambler's belief in luck. First used by a nineteenth century missionary to describe 'a power or influence, not physical and in a way supernatural', (van der Leeuw 1967, p24), it has since passed into common anthropological usage, referring, for van der Leeuw, to the embodiment of Power and for Mauss, to the embodiment of the sacred. For the latter, *mana* rests at the apex of a hierarchy of magical-religious notions, so that it is 'an idea of the same order as the order of the sacred' (Mauss 1972, p119). The force of *mana* is a powerful influence on the world. Among the ancient Germans, *hamingia*, the guidance of an unseen hand, or the power of life or luck, was a ‘quantitative potency’. Men fought by inciting their luck against their enemy, and only lost because their *hamingia* had deserted them (van der Leeuw 1967, p24). *Mana* then, operates as an indiscriminate power. It can be positive or negative, signifying good or bad luck, and can be possessed in varying quantities. It can also reside in both animate and inanimate objects, and be passed on from one to the other as though it were contagious. With these properties, it is quite distinct from *animism*, whose embodiment of the ‘conscious, psychic or personal’ is ‘utterly neutral’ towards the ‘powerful, effective, productive’ (Cassirer 1953, p159).

Lucky People

Like the ancient Germans defending their enemies with the power of their *hamingia*, the gambler believes the force of his luck can overcome the odds against him. The power we saw him imbued with in Chapter Four is the manifestation of this personal *mana*. When gamblers feel themselves filled with the magical efficacy of *mana*, they behave as if games of pure chance with astronomically high odds against them can be influenced - and therefore won - by the exercise of their magical force. This is 'the special kind of power' through which 'control over destiny becomes possible' that we saw earlier as a component of the thrill. Although, on one level, the gambler 'knows' his chances of winning are slim and that he cannot alter the course of a game, when he plays, another more profound and magical level of reasoning takes over and he knows that in fact he will win; the game will bend to his powers. In a surge of
charismatic efficacy, he believes that for his unique self, normal laws of reasoning no longer apply: the usual ebb and flow of existence temporarily abates. Bolen likens the gambler's state of mind to that of the magician in which both are full of magic, sacred Power. 'The modern gambler behaves as though he subjectively believes that he can control or contradict the laws of probability by certain types of thought or action. He is not unlike the sorcerer who has similar ceremony and paraphernalia'. The object of his magical power is different, though, for 'the deities to which the modern gambler directs his appeals are fickle Lady Luck and punitive Father Fate' (Bolen 1976, p8). Like the magician, for whom the laws of gravity no longer apply, the basic laws of probability are held in abeyance for the gambler. Whilst playing, Spanier was 'sustained by a conviction, akin to mystical belief that I was endowed with an extraordinary inner power - an ability to reverse the iron laws of probability' (Spanier 1992, p1). Players possessing powerful mana are filled with conviction, a self-esteem that derives from certain knowledge. One gambler believes 'I've always been a lucky person... I feel special, as if someone up there favours me' (The Observer 19 February 95, p22). We will examine the religious overtones of this statement later; for now it is enough to conceive it as the encapsulation of Power.

Dostoevsky presents us with a figure who always believed winning was due to himself alone. His wife laments his belief in his own powers, which was so often to drag her to penury, when he had promised to win a certain amount one night 'in a tone of complete conviction, as if his winning or not winning depended on him alone' (Mme Dostoevsky, in Koteliansky 1926, p867). Even mathematical laws are susceptible to the direction of the gambler's mana, and are forced to exclude him from their relentless determination of the world, thus leaving him free to tamper with the workings of the game at will. Winning is no longer the impersonal outcome of the distribution of a probabilistic equation, but the uniquely personal expression of the individual gambler's power. In the case of the former, the winner could be anyone, in the latter, it can only be him. 4

4 See Wagenaar, for whom luck is a force which provides the gambler with foreknowledge of the outcome of a game. Powerful enough to overcome chance, such luck is essentially an order of knowledge and implies a reversal of causation in time: 'a belief that through luck, future outcomes may determine choices' (Wagenaar 1988, p102).
Although it cannot be deliberately shared or exchanged, the good and bad luck that resides in people can sometimes emanate from them in a force that influences those around them. In this way, mana can be passed on involuntarily, and can be said to be contagious. This belief in the contagious properties of mana can encourage individuals to attach themselves to lucky people and avoid unlucky ones. In all primitive communities, writes Levy-Bruhl: ‘the natives range themselves, as if instinctively, on the side of the man favoured by fortune. They think that they can thus participate in his good luck, and the favourable influences exercised on his behalf will extend to his companions. The mere fact of being with him implies such participation’ (Levy-Bruhl 1966, p55).

Amongst gamblers, this belief is manifest in the perceived attraction of lucky people - usually winners, or those who are involved in some way with winning. The case of Charles Wells, who broke the bank at Monte Carlo, in a typical instance of one such charismatic winner. After a series of spectacular wins, Wells' table ran out of money, whereupon huge crowds gathered and surged around him, trying to touch him 'for luck' (Allcock 1985, p186). Slot machine players behave in a similar fashion, encouraging winning players to touch their machines to pass on their luck, whilst discouraging losers from doing the same. Physical contact, however, is not always necessary for the transmission of mana. Mere presence can suffice, as Dostoevsky reported when he had a run of luck. His wife wrote that 'Behind him stood an Englishman who staked on the same numbers that Fedja did, and Fedja observed that each time he made a stake and looked at the Englishman, he won without fail: Such a lucky face that man has. Fedja says that the Englishman's face is so good and kind that it is bound to bring luck' (Mme Dostoevsky in Koteliansky 1926, p82). Hence Dostoevsky engages in a sublimated form of divination, for, in 'reading' in the players face signs of good fortune, he participates in what Benjamin identifies as the interpretation of fate through physiognomic signs, a process in which 'modern physiognomics reveals its connection with the old art of divination' (Benjamin 1979, p131).
The negative *mana* possessed by certain individuals can also influence a game, disrupting what Richardson mystically refers to as its ‘propitious flows and patterns’. He identifies these individuals as ‘witches’, and describes the mechanism by which their *mana* enters a game. Initially, ‘they manage to emanate a subtle psychic disturbance that draws the mind away from the game’. From then on, the game is lost as the pernicious influence of the witch invades the game via its stake. ‘Invariably if one is betting hundreds the witch pointedly risks only a dollar or two, just enough so that its power will penetrate into the game. And the attuned gambler knows that once this power has him as its object, that its dollar is conjoined to his hundreds in some dark way, and that until he can recapture his own ego his fate is going to be directed by an unpitying crone who will manipulate him at its pleasure’ (Richardson 1980, p100). The existence of mystical currents - 'propitious flows and patterns' - which we find beginning to emerge out of the notion of contagious *mana* is closely connected with notions of personal destiny, which we will turn to in more detail later.

*Lucky Things*

The lucky powers of fetishes is distinct from the wills that reside in the objects of animistic belief, for the *mana* of the former is an impersonal power which can influence a game, while the latter have more complex natures which determine their own actions. As Cassirer pointed out, the impersonal efficacy of mana is 'utterly neutral' to the personal forces of animism. The *mana* of lucky objects such as mascots and charms is an instance of fetishism, whose essence 'lies in the idea that power resides in a thing and emanates from it'. Anything can be a power-bearer in this way, and van der Leeuw cites Rilke who, in one of his 'stories of God' made children decide a thimble shall be God: ‘anything may be God. You have only to tell it to be’. This, he says, ‘is the frame of mind behind Fetishism’ (van der Leeuw 1967, p37). Levy-Bruhl records the fetishistic use of items which are full of positive *mana* and which resemble the use of lucky objects or mascots among gamblers. If the divination of the natives of Rwanda yielded favourable results, the object which had been used to 'cast the lot' would be used for making amulets which were considered especially efficacious (Levy-Bruhl 1966, p189) Gamblers frequently display a desire to play with items that have just won, and although this
may be in some part a demonstration of the contagious properties of the mana within the object, it is also a demonstration of the frame of mind behind fetishism. Such a tendency was noted as early as 1708 by the probabilist Montmort, who wrote: 'There are those who will play only with packs of cards with which they have won, with the thought that good luck is attached to them' (in David 1969, p143). These kinds of beliefs belong to the worldview of magical participation, which the gambler shares with children. In a recollection by Piaget, we see a striking similarity between the two groups. The child in question would attempt to win at a game of marbles by playing with the marble which had last won. It was, Piaget informs us, 'as if the player's skill gave the marble permanently good qualities or as if the marble was made particularly good by the player's luck' (Piaget 1977, p166). van der Leeuw recognises evidence of contemporary fetishism in the use of mascots, which possess a potency that derives from their incarnation 'purely and simply as things' (van der Leeuw 1967, p40). Gamblers also carry a vast array of such 'lucky mascots': lucky coins, clothes or toys. One woman always wears a necklace of tiny dice when she plays, another, white gloves, and one player always places an upturned cup on his slot machine. As well as the personal mascots unique to their owners are the standardised ones of gambling folklore - such as borrowed money and four leaf clovers. The design of Fitzgerald's casino in Las Vegas is of a giant fetish - an architectural reification of the idea of luck. Its neon sign promises 'luck available', while its interior resembles a museum of lucky artefacts - fifteen thousand four-leafed clovers carpet a special enclosure, surrounded by giant horseshoes and beaming 'lucky' leprechauns!

In the frame of mind behind fetishism, gamblers attribute causal efficacy to their lucky objects, seeking out 'hot' dice and slot machines and lucky mascots, as if the objects themselves were responsible for the outcome of the game. Objects which continue to bring luck in this way come to be regarded as especially efficacious, and hence become the object of fetishism.

**Lucky Places**

Many gamblers prefer to play in their favourite places which they consider lucky and feel uneasy if forced to sit or play somewhere else. Downes et al. (1976) found that lottery players
usually have one specific kiosk or news-stand from which they buy their tickets because of its 'lucky' properties. Shops which have sold winning tickets are instantly perceived as the subjects of a hierophany by subsequent players who flock briefly to the sanctified spot, convinced of its latent powers. One newsagent testifies that when someone buys a winning ticket from his shop, neighbours stream in over the following days to buy more tickets from this lucky place.

Certain seats in casinos, bingo halls and slot arcades are sought out by gamblers for their lucky properties time and time again. The affinity between a gambler and 'his' place represents a propitious combination of which he is made aware by an original win, or some early run of luck, while positioned there. One bingo player who always sits in the same place states: 'When I changed seats after my first win, I lost and went back to my old position and won again, so I'm not taking any more chances' (The Observer 19 February 1995, p22). The negative power residing in certain places compelled gamesters to move even in the seventeenth century, when Pepys observed 'the different humours of gamesters to change their luck when it is bad - how ceremonious they are as to call for new dice - to shift their places - to alter their manner of throwing; and that with great industry, as if there was anything in it' (Pepys, 1 January 1668, in Latham and Mathews 1976, vol 9, p3). Such places are not merely 'places' to the gambler. One seat or one kiosk, is not identical with any other but is imbued with significance. It is not simply one of a number of interchangeable places, but is the only one of its kind, and is sought out by the gambler for its unique possession of power, of mana.

Eliade, Cassirer and van der Leeuw, amongst others, have demonstrated what the gambler intuits - that space is not perceived as a homogeneous mass, but as a thing possessed of differing qualities. The non-homogenous experience of time corresponds to the non-homogeneous experience of space during play, for parts of space, like instants of time 'have their specific and independent value' (van der Leeuw 1967, p393). What Cassirer calls 'primitive' or 'mythical' space (Cassirer 1944 and 1953) is a space of action, fraught with emotional and affective elements. Such space is syncretically bound up with its subject, and so, far from being objective, geometrical and abstract, exhibits egocentric and
anthropomorphic characteristics. The heterogeneous nature of space is particularly evident for Eliade in the distinction between its sacred and profane forms. While the latter exists as 'formless expanse', without structure or consistency, the former is strong and significant, giving form to the world. Thus, the sacred empowers space by organising its parts and creating order (Eliade 1957). In the sacred arena of the gambling sites, the manifestation of such sacred spaces are perceived by the gambler as lucky places; as centres of order. At this point, we can recollect the creation of order by the phenomenological 'centres' of play - the tables, machines and fixtures of gambling that exert a gravitational pull on the homogenous flux of individuals wandering around them. These centres differentiate the surrounding profane space by giving it a focus, a point, an orientation. Out of 'the chaos of the homogeneity and relativity of profane space, the discovery or projection of a fixed point - the centre - is equivalent to the creation of the world' (Eliade 1957, p22). This empowerment and ordering of the phenomenological sites is perceived by the gambler as the empowerment of his own personal space. The table or kiosk at which he stands is organised and familiar - it 'makes sense' to him in a way others of its kind do not. In this way, it is possessed of mana, or, to use van der Leeuw's expression, it is a position. A position is an area of sacred space which is chosen by the individual for its possession of power, and which he then orients himself towards. It is 'not some arbitrary point in space, but a resting place in universal extensity; a position which [the individual] recognises and towards which [he] directs himself' (van der Leeuw 1967, p393). Such positions assume their select status 'by the effects of power repeating themselves there, or being repeated by man' (van der Leeuw 1967, p393). In gambling, the 'effects of power' are felt in the occurrence of winning. The momentary empowerment of the ego that derives from winning a game creates a moment of supreme order and harmony for the gambler and everything around him. In this way, the bingo player who attributed her luck to her seating became aware of the 'winning power' of her space, henceforth perceiving it as a position. The creation of order by the securing of a 'position', specially demarcated within sacred space, grounds the gambler in a uniquely empowered place which is then regarded as particularly lucky for him. Once aware of the power around them, gamblers are understandably reluctant to give up their places and will try to occupy them every time they play, with, for example, slot machine players becoming notoriously agitated if
prevented from doing so. Because of the efficacy that is believed to accrue to place, we can understand, van der Leeuw says, 'why man clings with such obstinate tenacity to the positions he has once adopted' (van der Leeuw 1967, p393). This tenacity was abundantly evident in the 1981 poker final, when, in the full glare of media attention, the world's most skilled poker players, playing for hundreds of thousands of dollars, petulantly refused to change seats. Eventually they were persuaded and moved reluctantly, muttering and indignant, for Alvarez confides, every one was 'obscurely afraid of what a new seat at a new table might do to them' (Alvarez 1991, p162).

**Lucky Times**

Lucky people, places and things exist imbued with the power of *mana*, but their existence alone is not sufficient to assure luck, for they are dependent for their efficacy on opportune moments. Like space, time is not a homogenous mass but is made up of separate intervals, each with its own unique value. Certain times therefore are more favourable than others and for luck to befall a player it is important that it occurs at the right time.

As we saw in Chapter One, this notion of 'timeliness' is designated by the Greek *kairos*: 'the time of the due situation: the time of grace' (van der Leeuw 1967, p384). The 'due situation' is the time of the unfolding of luck, and the gambler must be present when it occurs, otherwise his own luck and that of the things around him will be redundant. The power of the propitious moment overrides that of the *mana* in things, for it must be present for the latter to have efficacy.

Richardson is well aware of the effects of inopportune moments on a player. Most gamblers, he writes, know when it is not their lucky day, and they ignore this intuition at their peril. Should a player do so, he will be gambling while 'disconnected from propitious flows and patterns', stubbornly trying to force a return of the luck he enjoyed earlier. When this happens 'he becomes nothing but an item of desperation, someone doomed to be unloved by fortune and destroyed by mathematics' (Richardson 1980, p127). On the other hand, most players
have a strong sense of when it is their lucky time, manifest in notions of the 'lucky streak', 'run of luck', and being 'on a roll'. In this state, having won once or twice, they feel certain they will continue to do so until their time passes. How and what they play during this time is irrelevant: when kairos prevails, their every action will result in winning. One punter was convinced of the potency of these lucky times, saying: 'if it's our night we've won a fortune on stupid things, but if it's not our night... can't do a thing'. When immersed in this time of grace, gamblers play on, convinced its influence will safeguard their every move, and eager to make the most of it before it runs out. When a woman had a lucky run at craps, winning several throws in a row, an envious bystander described 'the streak a gambler spends his waking hours trying to find and ride to glory' (Vinson 1988, p57).

Just like the gambler who finds a lucky place and has a position, the gambler who finds himself immersed in a lucky moment finds a situation. In the mythical time of the due situation time stands still, not in the sense that it ceases to pass, but in the sense that 'every 'when' has become a matter of sheer indifference' (van der Leeuw 1967, p385). For the woman enjoying 'her moment' at craps, duration has ceased. The awe-struck onlooker continued his commentary: 'she stopped time for one mythical, magical moment, and saw everything fall into place' (Vinson 1988, p57). The experience of the cessation of duration we saw in Chapter Four thus has more than secular significance, for it is also the apprehension of the power of the due situation; a power which brings the passage of time to a standstill.

This cessation of duration has for van der Leeuw 'the religious designation of eternity, which provides the background for the religious celebrations' (van der Leeuw 1967, p385). The individual who celebrates shares vital characteristics with the one who gambles; both ceremonies are performed by the same type; one 'who stands stationary in the midst of time because he finds the 'situation', and who does not therefore simply surrender to duration but firmly plants his feet, and for one moment concentrates both himself and time' (van der Leeuw 1967, p385). When man encounters Power, van der Leeuw writes, he must halt. When the gambler encounters the power of the due moment, he must surrender to it for as long as it lasts. When he does so, time freezes; his durée comes to a standstill. 'Duration then is the
The gambler stops everything to indulge in the Moment - which he knows is fleeting. He plays on and on for as long as he perceives it to last, spurred on by the potential of his imagined winnings, and not by the reality of his just as frequent losses. The gambler for whom time has frozen, shows that 'he declines the given as such, and seeks possibility' (van der Leeuw 1967, p385).

**Lucky Numbers**

The phenomenon of gambling is saturated with numbers. The trend which saw the emergence of highly numerical types of wager in the seventeenth century and the development of games of chance along similarly arithmetical principles in the nineteenth is continued today, with number forming the basis of all modern commercial gambling forms.

Gambling can be said to represent the apogee of our modern obsession with enumeration, and, moreover, the dual nature of this obsession; for both the scientific and the mystical forms of knowledge afforded by number converge here. The mechanics of play - the calculation of odds and distributions of wagers - is governed by the theory of probability, and lies within the domain of objective scientific knowledge. However, the relation of the gambler to play is governed by a different order of knowledge altogether. Just as he rejected the predictive insights of probability theory, so he rejects the building blocks of that insight - the objective apprehension of number.

Since most of his attention during play is concentrated on specific numbers, the latter come to assume enormous significance in the gambler's subjective map, and, more than any other facet of play are regarded as imbued with magical significance and specific powers, or *mana*. In most games, possession of the correct number or series of number is the key to winning, and so players are constantly searching for that elusive digit in which winning *mana* is stored.
In Chapter Two we saw how both scientific and mythical systems of number attempted, in their different ways, to explain and organise the contents of the world. In the scientific worldview, like the phenomenon of chance, number is regarded as an explanatory force in itself, whilst in the mythical, it signifies something else. What the scientific mind sees as a secular, explanatory power, the mythical one perceives as a sacred sign of the workings of some 'foreign demoniac power' (Cassirer 1953, p144).

The importance of number to the gambler cannot be overstated: as that which determines the outcome of a game, its significance reaches other-worldly dimensions, a position which befits its status in the mythical worldview. Here, according to Cassirer, 'not only number as a whole but every particular number is, as it were, surrounded by an aura of magic which communicates itself to everything connected with it' (Cassirer 1953, p143). In his sanctification of number, the gambler participates in a long western tradition, originating in the classical world where Philolaus sought the 'nature' of number in all human as well as in all divine acts and works. In this project, number became 'the great intermediary by which the earthly and divine, the mortal and immortal' communicated with each other (Cassirer 1953, p144). From divine messenger to divine harmoniser, for the Pythagoreans order was ultimately reducible to number. Observation of the heavens led to the concept of a celestial order that was mirrored on earth quantifiable amounts. Everything in the universe could be expressed in the language of mathematics, for 'the cosmos is isomorphic with pure mathematics' (Schimmel 1993, p13). In Pythagorean number mysticism, the universe was divided into numerical categories, each with different 'natures' or attributes. Odd and even numbers were regarded with particular fascination; for Plato, all even and all perfect numbers were an ill-omen. Such an empowerment of number was described critically by Aristotle when he wrote that the mystical Pythagoreans 'believed the entire vault of heaven to be harmony and numbers' (in Schimmel 1993, p15). It is in this tradition that the gambler is engaged when he studies numbers as bearers of power and meaning. Keenly aware of the mysterious properties resident in certain digits, he is engaged in a constant search for the number that is right for him in this particular game. A variety of methods of number selection exist, most operating on the Pythagorean assumption that every earthly phenomenon can be expressed as
a number and that the relations between numbers produced this way will possess a certain
harmony. The dream books that translate dreams into numbers also transform events and
objects into a series of digits imbued with metaphysical meaning. Drake and Clayton describe
such a translation for an American lottery: 'People want 'hot' numbers. Numbers and
combinations of numbers derived from lucky situations are much more powerful, have much
more of what anthropologists call *mana* than ordinary run-of-the-mill, garden variety
numbers' (Drake and Clayton 1967, p7). Numbers may also appear of their own accord,
announcing their presence with their own peculiar qualities or natures. Thus, Puerto Rican
lottery players, like the Pythagoreans, attribute characteristics such as 'beautiful' or 'ugly', to
them (Sullivan 1972, p83). Similarly, the brothers in Paul Auster's *The Music of Chance* are
very aware of the 'natures' of numbers. Stone explains that 'after a while you begin to feel that
each number has a personality of its own... A twelve is very different from a thirteen for
example... It's all very private, but every accountant I've ever talked to has always said the
same thing. Numbers have souls and you can't help but get involved with them in a personal
way' (Auster 1990, p73). They select their numbers in a manner that utilises their harmonious
balance, and so unleashes their mysterious power. Like the Pythagoreans, the brothers favour
prime numbers; 'It was all so neat and elegant. Numbers that refuse to co-operate, that don't
change or divide, numbers that remain themselves for all eternity... 3, 7, 13, 19, 23, 31... It
was the magic combination, the key to the gates of heaven' (Auster 1990, p73-4).

The perception of harmony is also the expression of what Cassirer calls 'affective tonality',
typical of the apprehension of numbers in mythical thought: 'because of the particular intuitive
content and the particular feeling tone attaching to specific quantities, the diverse numbers do
not seem absolutely uniform but take on the appearance of highly differentiated entities, each
having a sense its own tonality'. Such tonality contrasts with the 'purely conceptual, abstract-
logical determination of number', and is perceived in the mythical consciousness as being of
far greater significance than the mere determination of quantity' (Cassirer 1953, p142). Many
gamblers believe in their ability to intuit this 'affective tonality', an ability which depends on the
personal significance of a number marking it out from the undifferentiated insignificance of all
others. Numbers which have some association with the player's life are recognised as having
peculiar qualities for that player, which will be carried into the game as an executive power. In this way, 'lucky' numbers, calculated from phenomenon which possess personal significance such as birthdays, ages and telephone numbers, are powerful in combination with the individual for whom they are important. An instance of this is demonstrated in the case of one gambler, Angela V, who became reluctantly aware of the mysterious forces in numbers when numbers that were significant for her began 'appearing' in her life. The number in question was 226 - the abbreviated form of February 26 - her mother's birthday. The night before the birthday, she dreamed of her mother, and the following day saw the number four times. Initially, she was worried by the coincidence 'that bothered me... I was upset', but, becoming aware of the hidden significance contained in the digits, decided to play the number in the lottery. After she won, numbers flooded into her consciousness, and, highly sensitised, she was in no doubt as to their significance and began to act on what she regarded as their prophetic quality: 'other numbers began to bother me in the same way... I would see them three or four times in a couple of days and I would bet the number and win... I was afraid, I thought it was some kind of an omen, a message' (in Custer and Milt 1984, p151-2).

For Freud (himself intensely superstitious about numbers), the significance of lucky numbers could be explained by their displacement onto the external world in the mind of the subject. Although their meaning is to be found in the subconscious, the gambler, like all superstitious people, sees their significance emanating from outside the self. For this individual, meaning is external: 'everything he observes... is full of significance, everything can be interpreted'. The difference, Freud writes, between himself and a superstitious person in his selection of numbers is that 'first, he projects outwards a motivation which I look for within, secondly, he interprets chance as due to an event while I trace it back to a thought' (Freud 1939, p320).

The external significance which the gambler interprets in number has its source in the relation of the individual number to the realm of the transcendent, where all is 'harmony in numbers'. Number is considered by the gambler as it was by Philolaus, like chance, as an agent of some higher meaning, a sign whose significance derives from its otherworldly origin. Hence the
'sacred awe' which surrounds lucky numbers connects the individual momentarily with the sacred, and is revealed in the mysterious harmony, or 'affective tonality', of the number itself.

**Mana and the Total Representation Of Magic**

For Mauss, the 'total representation' that is magic is part of the participatory worldview, where cause and effect are interchangeable (Mauss 1972, p.63). Fundamental to this worldview is the belief that there is a certain relationship between the persons and the things involved in ritual. There exist many ways of conceiving this relationship, Mauss writes, but generally it implies the notion that something is shared. 'There is a distinct idea that there is a kind of continuity between the agents, the patients, the materials, the spirits and the end object of a magic rite' (Mauss 1972, p.62). Thus *mana* is only active and powerful in combination with the right elements. Any number, place or time can be lucky, but only for a given player: the same number, place and time could be quite ineffective for any other gambler. Devereaux describes the importance of this relation, and in so doing, articulates the total representation of magic in relation to gambling. Discussing bettors' notions of luck, he writes that they 'usually seem to involve some mysterious connection between the horse and something which the gambler associates with himself. This is taken as a sign that this is the horse for him, a sort of private tip'. For the gambler, as for the native, 'such mystical connecting links are not hard to find. In a flash of insight he recognises that the jockey of a given horse has his own initials, or that the colours of some entry are his college colours, or that the post position and the jockey's weight add up to his year of birth' (Devereaux 1949, p.625). The associations are perceived as the mystical forces which connect the gambler to that thing which is uniquely his, and which he recognises by this 'aura', whether it is the sacred aura of a number, a time, a place or a thing.

When we consider the involvement of the notion of *mana* within the total representation of magic, the behaviour of players described as labouring under an 'illusion of control', and other 'irrational cognitions', becomes clearer. The possession of *mana* allows the gambler to influence a game in his favour, and, within the participatory worldview, such influence is
passed on from its possessor to the outcome of a game, since 'there is a kind of continuity between the agents... the materials... and the end object...' of the game. Rather than an 'illusory control' over throwing dice or selecting tickets, the gambler knows that if he picks his ticket, it will win, for the conjunction of his mana and that of the ticket that find each other will cause this to happen. In this case then, the 'end object' is a winning ticket, an object which will only be effective for the specific player if he is allowed to realise his relationship as the 'agent' with the 'materials' - the ticket - and the 'end object' - winning.

THE RELIGIOUS WORLDVIEW: TRANSCENDENCE

The worldview of the gambler is a complex one. On the one hand, he is absorbed in a world of magical participation whose efficacy derives from within himself and exists in an indissoluble relation with his surroundings. On the other hand, he is also concerned with the operation of a power that lies outwith the self, and which determines the course of events in general and his life in particular from a distant and all-powerful transcendental realm. The distinctions between these two orders of belief are often not clear cut and their spheres of efficacy can overlap so that most of the phenomena so far designated as magical also possesses quasi-religious connotations. It is to this specifically religious dimension of gambling belief that we now turn.

The Dualism of Luck

This dualism is perhaps clearest in the notion of mana, which exists, somewhat ambiguously, in the mind of the gambler both as a neutral power residing in things, and also as something else - a power which is bestowed from without; an immaterial sign from the gods. It has thus both magical and theistic connotations. The idea of mystical 'currents and flows' which we found surrounding the notion of mana already hinted at the presence of another set of beliefs operating alongside those of magical efficacy. Looking back to the first mention of mana, we will remember that it was described as being 'in a way supernatural' and that for Mauss it
embodied absolute power, and was of the same order as the 'order of the sacred' Mauss further emphasised the transcendental dimension of *mana* when he wrote of the magician 'if he thinks about it, he may even come to the conclusion that his magical powers are quite separate from him' (Mauss 1972, p138, my italics). The externality of the power of *mana* is most evident in its formulation as *hamingia* - the guidance of an unseen hand.

This 'guiding hand' is a constituent element of gamblers' conceptions of their own luck, a semiconscious apprehension of a guiding force. The idea of power resident within them is still there, but its *origin* is outwith themselves. For the gambler in E.T.A Hoffman's *Gambler's Luck*, its source is the very power of fate itself, for luck is here 'the most terrible, most insidious enticement of the hostile power of fate' (Hoffman 1963, p219). A patient of Bergler feels sure of himself when he plays, but this is not simply the apprehension of his own *mana*, but rather 'a strange sensation that I am an executive agent of something beyond my control' (Bergler 1970, p45).

It is the same guiding force that the gambler who 'threw fistfuls of chips at random on the table, accepting where they came to rest as fateful places' trusted in (Richardson 1980, p232). Like the ancient diviner with his bundle of divining sticks or *astragali*, this individual believed in the significance inherent in the random pattern made by his chips, for he believed in the mysterious intentions of the power that put them there.

When the grandmother in Dostoevsky's *The Gambler* won, she too attributed her luck to an external force: "Look, look", grandmother quickly turned to me, all radiant and happy. "You know I told you, I told you. And it was the Lord himself who gave me the idea of betting two gold pieces" (Dostoevsky 1992, p202). The 'guiding hand' is more literal for another punter and is again specifically identified as God. Recalling how she watched the ball bounce out of one pocket and into another, this lottery winner enthused how 'it was like God took it out of that 50,000 pocket and put into the million [pocket]'.
An image of this guiding hand is exploited in the British National Lottery advertisement. As a constellation of stars in the shape of a giant hand descends from the heavens, this literal depiction of the hand of fate extends an enormous finger to one lucky individual and thunders its celestial pronouncement - 'it's YOU'.

The Apprehension of Power

Amongst the various forces confronted by the gambler in the magic circle, 'a power opposed to the seeming omnipotence of the I makes itself felt' (Cassirer 1953, p233). This is the apprehension of what Otto calls the 'Wholly Other', that indefinable perception of the sacred which is quite beyond 'the sphere of the usual, the intelligible, the familiar... filling the mind with blank wonder and astonishment' (Otto 1925, p26). Although mere adjectives can barely contain the sense of such an overwhelming entity, van der Leeuw nevertheless makes the attempt, describing it firstly as existing alongside primitive ideas of spirits and fetishes, and secondly, as possessing neither Will nor Form, but being Power incarnate (van der Leeuw 1967, p184). Otto's 'Wholly Other' is equivalent to this 'Power' of van der Leeuw; in both cases it is absolutely powerful: 'the force that here and this moment, binds me [to this very life, this very time and place], the law according to which I have come into being... The riddle as to why I was born and why, just here and now, my life rolls on is insoluble: it is just my lot and the Power apportioning it my fate' (van der Leeuw 1967, p183).

It is this formless Power that the gambler faces when he plays, and is contained in what Gogol calls the 'higher mysteries' of cards (Gogol 1926, p216). Conceived variously as Fate, Destiny, Fortune, or by more conventional Christian players as God, this is the impersonal force that lies behind events in the gaming arena, and determines the order of the world outside. It is to this that Duryodhana refers when he declares in The Mahabharata: 'if we gamble, the heavenly gate will be nearer' (The Mahabharata 1975, p123). The Chevalier Menars in Hoffman's Gambler's Luck also describes such a force when he advises his friend to make the most of its favourable orientation to him by gambling: "'Fate', he said, "Drops hints to us as to the path along which we should seek and find our salvation. The higher power that
rules over us has whispered in your ear: if you wish to acquire money and goods go and gamble, otherwise you will remain forever poor, indigent, dependent..." (Hoffman 1963, p222). It is this force that the gambler is most keen to propitiate, since it is this that determines his fate in any particular round, in any game - and more, for such an otherworldly Power determines the balance of his whole life and the order of his very existence. In participating in a game, the gambler enters the realm of the sacred, the arena of Power. His relation to it is fundamental to the experience of play and is a vital constituent of the thrill, for it is the sensation of the sacred that underlies the *ambivalence* of all religious experience.

This characteristic is fundamental to the sensation of the Wholly Other, and has been extensively depicted in the religious phenomenologies of writers like Cassirer, Otto, and van der Leeuw. For the latter, the relation of the individual to Power 'is always simultaneously a being attracted *and* a being repelled... both tremor and fascination' (van der Leeuw 1967, p509), while for Cassirer it is a combination of 'fear and hope, awe and admiration' (Cassirer 1953, p78) and for Otto, a mixture of horror and dread, longing and attraction (Otto 1925). A peculiar kind of *fear* dominates each of these relations, not fear in the sense of alarm, but rather the experience which Kierkegaard calls *dread* and which the gambler experiences as a particular *form* of dread - the *uncanny*. As always, this Kierkegaardian dread is ambivalent. A constituent aspect of being-in-the-world, it is 'a mode of the very state in which one subsists' (van der Leeuw 1967, p463), and is a condition intermediate between being repelled and being attracted. For Otto, such 'peculiar dread' is experienced as a shudder where the soul 'trembles inwardly to the furthest fibre of its being' (Otto 1925, p17). He also cites its 'eerie', 'weird' and specifically *uncanny* aspect, and it is this which interests us, for the gambler's experience of the sacred is the experience of the uncanny. The dread sensation of the uncanny can overcome him at play, and even while he is *thinking* about playing. Its horror is articulated by one gambler's description of his gambling 'daymares': 'I sometimes find myself apparently thinking of nothing. I am roused from that state by a feeling of horror and uncanniness. Then I am startled and try to recall what I had been thinking about. A few of these times, I was just

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5 It is this sensation of uncanniness that is conveyed (intentionally or otherwise) in the eerily atmospheric tales of gambling by writers like Balzac, Dostoevsky, Pushkin, Hoffman and Baudelaire.
rehearsing a roulette game I had played the day before. Why should that harmless thought be so terrifying?' (in Bergler 1970, p45).

Why indeed? Freud's analysis of this basic aspect of the religious experience traces the answer to the animist conception of the universe. In his essay on *The Uncanny*, he explains how we attribute an uncanny quality to impressions that confirm our animistic mode of thinking, even after a time 'at which in our judgement, we have abandoned such beliefs' (Freud 1955, p241). Two specific situations which can stimulate this sense of the uncanny are identified: the recurrence of coincidence, and the uncertainty as to whether an object is alive or not. This latter case can also occur when an inanimate object becomes too much like a live one, sending a shudder of horror through the onlooker. One punter, referred to in Chapter Four, experiences this form of the uncanny when sitting at the gaming table, overcome by a mixture of amazement, horror and fascination. He related 'It's the same feeling you'd get if you looked at a statue and suddenly saw it move'. Freud tells us that the sensation of the uncanny is also associated with the repetition of coincidences. A secret 'meaning' can be ascribed, for example, to the recurrence of a number throughout the day. The continued appearance of that number is then perceived as uncanny - witness the obvious uneasiness in the testimony of Angela V who, aware of the repeated occurrence of the number 226 over the course of a single day, became unnerved, upset and finally afraid by its uncanny appearance. Freud explains the fear engendered by such recurrence as an aspect of the compulsion to repeat - a compulsion which overrides the pleasure principle and lends to certain aspects of mind their 'demoniac character'. Thus 'whatever reminds us of this inner compulsion to repeat is perceived as uncanny' (Freud 1955, p238).

It must be remembered that the sensation of the uncanny need not necessarily be unpleasant, on the contrary, a certain frisson of pleasure can be derived from exposure to it, and it is in this sense that we can understand the 'potent attraction' of the 'repeated shudder' of horror stories heard again and again' (Otto 1925, p16). The gambler experiences the same frisson when the card he has been waiting for does come up, when the numbers he has been made aware of all day continue to appear and when he does not bet because he 'knows' the horse
will not win that particular round. van der Leeuw maintains ‘man loves his dread and becomes fascinated by it’, in the way that someone who gazes into a stream for a long time becomes ‘fascinated by the horror of the water’ (van der Leeuw 1967, p465). In the arena of play, this is felt as the sensation of the uncanny sweeping over the gambler. He becomes almost ‘pulled in’ by his dread, and in this sense, the player who is transfixed by the rhythm of a game shares the experience of the individual gazing at the water. One such punter, who we saw in Chapter Four, underwent such an uncanny almost visceral, experience, and was rendered immobile by an uncanny force. As he described it: ‘You can't leave the table, you're frozen to the table’.

This dread, writes van der Leeuw comprises the sense of ‘unrestricted possibility’, the ‘vertigo of liberty’ and as such represents the ‘existential tension between man and the sacred’. It can also be conceived as the dread of anticipation, for the unlimited possibility implied in the existence of an absolute Power concerns the determination of personal destiny (van der Leeuw 1967, p465).

In supplicating the realm of the sacred, the gambler is questioning this destiny, asking a question which holds the potential for limitless possibility, as well as finite nothingness. The possibility of salvation or damnation opens up in front of him in a panorama of dread and awe. In the face of Power, the query ‘will I win?’ takes on cosmic significance, far transcending the outcome of the mere game and amounting to the gambler’s questioning of the basis of his very existence and his place in the universe. According to Devereaux, for the player who asks ‘am I lucky?’: ‘the answer seems somehow to promise a solution to the whole problem of his personal relation to the supernatural powers that govern the universe (Devereaux 1949, p981).

The luck conceived as the personal possession of power or mana here takes on religious significance as a sign of external favour. The gambler wants simply to know his status. In an inner dialogue, Richardson debates his motives for gambling: “I want to know, I finally want to know”, he asks, and his inner voice retorts “what do you so badly want to know?” And I would answer, “whether I am to have any grace in this life” (Richardson 1980, p25). Since the realm of the sacred cannot be influenced by magical means, to find out his status, the
gambler must simply play. To this end, the formal structure of a gamble creates an arena for a ritualised dialogue with the sacred. The true gambler is therefore one who simply wants to enter into communication with the sacred, playing in a quest for metaphysical satisfaction with no thought of pecuniary gain. Hoffman's Chevalier describes one such a player, who would sit alone in his room for days on end, playing banque and staking against himself in an attempt to reach the transcendental realm. In his description of the game, the fundamental dynamic of gambling is revealed: 'the rule of the higher power emerges clearly, and it is just this that stimulates our spirit to stir its wings and try whether it cannot soar into the dark kingdom, into the fateful workshop of that higher power and eavesdrop on its workings.' (Hoffman 1963, p223). In these 'ritualised dialogues', we see evidence of the oracular origins of gambling, and are reminded of the ontogenesis of games of chance in religious ritual.

Just as the modern phenomenological sites can be said to resemble the specially demarcated magic circles of the ancient diviners, so the instigation by the diviner of an action whose outcome, guided by the divinity, could only be one of two meaningful alternatives can be said to resemble the gambler's plunging into an activity which can have only one of two outcomes - win or lose - considered as the unambiguous verdict on his fate. As we saw in Chapter Four, the gambler's wager represents himself and by staking it he is offering it - and vicariously, himself, up to Power to dispose of at will. The outcome of the game determines whether he loses his wager or is rewarded by winning more money: whether he is deserted or favoured by Fate. By hosting this confrontation, the gambling site becomes the arena of a ritualised encounter, where gambling itself becomes a symbolic activity in which 'the player asks for a decision that assures him the unconditional favour of destiny' (Caillois 1962, p73).

Freud's analysis of Dostoevsky's passion for gambling was founded on the assumption that the activity functioned as a cycle for the purgation of guilt, with losses masochistically courted by the gambler as punishment for his sins. Reik's comments on the article developed Freud's analysis into a more compelling argument which took into account the oracular, religious dimension of gambling belief. Reik postulated that the overriding concern of the gambler was not that he had sinned, but the uncertainty as to whether or not he would be punished for it.
His concern then, simply became to *know* his fate, and so his actions assumed the form of a question addressed to destiny. Ultimately, gambling became a divinatory activity: 'a modern form of consulting the oracle' (Reik, in Halliday and Fuller 1974, p80). A patient of Bergler confirmed this theoretical perspective when he outlined what for him was the dynamic of play: 'For me, gambling is a question I ask Fate. The question is simple - am I your favourite?' (in Bergler 1970, p83). For Richardson, writing from within the Protestant tradition, the expression is slightly different: '... gambling provides the answer to what all men want to know, namely which of us are the elect' (Richardson 1980, p21-2). The answer is communicated unambiguously in the outcome of a game. 'Winning means that Fate nods approvingly with her head and smiles lovingly. Loving means a warning and threatening finger' (Bergler 1970, p230). Both players want the certitude of the lucky lottery winner, specially chosen from millions of others by the starry miasma erupting from the cosmos. For one moment, the heavens open and the gambler is assured of his status and bestowed with beatitude and grace. For Bergler, such beliefs are yet another instance of the gambler's megalomaniacal egotism: 'He believes that Fate has singled him out from the other two billion inhabitants of the earth and communicates with him by means of small signs indicating approval and approach' (Bergler 1970, p230). Organisers are keen to encourage these kinds of beliefs, as were those of a lottery held in 1572 in Paris who spelled out Divine favour on winning tickets. *Dieu vous a elu*: 'God has chosen you' was the phrase written on winning tickets; *Dieu vous console*: 'God comforts you', on losing ones (in Brenner and Brenner 1990, p9).

The player's faith in his 'direct communion' with fate is the transcendent or religious dimension of the confidence inspired by his belief in the magical efficacy of his own *mana*. The *mana* of the magician is the state of election of the gambler. We can see the clear conjunction of these two interpretations in the dice game of *huaryu*, played by the Canelo of Ecuador. The game, which we described in Chapter Two, involves throwing dice over the corpse at a death vigil. A

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6. Certain writers in the psychoanalytic tradition (e.g. Greenson, France, Lindner) have made much of the oracular origins of gambling, but have interpreted the idea of fate as a father figure at the centre of Oedipal conflicts, thus making the fundamental dynamic of play not religious but sexual. (See Halliday and Fuller 1974).
particularly lucky player is believed to be favoured by the dead man, an unlucky one disliked by him. Although favour is bestowed here not by our pure nameless Power, but by ancestor spirits, the principle behind the notion of luck is the same: the source of individual luck, or *mana*, is outwith the self, emanating from the transcendental realm of unseen powers and manifest in the winning of a game.

A kind of circular causation similar to that encountered earlier permeates the notion of luck as the favour of fate or state of election. If a gambler wins, it is because he is lucky, and if he is lucky, he will win. Within this tautological system, luck or favour, once bestowed, are impossible to lose. Conversely, they are also impossible to attain if not bestowed. Puerto Rican lottery players adopt a philosophical approach to this dilemma, saying ‘if a person is meant to have luck, it will find him. If he's not there's no use looking for it’ (in Sullivan 1972, p83). When the gambler is singled out, he can do no wrong. As a roulette player we saw earlier stated, once ‘your time is up’, you can act with impunity, secure in the knowledge that you cannot lose. This punter’s statement can now be revealed in full to indicate the transcendental origin of such empowerment: ‘Well, I think it's 'im up there and if 'e says it's your night, it's your night and whatever you do you can't lose... if it's my night I've won a fortune on stupid things, but if it's not my night... can't do a thing’ In the same way, Flower describes his luck after winning the lottery: ‘Good luck continued to come our way. No matter what we do, everything seems to turn out right... It's as though God has singled us out from other men. He's showered us with good fortune and lifted us to the heights of happiness... at times I feel that we've become immortal’ (Auster 1990, p75). This notion of invincibility was codified in a British State Lottery of 1569, where, in addition to a first prize of £5000 there existed a prize which rendered the winner free from arrest for seven days, except for major crimes! (in Brenner and Brenner 1990, p10) Favour becomes literal immunity!

It is in this favoured state that the gambler feels able to reverse the laws of probability, for the power bestowed by election means he can do no wrong. Such favour is perceived as luck, as a
bingo player reiterates: 'I've always been a lucky person, I feel special, as if someone up there favours me'.

The efficacy that derives from this state of election, unlike the power of *mana*, can be completely unwilled. Like the Protestant who, owing to the omnipotent and transcendental nature of his God, cannot effect his status in the afterlife by worldly activity, gamblers cannot rid themselves of their select status when it is upon them. The protagonist Siegfried in Hoffman's *Gambler's Luck* presents us with the unusual instance of a reluctant winner who actually *wants* to lose. However, he can do nothing to prevent his favoured status being demonstrated in every game: 'He went to the bank with the firm resolution of losing... but even in gambling, the luck which stood by him in everything he undertook remained true to him. Every card he chose won... He could change cards, he could carry on with the same ones, it made no difference, he always won. The Baron displayed the rare spectacle of a punter who is beside himself because the cards come out favourably to him' (Hoffman 1963, p215).

As the external favour of omnipotent Power, luck cannot be cultivated by the gambler. Just as the Protestant had a duty to consider himself elect, so the gambler, to play with confidence and to truly plunge into the game, also has to presume his chosen status. To play poker, one regular declares: 'You have to believe in your luck, in your special relationship with fate, in the possibility that you are somehow chosen or blessed'.

**The Religious Experience of Power**

*Questioning*

In Chapter Four we looked at the gambler's experience of play, defining various aspects of the thrill as the state of dream-like dissociation, the frenzied plunging and the mystical state of transcendence encountered when winning. It is now time to turn to another dimension of this experience for, while his comprehension is engaged in a world of magical causation and religious significance, the gambler's *affective* apprehension of play is imbued with elements of
a mystical-religious nature. This dimension was alluded to in Chapter Four, and forms a constituent element of the experience of dissociation, namely those aspects involving 'mystical experiences, ecstatic religious states... and phenomena of possession' (Brown 1994).

As he awaits the outcome of a game, the gambler awaits the resolution of his life, an issue of such cosmic significance as to create in him an altered state of consciousness, similar in many respects to that experienced by prophets and diviners, and described variously as mystical and ecstatic states. According to Screech, such states exist in a variety of forms, ranging from prophetic madness (the Greek manitike) and dream-like torpor to states of spiritual possession. Fundamental to this diversity is the ecstatic state of amazement or stupour, from the verb existemi meaning to amaze or astonish. This 'acute distraction' is the sensation of religious fear or awe; a dread brought about by fright (Screech 1980). Hence we are once more brought to a consideration of that central feature of all religious experience - the sensation of dread, directly apprehended by the gambler as the uncanny - and from this basis ecstatic mental state to the existence of others, experienced by the gambler as a dream-like state and a frenzy.

**Dream State**

Inherent in this morbid amazement is a state of dream-like quality, in which the ecstatic neither knows what he is doing nor remembers it afterwards, except as through a cloud or dream (Screech 1980, p193). Although characterised by distraction and amnesia, such a state is frequently sought out by prophets for the profound illumination its removal of the subject to the realm of the sacred is thought to afford. For this reason, the Huron Indians utilise the dream state in order to induce sacred insights before playing games of chance. Before such games, as we have seen in Chapter Two, they fast to facilitate entry into the sacred realm, whereupon the result of the games will be revealed. The Esquimaux medicine man enters a similar trance in order to undertake the divining process. His dream-state is like that of the Huron, and, in its dissociative aspects, also like that of the gambler. Levy-Bruhl describes the 'hypnotic slumber or cataleptic or ecstatic trance' in which he enters the realm of unseen powers. 'His experience is like that of a dream which is induced...' (Levy-Bruhl 1966, p216). This trance-state is the condition that the gambler involuntarily enters when he begins to play.
In the phase that we called the 'dream-state', he is overcome by an absence of mind which he experiences as though in a daze (Bergler) or a dream (Dostoevsky). This dream-state is the sensation of entering another world, the crossing over into the realm of the sacred. The subject is dislocated from one reality as he begins to encounter another. It is the initial apprehension of the existence of Power. The ecstatic prophets of the New Testament experienced similar states in their confrontation with God, 'in which thought and volition cease' (Guillaume 1938, p293). Guillaume describes their transport as beginning 'when thought ceases, to our consciousness, to proceed from ourselves. It differs from dreaming because the subject is awake... it is... a temporary enhancement, not a partial disintegration, of the mental faculties' (Guillaume 1938, p293).

This is the state Richardson was in when he 'was incapable of articulate thought'. At the same time he experienced a 'temporary enhancement' of perception, when his senses were opened to let the impressions of the casino flood over him with the utmost clarity. Will and thought left him so that he became a creature of sensation, pulled along by the functioning of the subconscious mind. Echoing Guillaume's analysis, Richardson described this condition: 'It is an unconscious self-consciousness like the functioning of the rational mind in a dream when the normal response of the waking mind operates even while the subconscious mind carries the dreamer along the path of imagination' (Richardson 1980, p294).

**Frenzy**

The state of frenzy, in which the gambler loses track of the passage of time, his surroundings and the parameters of his ego, represents a peaking of the experience of play. According to Caillois, this state of 'inexorable, total frenzy' is often found in the play world, and it is this which brings that world into the orbit of the sacred. The conjunction makes play 'naturally part of the sphere of the sacred, perhaps providing one of the principal bases for the terror and fascination of the sacred' (Caillois 1962, p76). Linking the sacred with the profane, this 'divine frenzy' is indicative of the dual nature of both games and ritual we saw in Chapter One, and, as such, it should come as no surprise that it appears in gambling games as well as in religious
ritual. Guillaume describes how the *nabli* prophets inspired themselves to ecstasy by dancing and drumming, rousing themselves into such a fever or excitement 'that they were for hours oblivious to their surroundings' (Guillaume 1938, p. 114). In similar fashion, the Azande would continue their ritual until they had danced themselves into 'a condition bordering on dissociation' (Evans-Pritchard 1991, p. 87). In these kinds of ritual, participants are overcome by a delirium bordering on temporary insanity; what the Greeks called *mania* or *furor* - divine madness. From this comes the Platonic notion of the affinity between ecstasy or divine possession and madness.7

When playing, the gambler passes through various stages of dissociation that culminate in a delirium not unlike the one outlined above. In the state of vertigo or *ilinx* which, as we have seen destroys the stability of perception with 'sovereign brusqueness', the gambler loses track of his surroundings and the passage of time. In what are called 'dissociated states', he feels separate, disorientated and disconnected from himself - a condition he shares with the Azande who have danced themselves into dissociation. As the intensity of play reaches its peak, the gambler undergoes a period of temporary madness, during which 'in a certain sense, he is insane'. Dostoevsky's Alesky wondered if he had taken leave of his senses, and indeed he had, for the experience of insanity is integral to such an experience of the sacred.

Accompanying these transports of madness is the physical sensation of vertigo in which prophets and mystics become oblivious to pain, frequently losing one or more of their senses, and hallucinating, imagining bizarre noises and visions. As the gambler awaits the decision of a game, he too is seized by physical turmoil, as was Disraeli's *Young Duke* who played, gripped with nausea, his ears ringing with 'supernatural roaring'. This turmoil of anticipation is the sensation of vertigo, which gives way, when tension peaks, to a dissociated state of temporary insanity as the gambler finally enters the realm of the sacred. At last, the interlocutor is enlightened and he is swept away to communion with the divine. For a moment, his being merges with the sacred in a sublime moment of *transcendence*. Such communion is

7 See Plato's *Phaedrus* and *Ion*; also Guillaume (1938).
experienced by the gambler as well as the prophet as the sensation of plunging, when 'the interval between object and subject is... completely annulled, and the absolute otherness, the transcendence of Power, can persist only in the feeling of plunging within the universe' (van der Leeuw 1967, p185). This plunging is what Dostoevsky felt when he wondered if his experience of play was anything like Madame Blanchard's plunge from the balloon. It is also the mystical sensation of the unio mystica of the Lutherans— the loss of the ego and communion with God in a 'feeling of actual absorption in the Deity' (Weber 1990, p112). In the direct apprehension of Power, the individual is delirious and filled with power himself. The sensation is of 'the expansion of life, the collapse of all limitations, so that it seems as though the whole world were moving with oneself' (van der Leeuw 1967, p488). In this state, Richardson feels that he is more 'in the world' than he has ever been before: through his transcendence and communion with the divine, he has acquired ontological presence. According to Cassirer, this union between God and man, common to mystical religious experience, can be described as the moment when 'man becomes a god and the god becomes man' (Cassirer 1953, p230). It is this very transformation that makes Richardson feel superhuman, and that convinces Steinmetz's young gambler 'he was no longer an ordinary mortal'. As the gambler experiences the transcendence of play, his ego merges with the world, resulting in a state of indifferentiation between the world and his self. The magical indissolution of subject and object is thus also a constituent part of the religious experience of play. The well documented egotism of the gambler (for example, in Bergler 1970) can now be seen as a state in which the ego actually dissolves in the communion with the divine. What appears as egotism is merely a means to an end; the end being, in Sartre's words, nothing less than the project of mankind: 'Man makes himself man in order to be God, and selflessness, considered from this point of view, can appear to be egotism' (Sartre 1957, p92). As he plays, the gambler loses awareness of time, place and self, caught in an undifferentiated ever-present that reflects the state of the sacred in which he is immersed. Leuba describes this experience of the divine thus: 'Simultaneously with the loss of taste and hearing, the body had completely lost its sense of orientation. It seemed as though it were nowhere at all, but were simply hovering in space' (in van der Leeuw 1967, p488). This mystical 'disembodiment' is experienced by the gambler in his moment of transcendence; for it is the experience of the
divine. Cassirer outlines the conditions necessary for such an experience and in so doing, outlines the timeless, formless parameters of the experience of play: 'In order to apprehend the divine we must first cast off all the conditions of finite, empirical being; the “where”, the “when” and the “what”... for the divine “has no “where”... and all difference and contrast of time - past, present and future - are extinguished in Him: His eternity is a present now that knows nothing of time' (Cassirer 1953, p250). Hence the gambler's oblivion to his surroundings and to the passing of time as he aspires instead to the realm of the divine in which such phenomena do not exist.

Answering

For the gambler, the various states of the thrill culminate in a condition whose affective tone varies depending on whether he is winning or losing - blessed or damned. The caprice of such a condition is intimately associated with the state of the ego, and, for van der Leeuw, is typical of the ambivalence of mystical experience in general which 'circles around the impenetrability of the ego itself: at one moment it may become the most extravagant self-glorification, but also at any time the most abysmal consciousness of nullity' (van der Leeuw 1967, p507).

When winning, the gambler experiences his state of election as a transcendental communion with the Divine. However, when losing, he is not bestowed with favoured status. His loss signifies reproval and, like Richardson, he is filled with the 'blackest feelings' (Richardson 1980, p10). There exists 'a harmonious' and at the same time 'a discordant’ “state of being beside oneself” (van der Leeuw 1967, p488), and this is experienced by the gambler as either the state of harmony or discord - the total breakdown of order within the universe.

Losing

When losing, the order created by play breaks down. The gambler is given the harshest possible sign of his insignificance: he is not favoured, or special, or elect, and has no relation with the powers of the immanent realm. This is an aspect of the experience of the Wholly
Other, which Otto describes as the element of ‘overpoweringness’ or majestas and before which the individual is crushed by self-deprecation and humility (Otto 1925, p20)

In a world of participation, where no dissociation between objective perception and subjective feeling exists, the player’s surroundings assume affective characteristics. Assailed of the ‘blackest feelings’, the breakdown of order is inevitable.

In the poker game in The Music of Chance, Pozzi finds himself winning handsomely and attributes his success to the presence of his friend Nashe standing behind him. However, when Nashe leaves, the propitious forces that were generated by him are destroyed, and Pozzi begins to lose. Pozzi blames his losing streak on the actions of his friend; actions which he sees as instrumental in initiating the collapse of order: ‘It’s like committing a sin to do a thing like that, it’s like violating a fundamental law. We’d come to the point where everything was turning into music for us, and then you have to go upstairs and smash all the instruments. You tampered with the universe my friend, and once a man does that, he’s got to pay the price’ (Auster 1990, p138). The ‘music of chance’ becomes discordant; when Pozzi begins to lose a disequilibrium sets in that is apparent in every feature of the gambler’s surroundings. His lack of favour is obvious in everything he sees. When Richardson was losing, ‘he saw in every inch of the table’s betting surface a sly, pervasive danger. Numerals, squares, letters - all took on the contours of treachery’ (Richardson 1980, p247). His surroundings became imbued with menace and foreboding that spoke eloquently of his disjunction with the universe. When he is not favoured, he has no place and no real significance in the world. He was aware of ‘a sudden strangeness, an odd imbalance to everything around me. There was a subtle danger now in every person I looked at, as if I and those at the table with me no longer shared the same laws of matter. Costumes, movements, faces, sounds - all were now discordant and disjointed human data, out-of-joint images that my mind could not mend. I could not tell whether a spell had been lifted or put on me. I knew where I was, but no longer the reason for my being there’ (Richardson 1980, p240). Richardson is lost: ‘rootless and vulnerable’ uncomprehending and despairing. Meaning has vanished as the order of the world breaks down; the music of
chance has become discordant. This is the state of disorientation in which he experiences 'the most abysmal consciousness of nullity'.

Winning

Winning is the assurance of favour. When winning, the gambler's ego momentarily merges with the Divine and the sense of an Absolute Order, a sublime being at one with the universe washes over him. This is the apprehension of grace, or election, which Otto describes as a 'beatific experience of Deity' (Otto 1925, p31), and Screech as 'a momentary glimpse of bliss... a beatific vision' (Screech, 1980, p173). When Richardson won, as we saw in Chapter Four, he felt fulfilled, centred, and very aware of having a 'place' in the scheme of things. In this state, he told himself 'You are more in the world at this moment than you have ever been before'. His oceanic feelings of triumph are a consequence of his feeling that the world has become ordered, and that he has a place in it. Assuaged by a tranquil confidence, his existence is confirmed. The favour of the Divine is the bestowing of luck, and lucky people times, places and things are caught in the propitious flows that signify this favour. For the poker player in Auster's novel, such currents reveal the favour of unseen powers - 'the music of chance'. When favour is bestowed, the world coalesces into order and winning is inevitable. A kind of Pythagorean harmony reigns: 'Once your luck starts to roll, there's not a damn thing that can stop it. It's like the whole world suddenly falls into place. You're kind of outside your body and for the rest of the night you sit there watching yourself perform miracles. It doesn't really have anything to do with you anymore. It's out of your control...' When winning 'everything is in harmony... everything turns into music' (Auster 1990, p137, my italics). Metaphysical order reigns. 'We had everything balanced, all the wheels were turning, it was beautiful'. This creation of Divine order and the sensation of ecstatic tranquillity it inspires are intrinsic to the experience of winning. Cailliois described the motivation of the individual who, when winning at slots, had 'expressed his irritation with reality and made the world behave' (Cailliois 1962, p84). A similar satisfaction was discovered by the woman who, having a lucky run at craps, 'for one mythical, magical moment saw everything fall neatly into place' (Vinson 1988, p57). Another female gambler became immersed in what can only be described as a beatific serenity
when winning. Filled with a sense of otherworldly efficacy, she relates 'I just kept on betting and winning, and I was convinced I couldn't lose, that God had given me some kind of power...' A great feeling of rectitude; that everything was in its place and all was right with the world washed over her: 'I just saw it [winning] as a natural happening, the way other things in my life had come, good things and bad things, and just accepted it without getting all excited'. All was well in this state of tranquil resignation 'If that is what God wanted for me, then that is how it is' (in Custer and Milt 1984, p152). When favoured in this way, the gambler can do no wrong, for he has transcended the confines of mere existence and merged momentarily with the realm of the sacred. Now the special order of the world becomes apparent, it is imbued with meaning and what is more, the gambler has a place in it. Previous wins and losses and the unpredictable unfolding of all previous games are now 'explained' - and not by probability theory. In his privileged state of election, the exceptional now becomes explicable to the gambler who has transcended the narrow confines of probability theory and adopted an elevated vantage point which takes account of the individual case without subsuming it under the broad generalisations of what is merely 'probable'. Like the all-seeing Divine presence described by Boethius, in his state of election the gambler embraces 'simultaneously the whole of unending life as present' (Boethius 1991, p51). Now, the broad dispersal of individual outcomes becomes emotionally meaningful as signs of favour and disapproval, and not as mathematical expressions of average distributions. In the religious worldview then, order and harmony reign supreme: but this is an order and harmony of a sacred, not a rational kind.

Repetition

We saw in Chapter Four how the gambler plays over and over again whether winning or losing and now, within the context of his communion with the Divine, we can develop the broader religious significance of this repetition for, as Kierkegaard wrote, not only is repetition a category of existence in its own right, but it 'is and remains a religious category' (Kierkegaard 1983, p326). The world is formed through repetition, for 'If God himself had not willed repetition, the world would not have come into existence... the world continues
because it is a repetition’ (Kierkegaard 1983, p133). That which is repeated is made into something new, thus there is ‘no meaningless repetition, but a repetition of such a nature that the new has absolute significance in relation to what has gone before, is qualitatively different from it’ (Kierkegaard 1983, p307). The movement of repetition is manifest in the continual raising of consciousness and the realisation of the self, for the more one wills repetition, the more fully human one becomes. The will to repetition, like the Nietzschean will to power, becomes for Kierkegaard a measure of humanity: ‘He who will merely hope is cowardly, he who will merely recollect is voluptuous; he who wills repetition is a man, and the more emphatically he is able to realise it, the more profound a human being he is’ (Kierkegaard 1983, p132).

In his ever-repeated questioning as to whether or not he is favoured, the gambler embodies this ‘will to repetition’ in play. At work is the dynamic between fear and faith - the certainty he is favoured alongside the simultaneous fear he is not. This is an aspect of the ambivalence of the religious experience we mentioned before: the being attracted and repelled by Power ‘both tremor and fascination’.

When losing, the player knows he is not favoured; the Deity frowns on him and he experiences the 'blackest feelings' and the breakdown of order.

The decision of the game is final. He cannot challenge it but nor can he accept it, so his only option is to repeat it in the hope that propitious flows may begin to work, and so change his status in the realm of the transcendent.

The gambler's repeated supplication of the Deity in the face of rejection resembles the behaviour of diviners and augurs when they fail to attain the answer they require. van der Leeuw pointed out that the inquirer does not necessarily want to know what will happen next, but simply whether what he wants to happen will occur, while Levy-Bruhl's evidence indicated that natives try to solicit a good omen which, when received, negates all those that went before. Like the outcome of individual games, the decision on individual oracles remain
independent of one another, and a favourable decision outweighs all unfavourable previous ones. So, the gambler assumes, along with the diviner, ‘...if one waits a bit and tries again the answer may be different...’ (Cryer 1994, p119). Here Levy-Bruhl draws a direct analogy between the state of mind of the diviner and the gambler. The aim of the ritual of the former is to make known on which side there are sacred rights. The diviner must concur with its verdict, but he may not agree with it. The ‘curious’ state of mind behind this activity, Levy-Bruhl says, ‘is not unlike that of gamblers. They too solicit the verdict of dice or cards. If the play has been fair, the loser may be vexed, dejected or furious, but he does not protest against the verdict. The only way he can reopen the question is to begin a new game... and put his fate to the touch once more...’ (Levy-Bruhl 1966, p229).

Thus, in the hope that in a later game the divine pronouncement will be changed and he will be favoured, the gambler simply repeats his questioning until the desired result is eventually bestowed upon him. The thoughts behind Rousseau’s divinatory stone-throwing could be those of any gambler. The motivation for his actions was the uncertainty of his status ‘In what state am I in?’ he asks himself, ‘If I were to die at this moment should I be damned?... Being always fearful, and now a prey to this cruel uncertainty, I resorted to the most ludicrous experiments to overcome it’ (Rousseau 1967, p231). His tryst with the stones then begins ‘I am going to throw this stone’ he decides ‘at the tree facing me. If I hit it, it is a sign that I am saved; if I miss it I am damned’ (Rousseau 1967, p231). Rousseau’s quest for salvation is accompanied by all the physiological discord of the gambler - trembling hands and ‘a terrible throbbing of the heart’, until he hits the tree and is finally relieved of his anxiety.

When winning however, the gambler is no better off, for he is dogged by perennial uncertainty, forever unsure as to whether his favour is permanent. The deflation of mood after the intensity of play has a more dramatic quality than the mere experience of boredom outlined in Chapter Four; for the end of a game signifies the end of favour, and the loss of meaning van der Leeuw describes how, as soon as his ecstatic transport ceases, the mystic experiences recoil when it seems that God has forsaken him again: ‘It is like a bitter taste in his mouth and he feels himself twice as impotent and abandoned as before’ (van der Leeuw 1967, p491)
The foundation of the order induced by winning is tenuous, and collapses completely as soon as uncertainty begins to creep in. Despite his confidence in his favoured status, the gambler's relation with the Divine is ambivalent - how can he be sure preference has not been re-aligned and that he is still the favourite? He is insecure and suspicious, and so repeats a cycle of supplication, repeating his question over and over again for 'a repeatedly, confirmed statement [is] more foolproof' than a single assurance (Bergler 1970, p83).

Baudelaire's story *The Generous Gambler* illustrates the operation of faith and uncertainty in play in a tale about a gambler who makes a Faustian pact with the Devil. He stakes his soul and loses, but nevertheless the Devil promises to pay him as if he had won. In the Devil's description of these winnings is encapsulated what is at stake in all gambling - what will befall every gambler who is favoured: 'I shall give you the same stake you would have won if chance had been with you; that is the possibility of alleviating and overcoming for your entire life that strange disease of Boredom... Never shall you formulate a wish that I will not help you to realise, you shall dominate your fellow countrymen, flattery will be yours... fairy palaces shall come seeking you out begging to be accepted without you having to lift a finger to obtain them... you shall know all the intoxication of pleasure without satiety...' (Baudelaire 1970, p60). This is the imagined reward of the gambler favoured by Fate, and Baudelaire's gambler is guaranteed it forever, for he has staked his soul and been personally assured it by the Devil. But, typically, he is tortured by uncertainty and by nightfall goes to sleep anxiously muttering 'Oh my God, oh my God! Make the Devil keep his promise!' (Baudelaire 1970, p60). Eventually, he resorts to playing again, for even though he has won the ultimate game, he is still not satisfied that his favour will continue.

In a case study, Reik presents a woman who played cards as a modern consultation of the oracle, telling herself if she won 'this or that for which I hope, will happen; if not... my wish will not be fulfilled'. However, the powers of destiny were regarded as particularly 'malicious and treacherous', so that even when she won, she was still plagued with doubt as to whether
‘Fate will not realise its evil and secret intentions just when one thinks one is safe’ (Reik 1951, p168, p175).

This perennial uncertainty is the predicament of the gambler. Straus found a similar striving for certainty, yet inability to escape uncertainty, among compulsive patients whose ‘pathology of compulsion’ was also founded on the dynamic between faith and uncertainty.

Such patients seek absolute order and the removal of all spontaneity, and often find it in the certitude of numbers, which are ‘well-defined, exactly determinable individuals’ (Straus 1966, p319). However, this security does not last: ‘For the certitude afforded by the full meaning of the single number is soon placed in doubt by the multitude of numbers’ (Straus 1966, p319). Likewise, the certitude afforded the gambler by a favourable sign that he is favoured is soon placed in doubt by the possibility of the outcomes of all future games. In Straus’s elaboration, we can substitute for the compulsive uncertainty of his patients the perennial insecurity of the gambler posing the question of whether or not he is elect: ‘When I have resolved not to leave the house before brushing my coat twenty times from top to bottom and twenty times from bottom to top, why should it just be twenty times? Why not thirty or fifty times? Why not two or three times twenty times? And did I do it exactly twenty times? Did I make a mistake? Must I not start over again from the beginning? The guarantee of numbers breaks down too; the requirements must be raised repeatedly’ (Straus 1966, p319). The ritual that will restore order for the compulsive is founded on grounds as unstable as that of the ritual engaged in to restore order for the gambler. He wins and knows he must therefore be favoured. But uncertainty creeps in - ‘Am I really favoured?’ - so he plays and wins again and again. ‘But what about Now; am I still favoured right now? Was I really favoured before? Will I be favoured again?... and what about next time...?’ and so on. In this way, Reik’s patient could never be certain that she would be unequivocally successful in whatever project her game was prophetic of. If she asked ‘Will Franz [her husband] get a job within the next year?’ and was assured, by winning, that he would, she would worry incessantly: ‘But does that mean the present year? As measured by the calendar? Am I thinking of the Gregorian calendar? There’s a Jewish calendar too. And what about the Russian calendar?’ (Reik 1951, p170).
motivation of the gambler is not then, as the psychoanalysts would have it, a masochistic compulsion to lose, but a compulsion to question. Such compulsive uncertainty can be regarded as a manifestation of the compulsion to repeat; a tendency which, for Freud was more powerful than - and hence lay beyond - the pleasure principle. This basic and primal compulsion (which Freud also calls the 'compulsion of destiny') is derived from the conservative nature of the instincts and urges the endless repetition of an act regardless of its outcome. Repetition is here justified as an end in itself, independent of outcome, and is responsible for the exercise of a degree of control over the act being repeated. Hence, Freud writes, 'the repetition of an activity or event, sometimes experienced as possession by some daemonic power, in the obsessional neuroses or in the play of children, is pursued in order to facilitate a gradual mastery over a situation' (Freud 1984, p275-338). For the gambler, similarly possessed by a compulsion to repeat, mastery is concomitant with the knowledge of divine assurance.

In Kierkegaard, repetition secures more than mere mastery over a situation, for, as a basic category of existence, it has the power to transcend the confines of a given situation. This transcendent character opposes the immanent nature of modern philosophy, for repetition 'is and remains a transcendence' (Kierkegaard 1983, p186). In this lies its challenge, and Kierkegaard admits he is not equal to it: 'Then, too, repetition is too transcendent for me. I can circumnavigate myself but I cannot rise above myself. I cannot find the Archimedean point... I am unable to make a religious movement; it is contrary to my nature' (Kierkegaard 1983, p186,7). It is not, however, contrary to the gambler's nature, for his ever-repeated play is nothing but a religious movement, a continual striving for transcendence. Every time he bets he leaves the confines of everyday existence behind and reaches for that 'Archimedean point' outside himself. The reward is great, for upon reaching that point the gambler achieves transcendence and a momentary glimpse of the certainty he is striving for. This fleeting certainty lies at the heart of repetition, for as Kierkegaard tells us, in its continued movement is to be found 'the blissful security of the moment' (Kierkegaard 1983, p132).
Hence the gambler's desire to pursue play-in-itself is the desire to forever repeat his question and forever find reassurance - the transcendence of 'blissful security' - in the answer. He cannot stop, because to stop - even when winning - allows doubt to creep in with the time that passes from his last assurance. Every now presents fresh doubt - every potential game is therefore a game he must play. By not participating in a game, he may or may not be favoured, but what is worse is that he will not know, and he has to know, so he has to play. Mastery for the child is the equivalent of certainty for the gambler; neither group can have 'their pleasurable experiences repeated often enough, and they are inexorable in their insistence that the repetition shall be an identical one' (Freud 1984, p307). The retrograde force of the compulsion to repeat can be seen as the ultimate quest for transcendence through order and quiescence; a quest somewhat ironically manifested in the sometimes desperate rituals of insecurity engaged in by the neurotic and the gambler. The latter's need to know ties him to the order of a forever-repeated ritual in which a precarious security can only be maintained by absolute adherence to the rules. Like the compulsive, to transcend the confines of the immanent, the gambler is required to 'subordinate himself utterly and slavishly to an impersonal and general order accepted as an end in itself' (Cassirer 1953, p319).
CONCLUSION

This thesis has presented a broad perspective on the social and historical forms of gambling behaviour in western society, and has demonstrated how the diverse nature of the activity can be studied from variety of angles in order to shed light on the phenomenon as a whole. It has been shown that the modern gambling economy is the result of a long historical development of games of chance in a dynamic relation with society.

Analysis of the historically contingent conception of chance and of the historically specific character of various types of gambling has illuminated certain aspects of the form and content of modern gambling. For example, the attitude of the seventeenth century aristocrat, for whom games of chance were a symbolic battleground for the demonstration of status and prestige, is evident in the patrician disregard for money intrinsic to gambling contests today. At the same time, the ‘democratic’ style of play introduced in the nineteenth century is continued in the modern emphasis on participation: the desire simply to stay in the action for as long as possible. Both of these attitudes are contained in the pursuit of play as a thing-in-itself, valuable for its own sake, and existing outwith the realm of material utility.

It has been argued that the stratification of games, with the poor historically ranged around lotteries, and horse races and high stakes card-play the prerogative of the upper classes, set the parameters for the modern gambling economy, just as Reformation and Enlightenment criticism of these activities set the tone for contemporary debate. These criticisms were directed at chance as much as at gambling, for, in a broadly providential worldview, the notion of an omniscient, all-powerful Deity precluded consideration of random events.
Despite these historical continuities, it has been argued that contemporary gambling is nevertheless shaped by its own configuration of forces that make it a unique form of social life. In particular, commercial forms of capitalist enterprise are breaking down the traditional stratification of gambling, and, to some extent, homogenising its various forms. They have also proved stronger than the forces of moral outrage. Not only is consideration of chance no longer deemed sacrilegious, but no sooner had it been granted ontological status than it was embraced by capitalist enterprise and sold just like any other commodity.

It has further been argued that, within the modern gambling sites the pursuit of games of chance is experienced as a unique form of modern life. Submersion in an environment of chance creates a peculiar destructuration of the perception of time, space and causation, and this is part of the unique appeal of the games themselves.

Using the insights of phenomenologists, writers and gamblers, the essential nature of this experience has been characterised as the pursuit of an intense, fleeting thrill and the simultaneous desire for order and certainty. The experiential chaos of play - the plunge into chance - is resolved in the dynamic of gambling itself, whereby the gambling encounter acts as a symbolic testing of fate. It is here that the essentially religious character of games of chance is most evident, and it has been argued that the game can be regarded as a modern divinatory drama whose unfolding is interpreted by the player as being imbued with metaphysical meaning. Playing is a posing of the question 'am I favoured?', with a win a sign of divine assurance and a loss evidence of disfavour. The gambler is driven to continue asking his question; when losing, in the hope of eliciting a more favourable response, when winning, to assure himself that his favour is continued.

This dynamic can be related to wider social movements, for it has been argued that the evacuation of religious meaning from the notion of chance reflected a broader erosion of metaphysical meaning from the world, as the latter came to be increasingly interpreted according to the principles of a 'meaningless' secular order. In this way, the status of chance in the world can be regarded as an index of the degree of ontological security in modern life.
The disparity between the present status of chance and all of its previous historical incarnations is most evident in the gambling arena, for here, despite its ontological status in the world outside, the random event continues to exist as a cipher for essentially sacred meaning.

In an era of ontological insecurity, the need for meaningful explanation is great. The piecemeal explanations of probability theory fail to satisfy the desire for total explanation and, particularly in the vortex of uncertainty of the gambling arena, another level of explanation must be found. By renouncing mechanical causation for the universalism of the magical-religious worldview, the gambler realises the desire to transcend particularism, and so reveals a fundamental aspect of the human condition that is the ‘incessant struggle to secure a grasp on the whole, to rise above particularity and tentativeness’ (Straus 1966, p321).

It has been shown that, in demanding the security of holistic explanation, the gambler creates a coherent, emotionally meaningful system of belief in which the concept of chance is sacralised, once more becoming the sign of some transcendent power. In this system chance events are imbued with significance, and become meaningful at the level of their individual occurrence. The gambler thus infers something of his status - not only in the game, but, through the dynamic inter-relation of gambling and society, also in the wider world - from the outcome of individual gambles. The order and harmony that emerges out of the chaos of chance in an insecure world, then, is of a sacred, not a rational kind.

If we recall Sartre's statement that man is a totality and reveals his basic nature in even the most insignificant activities, which are indicative of the ‘reality of man in general and to his condition’ (Sartre 1957, p60), then we can go on to decipher those activities as indicative, not of an idle pastime, but as a part of the ‘bigger picture’ of human reality.
Gambling is such an activity, and in the actions of the gambler we can perhaps see, in microcosm, an image of more universal human concerns. Within these worlds of chance, the pursuit of play reveals a fundamental facet of human existence: its status as *homo aleator*.

In presenting a broad image of the gambler, this thesis has established an area for study which did not previously exist. It does not claim to be exhaustive: it is acknowledged that there are many ways of studying gambling, and that this represents only one possibility. However, by exploring various angles and raising certain issues it has at least attempted to demarcate an area for future study.

Each Chapter suggests a variety of possibilities which could be fruitfully developed in many different directions. The history of games of chance and their relation to the social structure, the existence of chance throughout history and in everyday life, the inner world of the gambler and its concomitant beliefs, and the modern arrangement of gambling forms, all offer wide scope for further research in a fascinatingly diverse and complex field.
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