

Published as: Parke, A. & Griffiths, M.D. (2012). Beyond illusion of control: An interpretative phenomenological analysis of gambling in the context of information technology. *Addiction Research and Theory*, 20, 250-260.

**Beyond illusion of control: An interpretative phenomenological analysis of
gambling in the context of information technology**

Dr Adrian Parke, School of Psychology, University of Lincoln, UK

Professor Mark D. Griffiths, International Gaming Research Unit, Psychology
Division, Nottingham Trent University, UK

Abstract

Previously, it was widely accepted that commercial gambling operates at a negative expected utility, and those individuals who believe to have influence over gambling outcomes to the extent of being consistently profitable were likely to have erroneous cognitive biases. The relationship between cognitive biases, such as illusion of control, and persistent gambling has been demonstrated in multiple studies. Recent explorative research has proposed that many individuals perceive that via application of information technology (IT) there is scope to influence gambling outcomes, to the extent of becoming consistently profitable. The objective of this study was to explore how the proposed concept of profitable, controlled gambling via IT is affecting how individuals understand and execute their gambling behaviour. This study used Interpretative Phenomenological Analysis (IPA) and aimed to produce a detailed understanding of how the concept affects gambling attitudes, behaviour and experiences of seven adult, frequent gamblers. The IPA produced three super-ordinate themes accounting for impact of IT on their gambling attitudes and experiences: Maturational Developments, 'I've Had My Own Epiphany', and 'There Are Much More Lucrative and Secure Ways to Make Money With Less Effort'. The implications of the emergent themes on gambling behaviour are discussed in detail, with particular reference to their relationship to responsible gambling behaviour.

I only counted seven participants in the paper

Introduction

Previously, commercial gambling was determined to be an unprofitable venture for individuals over a consistent period of time (Delfabbro & Winefield, 2000; Griffiths, 1994; Walker, 1992; Wagenaar, 1988). Delfabbro and Winefield (2000) proposed that if evidence shows that a primary motivation for gambling is to accumulate profit (Griffiths, 1994, 1995; Walker, 1992), then it is likely that gamblers have an irrational understanding of probability and determinants of gambling outcomes. Wagenaar (1988) questioned the contribution of individual differences and sociological factors to the development and maintenance of pathological gambling behaviour, and instead proposed that gamblers are in fact led by reasoned action. However, at a fundamental level, the heuristics used when gambling are erroneous.

According to Raylu and Oei (2002), gambling-related cognitive heuristics can be dichotomised into two categories: either a belief that they have an extent of control over gambling outcomes, or a belief that they have the ability to make accurate predictions of gambling events. One of the most predominant cognitive biases used is the illusion of control. Langer (1975) defined the illusion of control as a belief that a gambler is more likely to experience success than objective probability would dictate. Griffiths (1993) demonstrated how the structural characteristics of slot machines, such as specialist play features, were effective in developing and maintaining illusions of control. Additionally, Dickerson (1993) also outlined how several situational factors, such as whether the game is believed to be skillful, influenced gamblers' perceptions of control and a willingness to continue gambling despite incurring repeated loss.

The relationship between illusion of control and persistent gambling has been demonstrated in several studies (e.g., Ginakis & Ohtsuka, 2005; Moore & Ohtsuka, 1999; Griffiths, 1994). Delfabbro and Winefield (2000) noted that significantly more research was required before a comprehensive understanding of the causal relationship between erroneous cognitions, such as illusion of control, and gambling behaviour can be achieved. However, the concept of illusion of control within gambling is potentially under threat from the development and application of information technology (IT) software in gambling, based on explorative research (Parke, 2008). Parke (2008) theorised that because of the availability of new IT

software and applications, participants perceived that the extent of their individual control on gambling outcomes had been increased to the point where gambling may no longer necessarily be an activity with negative expected economic utility (i.e., they may actually be capable of winning in the long run rather than losing).

This increase in control is created by gamblers employing multiple strategic processes that use IT (e.g., arbitration of sporting event probabilities using betting exchanges; for full review see Parke, 2008). Currently, empirical evidence is lacking demonstrating that individuals can utilise IT to increase control over gambling outcomes to make gambling profitable over time. However, this is irrelevant to an extent because there is empirical evidence that individuals perceive that because of opportunities created by developing IT there is the possibility of profitable control (Parke, Rigbye, Parke & Vaughan-Williams, 2007; Parke, 2008). Furthermore, these studies showed that those who carried out such processes reported that they won significantly more money, more frequently (Parke et al. 2007; Parke, 2008). This means that independent of objective reality, individuals who perceive that gambling, if performed in a controlled process, can be consistently profitable are provided rational motivation to engage in the behaviour. Fundamentally, beliefs of control in gambling may no longer be illusory, and this change, driven by IT, is likely to affect gambling attitudes, experience and behaviour.

The purpose of the present study was to explore how this concept of profitable, controlled gambling via IT is affecting how individuals understand and execute their gambling behaviour. The study used a phenomenological approach, where the researchers aimed not test hypotheses, but to produce a detailed understanding of how this emerging concept affects gambling attitudes, behaviour and experience. The proposed causal relationship of gambling motivation and behaviour is likely to be complex and probably does not follow a uniform process, given the multitude of situational and individual differences across the research population. Furthermore, it is probable that the proposed concept of control over gambling outcomes via IT application might not be an objectively valid concept, and may solely be a subjective heuristic (Parke, 2008). As a result, epistemologically speaking, it makes sense to explore the cognitive understandings of gambling through Interpretative

Phenomenological Analysis (IPA; Smith & Osborn, 2003) rather than using a positivist approach.

Given the lack of empirical validation for the concept under investigation, and minimal evidence to identify the effect of this concept on behaviour and attitudes, the IPA approach is particularly suitable because it will enable unanticipated phenomena and theoretical relationships to emerge. The idiographic handling of the data may also provide a more comprehensive understanding of the phenomena in relation to contextual factors, by identifying shared and unshared experiences (Shaw, 2001). By increasing our understanding of gambling motivation within the context of developing IT, it is possible that new hypotheses for future research will emerge.

Method

Participants: Participants were recruited using a variant of purposive sampling (Willig, 2001). Patton (2002) highlighted the importance of selecting participants based on their ability to provide rich data, making purposive sampling the most effective method of recruitment for an IPA study. The inclusion criteria for participation in the present study were that individuals had to have been current regular gamblers (i.e., gamble at least once per week) and must have gambled regularly for the past five years. The specified inclusion criteria were selected to obtain a sample that may have experienced changes in gambling activities and their environments, associated with technological advances. Participant fulfilment of the inclusion criteria was assessed through self-report. Participants were recruited from several gambling establishments in a large city in the East Midlands area of the UK. In total, seven gamblers participated (six males and one female) with a mean age of 29 years (age range of 20 to 42 years). All nominal information relating to the identities of the participants, such as names and place names, have been altered to protect anonymity.

INSERT TABLE 1 ABOUT HERE

Data Collection: Data were collected through semi-structured interviews. The objective of data collection was to accumulate rich, considered, and highly contextualised disclosure about attitudes and gambling behaviour and any particular

changes that may have occurred in their gambling career. The semi-structured interviews each lasted between 50 and 90 minutes, and were all carried out in a university meeting room. Interviews were recorded on a digital tape recorder, and then transcribed verbatim by the first author.

The researchers were reluctant to design a detailed semi-structured interview, because of concerns of how findings of past research may bias any wording and directional influence of questions. Based on this reflexivity concern, the structure of the interview was determined without specifying any particular question wording, and instead topics of discussion were noted under specific categories. The interview was separated superficially into three sections: (1) Early gambling attitudes and behaviour; (2) Current gambling attitudes and behaviour; and (3) Future changes in gambling attitudes and behaviour. The interview questions cascaded organically, with the interviewer selecting lines of questioning based on participant responses to earlier questions. This method of interviewing was particularly conducive to collecting personal data, as the interviewer explored each disclosed incident and perspective in a detailed, critical manner. Data collection remained focused on attempting to make participants discuss their interpretations of gambling experiences and understandings of their behaviour in the context of developing IT, as lucidly as possible.

Data Analysis: Data transcripts were analysed in accordance with the canons and techniques of IPA methodology (Smith & Osborn, 2003). In IPA, the technique involves a double hermeneutic, whereby the participant attempts to interpret the significance of their own experience and the researcher, in turn, makes interpretations about what has been represented in the interview. Although such inductive reasoning is criticised for being too subjective, in IPA this level of subjectivity is considered to be of pivotal importance rather than an epistemological limitation. The aim is not to produce an objective narrative of the transcripts but rather a narrative that is “a co-construction between participant and analyst in that it emerge from the analyst’s engagement with the data in the form of the participant’s account” (Osborn & Smith, 1998; p.67). In IPA, unlike many other phenomenologist methods, analysts do not profess that they can access the ‘lived experience’ of the participant directly, but instead acknowledge that the analyst must draw from their own existence and experience for successful interpretation (Willig, 2001). IPA stems from a relativist

ontology, and therefore makes no attempt to produce claims about objective reality, because as Kvale (1996) stated the only important reality is people's perceptions of reality. Throughout the interpretative process the interviewer maintained reflexivity, carefully considering the potential of individual bias in making interpretations.

The analytic process was essentially idiographic where each case was analysed in its entirety before commonalities across the transcripts were extracted and retained as the essence of the experience of gambling within the context of developing IT. Each cluster of themes was provided with a super-ordinate descriptive title that accounted for the incumbent themes. Continuing the idiographic nature of the study, care was taken to interpret data and extract themes on a case by case basis initially. After each of the seven transcripts had been independently analysed and reduced into hierarchical thematic structure, attempts were made to merge the thematic structure of each transcript into a more coherent, global model that maintained the essence of the phenomena being studied.

In order to maintain credibility of analysis, the interpretative process and the final model of super-ordinate and their sub-ordinate themes, was audited by the second author (Smith, 2003). There was a dialogue with the second author who ultimately was satisfied with inductive reasoning and representation of data. Finally, the agreed hierarchical structure of themes was transformed into a narrative account, supported substantially with verbatim extracts. The inclusion of a substantial amount of verbatim accounts is important as it retains the voice of the participants while also providing an opportunity for the reader to critically appraise the interpretations made by the researcher (Newton, Larkin, Melhuish & Wykes, 2007).

Results

Analysis revealed three emergent super-ordinate themes from the corpus of interviews that illuminated understanding of how gambling behaviour and attitudes to gambling behaviour have developed amidst the emergence and proliferation of information technology (IT) within the social and behavioural domain of gambling. Super-ordinate Theme 1 identified that participants unanimously reported that control was possible in modern gambling activities with the use of IT. However, the impact of this

phenomenon was limited because *‘there are much more lucrative and secure ways to make money with less effort’*. Secondly, and evidently linked to attempts to understand one’s motives in gambling, each participant discussed or alluded to a new, enlightened understanding of their gambling behaviour referred to as an ‘epiphany’ (Super-ordinate Theme 2: *‘I’ve had my own epiphany’*). The third super-ordinate Theme to emerge was labelled *Maturational Developments*, describing the cluster of themes illustrating how situational changes in lifestyle stemming from maturation influenced the experience of gambling. Essentially, in the context of the participants maturing socially, the developments in IT have made gambling a more rational risk activity than when they were younger. Each of the three super-ordinate themes to emerge in the analysis was constructed of component sub-themes. The thematic structure of each super-ordinate theme is presented in Table 2.

INSERT TABLE 2 ABOUT HERE

Super-ordinate Theme 1: “There are much more lucrative and secure ways to make money with less effort”

It emerged clearly from the transcripts that it is possible to profit in both offline and online forms of gambling, by manipulating various forms of IT. The significance of this belief was moderated in the sense that although participants professed that such profitable control was indeed possible they indicated that there were also negative consequences of gambling in a controlled and profitable manner. This profitable, yet restricted form of gambled was described by one participant as ‘trawling’, highlighting the demanding and onerous nature of the activity.

Significant opportunity cost when ‘trawling’

Opportunity cost in terms of gambling comes in various formats, but what participants are primarily referring to within this theme is the opportunity cost of time spent when gambling and engaging in gambling-related activities. This concept of time spent, refers in a finite sense of sacrificing time that could be spent on everyday responsibilities and leisure, but also refers in a more existential sense to wasting opportunities for life-enriching activities such as creativity, perhaps best summarised as ‘self-actualisation’. For example, when asked whether the idea of using winnings

from poker gambling as a primary source of income appealed to him, Jason responds negatively:

Extract 1 – Jason: *“No because like I said I don’t think there is a lot of joy in it. It’s OK now and again as I say like a leisure thing, trying to pit your wits against someone else”*

Interviewer: *“How does it make you feel pitting your wits against the other guy?”*

Jason: *“I quite enjoy it. Like I said if I did it all the time I wouldn’t feel like I was doing anything useful with my life”*

Interviewer: *“What about those who work in a factory, would they not be more challenged playing poker for a living?”*

Jason: *“Well I suppose people would argue that working in a factory is still contributing to society. You are still creating something (...) You know, there are many levels to this conversation”*

In Extract 1 Jason suggests that there is limited pleasure in gambling. Jason removes the act of making money in gambling to a more abstracted level and contemplates it as a core area of his life, and views the behaviour as waste of one’s life. Furthermore, when asked to compare the activity of profitable, controlled gambling with what the authors considered to be a menial and unrewarding occupation (factory work), Jason found more accomplishment in factory labour. Jason retorts that the factory worker has the benefit of an end product that can contribute to their external environment as well as their own remuneration, whereas profitable poker gambling is interpreted to be devoid of this dividend. Through more detailed interpretation, Jason may be expressing the insular nature of gambling, highlighting the self-indulgent motives of gambling, even within profitable gambling. Caroline (as demonstrated in Extract 2 below) expressed similar perceptions to Jason regarding the insular, ego-centric nature of continuous gambling by suggesting that she was not attracted to increasing gambling exposure in coherence with her ability to ascertain profits from gambling.

Extract 2 – *“If I was winning a decent amount (...) I might, might consider it. But there are so many other things to consider like the fact I have a family. If it was just me then maybe... I don’t think I’ll stop playing poker but I don’t think I’ll play it as much. Because with the baby coming I don’t want to be playing (...) Yeah, imagine you got aces and people are going all in and the baby starts crying and its like ‘well, which do I do?’ Obviously you have to go for the child but you don’t want to feel like you’re trying to get it sorted out quickly so you can get back to your poker hand”* (Caroline)

It is evident from Extract 2 that Caroline perceives gambling to be a secondary concern to her role as caregiver to her family. However, indirectly she highlights the level of engrossment involved in playing poker successfully. Caroline demonstrates clearly that her attention while poker gambling is strictly limited, and therefore if she engages in this behaviour to a substantial extent, then she will compromise her ability to perform other roles within the family that are important to her. It is implied that the role of contributing to the family is perceived by the participant to be more rewarding than acquiring profit from poker gambling. Further evidence of the limited nature of the rewards from profitable gambling is presented by Chris who professes that his current, admittedly excessive, involvement in gambling is merely a transitional phase which is likely to be reduced when opportunities to engage in more gratifying activities, such as his future career, emerge:

Extract 3 – Interviewer: *“So how do you understand your gambling now and what role does it play in your life?”*

Chris: *“It doesn’t play a role as such. It’s a game and I can stop if I want. There have been times I’ve stopped for like three weeks and sometimes more. Like when my exams start I’m going to stop playing and start studying. I put all this money into college and it’s all a waste of time unless I get a good degree out of it. I want to get into banking or finance or something like that. That’s where the real money is. Poker is just a hobby on the side”*

Chris, despite strongly advocating consistently throughout the transcript that it is possible to ascertain profits demonstrates in Extract 3 that gambling is a peripheral consideration when opportunities to develop one’s career become available. Essentially, this suggests that although profit can be consistently obtained when gambling, this profit is insignificant in comparison to other activities such as having a successful career. This is illustrated through describing money obtained from working in banking and finance as ‘real money’, and therefore implying that money acquired from gambling is somewhat less significant. Jason echoes this disposition in Extract 4 (below) by indicating that there are more simplistic and productive ways of accumulating profit:

Extract 4 – *“To some extent I think the rules work [the rules of profitable, controlled gambling via IT] but at the end of the day I think it comes down to the basic argument that if you did it purely to make money there are much more lucrative and secure ways to make money with less effort”* (Jason)

The large opportunity cost of trawling must be placed in the context of the consistent amount of profit that can be acquired. Intuitively, the lower the amount of money that can be acquired the higher the opportunity cost, when considered as a trade-off. Perhaps the weak standing of acquiring profit through gambling, in comparison to one's career and role within the family, is largely determined by the limited amount of money that can be made. From the data it is apparent that it requires considerable endeavour for little reward when manipulating the gambling infrastructure that has been provided by developments in IT. The use of the term 'trawling' for such forms of controlled gambling conveys an impression that is similar to commercial sea fishing (i.e., not only is it an arduous task but also several external factors influence profitability such as luck).

"It's a grind"

This component theme highlights the taxing and laborious nature of gambling in a profitable, controlled process via IT applications. The participants having acknowledged that the control available is still limited and the significant opportunity cost required, also disclose that once the gambling activity becomes centred on maximising profits that the activity loses its appeal:

Extract 5 – *"It's hard to be disciplined at the table but hey that's the cost if you want to make money. Successful poker when you get deep down isn't about fun, it's a grind. Don't get me wrong, it's a fun game but not if you are playing professional or looking to win money. That's the way I see it"* (Trevor)

According to Trevor, poker gambling is devoid of fun and enjoyment when the objective in poker becomes about making money. This suggests that that gratification when gambling emanates from the creativity and spontaneity of gambling decisions in contrast to adhering to strict strategic patterns. The metaphor 'grind' indicates that profitable, controlled poker is a mechanical behaviour that is oppressive and repetitive, and devoid of pleasure and excitement. This disposition is echoed by Jason who (in Extract 6 below), demonstrates the banality of playing professional poker:

Extract 6 – *" I think it's possible for people to make money when playing poker particularly if they have a high level of rake-back which is all these types of bonuses that they can get. Rake-back, loyalty bonuses, um free-rolls, there are all sorts of ways to maximise your income. I think I wouldn't advocate it personally for two*

reasons and this is my own personal opinion. First one is I think it's very time consuming and I don't think it's particularly any kind of fun (...) I've realised it's not particularly fun to play safe (...) Profitable play is letting your four suits [a potentially strong hand] go if you're not getting the right price to follow it (...) And I feel that if poker is not played as a game and as a relaxation enjoyment thing then I think poker is the opposite of that" (Jason)

From a simplistic interpretation of Extract 6, it is reasonable to conclude that gambling within a rigid set of instructions removes a significant amount of pleasure from the activity and essentially makes the activity less rewarding. Fundamentally, the admission that gambling in a strategic, profit-orientated mode that has limited control is not enjoyable and is consuming to the point of forgoing other rewards activities and social roles, can be interpreted as a negative appraisal of this behaviour. Participants feel that the rewards achieved from controlled, strategic gambling are ultimately outweighed by the negative consequences of engaging in such behaviour.

Super-ordinate Theme 2: "I've had my own epiphany"

Following on from the acknowledgement that although gambling can be profitable that it is outweighed by the non-pleasurable requirements of gambling in a controlled pattern, participants also disclose that gradually through their gambling experiences they are beginning to realise that profit is not their primary objective when gambling.

"There was some element fooling myself"

Participants indicated that they had come to accept that the profit acquired from gambling is often a secondary objective of their gambling participation:

Extract 7 – " I would consider that some of the more intelligent gamblers around the world at the minute agree that it's more about fun. When I say intelligent I don't mean professional I mean people who are aware. We don't gamble to win money but because of the benefits you get out of it (...) There was a transition but it's hard to pinpoint what that was. I mean you can stipulate that even right until recently I think there was some element of fooling yourself that goes on where you talk about, where you, where you convince yourself and other people that you are motivated by making profit and income" (Jason)

The attempt to disguise the legitimate objective of gambling, as disclosed in Extract 7, could be interpreted as an admission of the impractical, and possibly immature gratification that is achieved through gambling. Here, the behaviour would appear,

superficially at least, to be more rational and legitimate if the objective was to obtain profit rather than obtaining stimulating gratification. Charlie (in Extract 8 below) supports this admission by stating that gambling is entertainment rather than about attempting to win money:

Extract 8 – Charlie: *“You need to be honest with yourself there. It’s not about the money is it?”*

Interviewer: *“What’s it about then?”*

Charlie: *“Something else. It’s about missing the bus and having to wait for an hour. It’s about wanting to be out of the house for a while”*

“When you can’t afford to lose it, that’s the ultimate gamble”

Another sub-ordinate theme to emerge from the participants’ realisations about their true motivations for gambling is the distinction between social gambling and ‘real’ gambling. According to the participants, unless there are significant negative consequences to losing money staked then it is not considered an act of gambling. As a result, exerting control over gambling outcomes and restricting the possibility of incurring loss through using IT processes is not really gambling:

Extract 9 – *“Granted, the promise of winning is central to enjoying the game but the threat of losing money makes it more of a pure game. (...) The most exciting gambling is when there is risk. There is always risk involved because of giving up your time and some money but when it has real implications, when you can’t afford to lose it, that’s the ultimate gamble”* (Jason)

In Extract 9, Jason indicates that the most authentic form of gambling is when there is an immediate threat of punishment. Essentially, by gambling within one’s affordable budget the behaviour remains devoid of an integral element of excitement. This statement could be interpreted to suggest that if one accepts that profiting from gambling is unlikely, the pleasure experienced when gambling results from putting oneself in danger and potentially escaping punishment. Further evidence of this interpretation is presented in Extract 10 (below) where Charlie describes how the experience of gambling has changed now that he is in a more financial stable position:

Extract 10 – Interviewer: *“Has the fun drained out of football [soccer] betting for you then?”*

Charlie: *“I wouldn’t say it’s gone. It’s different though. It felt different then. It was about finding an edge and trusting your food money on this edge you earmarked (...)”*

In uni[university] stakes were higher because you lose then your semester is spent eating 'best buy' soup [budget food product] and bread and watching TV at night”

It is evident that the experience of gambling in terms of pleasure derived is largely determined by the level of punishment one exposes oneself to. The act of minimising exposure to potential punishment (i.e., losing, through acquiring knowledge and achieving control), is the core component of profitable gambling. From this, it is understandable why the possibility of strategic, profitable style of gambling using IT applications, is not widely acclaimed by the participants. In essence, by implementing control and minimising risk, the pleasurable essence of gambling is removed.

Super-ordinate Theme 3: Maturational Development

Participants explain how as they have matured, their ability to engage in leisure activities is determined by the demands of their career and social roles (e.g., parent, spouse). IT has enabled participants to gamble socially without detriment to competing responsibilities that appear to be important to their self-concept. Furthermore, in relation to self-concept, participants indicate that the impact of losing money when gambling is reduced based on their capacity as adults to acquire funds through salary or credit provisions, whereas previously this was not the case. Essentially, attitudes, experiences, and consequences of gambling for the participants transform, not only in relation to developing technology but in response to situational changes in their lifestyle.

“All I have to do is sign off”

The increase in rational motivation for engaging in gambling may stem from a reduction in the opportunity costs of gambling. [For purposes of clarity it is important to acknowledge that the opportunity cost of ‘gambling purely for profit’ is not the same as opportunity cost of ‘gambling as leisure’]. Changes in the environmental characteristics of gambling within the context of IT, means that participants can gamble remotely. Jeff, was initially reluctant to gamble as an adult because he perceived the activity to detract from one’s ability to fulfil familial responsibilities. However, since the availability of online gambling, Jeff feels that gambling no longer is a threat in this respect because it can be carried out in the home.

Extract 11 – *“Growing up in that [industrial] area you would see the men just drink and bet all the money at the weekend and then leave their family with nothing for the rest of the week. Nothing but selfish losers. I guess that’s why it didn’t appeal to me; certainly not to any regular extent. (...) After online poker became popular playing online made a lot more sense to me. Don’t have to go out of the house to participate. That means I’m always on call for the family and work. I would feel terrible that if work called me in to do overtime and my wife told them I was out at the casino. It would make me feel like a low-life who wasn’t taking care of business. (...) If stuff needs fixed or my son needs help with his homework I’m right there and available. All I have to do is sign off”* (Jeff)

From the transcripts it is evident that gambling is a potential threat to participants’ valued self-concept. Gambling is a leisure activity, however, through IT the activity can now be engaged in within the home reducing the opportunity cost in terms of fulfilling social roles that are important to the individual. In Extract 11 (above), Jeff indicates that he would be reluctant to gamble in an external environment because it may limit his ability to fulfil his perceived responsibilities:

“It doesn’t really affect my day”

Participants are indicating that previously, when access to funds was limited because they were at university or at an early stage in their career, winning was disproportionately more rewarding than it is now as they are more financially secure. Intuitively, it is logical that individuals would only need to increase the money at risk in proportion to their increase in wealth to achieve the previously experienced arousal. However, as demonstrated in Extract 12 (below), Trevor explains that as adults they can ultimately avoid destitution even if they gamble considerably more:

Extract 12 – Interviewer: *“Is losing the same now as it was when you were in college, or even as an adolescent?”*

Trevor: *“It was much more biting then. There were real problems associated with losing like not having money to take the girlfriend out, not having enough money to get the stuff everyone else had.”*

Interviewer: *“I would have thought there were more consequences associated with losing as an adult, simply because you have more responsibilities?”*

Trevor: *“That’s true but you’re forgetting that as a kid there where you can get money from is limited. When you blew your money that was that, there just was no more. But as an adult you have more responsibilities but you also have a beautiful thing called credit. Like say I spent 200 on poker today, what are the consequences? I owe about £65,000. Do you think that another 200 on top of that is really going to be an issue? When I lose all I have to do is raise the limit on my credit card, and things go back to normal”*

Trevor, as an adult, has accumulated significant debt and this affects how he interprets and experiences losses from gambling. Although Trevor does not state the source of his debt (e.g., mortgage borrowing, student loan, etc.), it is common for adults to have acquired some form of structured debt. From Trevor's perspective, losses incurred are devalued when contrasted to his accumulated debt, and therefore reduces the punishment experienced when losing. Furthermore, this perception of the consequences of losing as an adult helps explain why participants cannot experience similar levels of arousal when gambling, as they did when access to money was restricted. Put simply, perceptually participants as they mature, experience less threat from losing as they believe there will be minimal consequences in terms of their lifestyle. In Extract 13 (below), Charlie explains how the experience of winning has transformed as he has become wealthier since leaving university. Charlie describes how winning online lacks tangibility and how this has implications for pleasure derived from winning:

Extract 13 – *“Now I've got money. I'm not the poor student anymore. The winning thing is different. If you won in uni[versity] say even something like £150, that was massive. You would go buy labelled clothes, buy nice stuff from Tesco's, buy beer you like instead of white cider. There was something tangible there. Now, like I said I have the money. I buy labelled clothes, I buy nice food, I buy the beer I like instead of what's on offer. I have savings and stuff, so I pretty much get what I want, so to me the thrill of winning is different. Don't get me wrong I enjoy winning money but the point is, is that it doesn't really affect my day. If I win now I don't walk out of the bookies with a wad of twenties. It just goes into my online account”* (Charlie).

When funds are limited then both the positive and negative consequences of gambling are enhanced, making the game more rewarding not only in terms of winning but also in terms of experienced arousal. It is apparent that the nature of the experience of gambling for participants is related strongly to situational factors influencing access to money.

Discussion

If participants perceived this construct (which construct exactly? Ambiguous) to be valid, then motivation to gamble based on perceptions of outcome control, may no longer necessarily be irrational. Fundamentally, there is scope to consider gambling as rational economic activity. The purpose of this study was to explore how the concept

of profitable, controlled gambling via IT is influencing how individuals' understand and execute their gambling behaviour. Essentially the research aimed to produce a detailed understanding of how this concept affected gambling attitudes, behaviour and experience. The findings of the study have demonstrated that for these participants, development in IT has changed gambling attitudes and behaviour. Equally, however, personal development and maturation, and the resultant increase in responsibility have also emerged as a powerful catalyst for change in participants' gambling attitudes and behaviour.

Taking the first higher order theme, '*there are much more lucrative and secure ways to make money with less effort*', it is evident that the opportunity cost of engaging in profitable, controlled gambling is too much in relation to the small level of expected profit. Gambling as an activity does not provide several important sources of personal satisfaction such as being productive, fulfilling social roles and applying one's abilities. Gambling, and profit from gambling, is a secondary consideration in relation to satisfying these needs, and therefore rational motivation to gamble is persistently outweighed by other sources of pleasure and manifestations of one's identity. Furthermore, it is felt that the pleasure taken from gambling is removed once the activity becomes a repetitive, sterile process, where the individual has no outlet for spontaneity.

The second higher order theme, '*I've had my own epiphany*', represents a genuine enlightenment and concession that the previously professed motivation to gamble to make profit was a façade. Acquiring profit was an adopted pretence that was highlighted as a rationalisation, when the opportunity to make consistent profit was made available through IT processes. Fundamentally, the participants admitted that the satisfaction they receive from gambling is not primarily sourced from making profit, and more about receiving entertainment. It appears that the concept of personal control over gambling outcomes is a useful schema to deploy when rationalising involvement in a risk activity. Whereas in reality, for the participants, it is the uncertainty and risk that is pleasurable, and that by maintaining control the essence of gambling is detached.

The primary feature of the third super-ordinate theme '*maturational development*' is the effect that changes in personal circumstances have on gambling experiences. As participants mature in age, the behavioural contingencies of gambling (i.e., winning as positive reinforcement and losing as punishment), are muted to an extent because as mature individuals they have more income, more access to credit and more structured debt. The thrill of winning money is reduced because in comparison to structured debt the win appears negligible. Moreover, as the individuals mature, their levels of responsibility increase, namely their time restrictions because of work and relationship commitments, restricting their ability to engage in alternative sources of leisure. Many deterrents of gambling regularly, as a responsible adult, have now been removed because it is no longer necessary to be unavailable while gambling for important social roles such as being a parent or provider. Online gambling is perceived to be a practical solution to engaging in a leisure pursuit that does not compromise the valued social roles one acquires during social maturation.

Information technology, control and gambling motivation: A key explanatory model for pathological gambling is the cognitive model (Sharpe & TARRIER, 1993; Griffiths, 1994; Ladouceur & Walker, 1996). The basic premise is that strong disordered cognitive schemas develop, such as beliefs of outcome control, and provide motivation to gamble despite persistent losses (Blaszczynski & Nower, 2002). Explorative research has indicated that it may be possible to use IT applications to increase outcome control in gambling, thus potentially making it consistently profitable (Parke, et al. 2007; Parke, 2008). As a consequence, perception of control may not be an erroneous cognitive heuristic for gamblers. From the emergent findings in the present study, the effects of this new construct are not particularly significant in changing behaviour for this cohort of gamblers. Establishing control in gambling was seen as undermining the purpose of the activity. Gambling was clearly seen as a source of entertainment, and that although winning money was integral to the pleasure received when gambling, focusing on removing the unpredictability and risk from the activity was undesirable. .

Motivation to gamble has been consistently linked to winning (or the chance to win) money (Dumont & Ladouceur, 1990; Walker, 1992). In this study, when faced with opportunity to win money on a consistent basis, the participants were reluctant to

engage in the processes necessary to achieve this aim. It is possible that the motivation to gamble to win money may be an erroneous cognition deployed. The lack of motivation to achieve this perceived aim led participants to concede that their primary motivation to gamble is to extract pleasure in various forms, independent of profit (e.g., entertainment, arousal, escape, etc.). The implication of this increased awareness of intentionality will, by default, increase the objective rationality of the behaviour. Participants can engage in the behaviour more purposefully, in terms of adapting attitudes and gambling behaviour. Potentially, if gambling is recognised primarily as a source of leisure, expenditure in terms of both money and time may also be adapted to fit into this new understanding of the motivation to engage in the behaviour.

Implications for responsible gambling behaviour: For this cohort of gamblers, it was evident that the emergence of this construct aided the realisation of their genuine objectives when gambling. The perceived ability to be consistently profitable led the participants to become aware, through their reluctance to gamble in the required mode, that their objective in gambling was acquiring pleasurable experience. Research shows that problem gambling is associated with erroneous heuristics, which in turn influences one's ability to make rational gambling choices (Moore & Ohtsuka, 1999; Griffiths, 1994). In other words, an individual being fully aware of the true nature of their behaviour, including their motivation to complete the behaviour, is a positive step towards responsible gambling. The more that gambling behaviour is transparent to the individual, and they remain cognisant of the exact nature of their behaviour, devoid of any heuristic, the more rational gambling behaviour will become.

The ability to determine whether the findings of the present study are applicable to the overall gambling population through traditional forms of quantitative and qualitative research design is questionable. The ability to penetrate and measure individuals' underlying motivation to gamble in the context of their social and gambling environment may be reserved for idiographic methods of analysis. The relationship between the structural aspects of the gambling activity and situational factors in the gambling environment, and individual behavioural intentionality has been demonstrated in this study to be complex and multi-faceted. It is possible that this

relationship might not be able to be reduced into quantitative variables comprehensively, and there is a substantial danger that structured interviewing may influence participant conceptualisations, reducing the validity of the potential findings. It is probable that the grounded knowledge that emerged in the present study may not be validly applied to the wider gambling population because the lack of suitable research designs to achieve this objective, effectively limiting the impact these findings may have on gambling theory.

Epistemological limitations of IPA: A construct to emerge was the belief that through manipulating IT applications and processes, it was possible to gamble and be consistently profitable. This construct has been uncovered, and indeed explored, through the aforementioned epistemological perspectives. However, in this IPA study, we are afforded an idiographic exploration of the significance of this construct on individual's attitudes and behaviour. To explore the influence of this construct through traditional nomothetic research methods would lose much of the detailed contextual relationships, leading to a restricted understanding of the construct and its effect of gambling experiences.

The objective of IPA is to obtain an understanding of lived experience regarding a specific phenomenon (Smith & Osborn, 2003). As a result, we are reliant upon the participants' ability to be introspective and reveal the significance of their experience. Therefore, a limitation of IPA is that its success is determined by the ability of its participants to articulate their introspective interpretations of their experience (Willig, 2001). The impact of this limitation on research success is determined by the researcher's ability to interview the participants from a critical perspective, continually requesting participants to consider their experience from competing perspectives. After careful inspection of the interview transcripts by both authors, it is tentatively proposed that this recommendation has been achieved in this study.

Conclusions: Despite the idiographic nature of the study, there was considerable consensus regarding gambling attitudes, behaviour, and experiences in relation to the specified emergent construct. Fundamentally, for this cohort of gamblers, there was minimal motivation to gamble in the requisite process in order to make consistent profits using IT applications, because the opportunity costs of the time required were

incommensurate with potential profits. Furthermore, through evaluating their reluctance to engage in profitable gambling, participants were provided with a clearer understanding of their motivation to gamble and therefore eliminated an erroneous cognition. The core finding is that developing IT has made gambling a more viable leisure activity to the mature gamblers in the study. In essence, the participants could more justifiably rationalise engaging in gambling because by becoming more expedient it is less of a threat to valued social roles that are integral to one's self-concept as an adult. Although IT was shown to have substantial influence in changes in gambling perspectives and experience, personal development and maturation was also identified as a primary catalyst for behavioural change in gambling.

References

Blaszczynski, A. & Nower, L. (2002). A pathways model of problem and pathological gambling. *Addiction*, 97, 487-499.

Delfabbro, P.H. & Winefield, A.H. (2000). Predictors of irrational thinking in slot-machine gambling. *Journal of Psychology*, 134, 117-128.

Dickerson, M. (1993). Internal and external determinants of persistent gambling: Problems in generalising from one form of gambling to another. *Journal of Gambling Studies*, 9, 225-245.

Dumont, M., & Ladouceur, R. (1990). Evaluation of motivation among video poker players. *Psychological Reports*, 66, 95-98.

Ginakis, S., & Ohtsuka, K. (2005). Problem gambling: An exploration of the role of global personal hopefulness, short term gambling hope and illusion of control beliefs. *Gambling Research*, 17(2), 7-16.

Griffiths, M.D. (1993). Fruit machine gambling: The importance of structural characteristics. *Journal of Gambling Studies*, 9, 101-120.

Griffiths, M.D. (1994). The role of cognitive bias and skill in fruit machine gambling. *British Journal of Psychology*, 85, 351-369.

Griffiths, M.D. (1995). *Adolescent Gambling*. London: Routledge.

Kvale, S. (1996). *InterViews: An introduction to qualitative research interviewing*. London. Sage.

Ladouceur, R. & Walker, M. (1996). A cognitive perspective on gambling. In: Salkovkies, P.M. Eds. *Trends in cognitive and behavioural therapies*. page numbers needed. Chichester: John Wiley and Sons.

Langer, E. J. (1975). The illusion of control. *Journal of Personality and Social Psychology*, 32, 311–328.

Moore, S.M., & Ohtsuka, K. (1999). Gambling activities of young Australians: developing a model of behaviour. *Journal of Gambling Studies*, 13, 207-213.

Newton, E., Larkin, M., Melhuish, R. & Wykes, T. (2007) More than just a place to talk: Young people's experiences of group psychological therapy as an early intervention for auditory hallucinations. *Psychology and Psychotherapy, Theory, Research and Practice*, 80, 127-149.

Osborn, M., & Smith, J.A. (1998). The personal experience of chronic benign lower back pain: An interpretative phenomenological analysis. *British Journal of Health Psychology*, 3, 65-83.

Parke, A. (2008). *An Explorative Investigation of the Effects of Information Technology on Gambling and Gambling-Related Behaviours*. Unpublished doctoral thesis, Nottingham Trent University.

Parke, J., Rigbye, J., Parke, A. & Vaughan-Williams, L. (2007). *Global Online Gambler Survey*. Report prepared for eCommerce and Online Gaming Regulation and Assurance.

- Patton, M. (2002). *Qualitative research and evaluation methods*. London: Sage.
- Raylu, N., & Oei, T. (2002). Pathological gambling: A comprehensive review. *Clinical Psychology Review, 22*, 1009-1061.
- Sharpe, L., & Tarrier, N. (1993). Towards a cognitive-behavioural theory of problem gambling. *British Journal of Psychiatry, 162*, 407-412.
- Shaw, R.L. (2001). Why use interpretative phenomenological analysis in health psychology? *Health Psychology Update, 10, 4*, 48-52.
- Smith, J.A. & Osborn, M. (2003). Interpretative phenomenological analysis. In J.A. Smith (Ed.), *Qualitative Psychology: A practical guide to research methods*, pp. 51-80. London: Sage publications.
- Smith, J.A. (2003). Validity and qualitative psychology. In J.A. Smith (Ed.), *Qualitative Psychology: A practical guide to research methods*, pp.232-236. London: Sage publications.
- Wagenaar, W.A. (1988) *Paradoxes of Gambling Behaviour*. London: Erlbaum.
- Walker, M.B. (1992). Irrational thinking among slot machine players. *Journal of Gambling Studies, 8*, 245-288.
- Willig, C. (2001). Interpretative phenomenology. In C.Willig. (Ed.), *Introducing qualitative research in psychology: Adventures in theory and method*, pp. 50-69. London: Open University Press.

Table 1: Participant demographics		
Participant Name	Sex	Age
Caroline	Female	29
Charlie	Male	24
Chris	Male	20
Jason	Male	34
Jeff	Male	42
Tom	Male	26
Trevor	Male	29

Table 2: Hierarchical thematic structure of experience of gambling behaviour in the context of developing Information Technology	
Super-Ordinate Themes	Component Themes
<i>‘There are much more lucrative and secure ways to make money with less effort’</i>	<ul style="list-style-type: none"> • Significant opportunity cost when ‘trawling’ • ‘It’s a grind’
<i>‘I’ve had my own epiphany’</i>	<ul style="list-style-type: none"> • ‘There was some element fooling myself’ • ‘When you can’t afford to lose it, that’s the ultimate gamble’
<i>Maturational Developments</i>	<ul style="list-style-type: none"> • ‘All I have to do is sign off’ • ‘It doesn’t really affect my day’