What differentiates professional poker players from recreational poker players?
A qualitative interview study

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Abstract

The popularity of poker (and in particular online poker) has increasingly grown worldwide in recent years. Some of the factors that may explain this increased popularity include: (i) an increasing number of celebrities endorsing and playing poker, (ii) an increased number of televised poker tournaments, (iii) 24/7 access of poker via the internet, and (iv) the low stakes needed to play online poker. This increase in the popularity of poker has led to the increased incidence of the 'professional poker player'. However, very little empirical research has been carried out into this relatively new group of gamblers. This research comprised a grounded theory study involving the analysis of data from three professional poker players, one semi-professional poker player and five recreational poker players. Results showed that all players believed that poker was a game of skill. The central theme as to what distinguishes professional poker players from recreational players was that professional poker players were much more disciplined in their gambling behaviour. They treated their poker playing as work, and as such were more likely to be logical and controlled in their behaviour, took less risks, and were less likely to chase losses. Recreational players were more likely to engage in chasing behaviour, showed signs of lack of control, took more risks, and engaged in gambling while under the influence of alcohol or drugs. Also of importance was the number of games and time spent playing online. Recreational players only played one or two games at a time, whereas professional poker players were much more likely to engage in multi-table poker online, and played longer sessions, thus increasing the potential amount of winnings.

Introduction

The popularity of poker has increased dramatically in recent years. *Texas Hold' em,* a version of poker, has been popularised through media coverage of the *World Series of Poker.* This is the major poker event, held annually in Las Vegas and costs $10,000 to enter and has increased from only 6 players in 1971, to 839 players in 2003, to 5,619 in 2005 (Croson, Fishman & Pope, 2008) and 6,844 in 2008 (Poker Pages, 2010). The 2008 *WSOP* had more than $180 million in prize money spread across 55 different events, making it the richest WSOP in history (Poker Pages, 2010). In 2003, having never played in a live tournament before, Chris Moneymaker qualified online for the *WSOP* and won. Since then, there has been a large increase in the popularity of poker. People rationalise that if people like Chris Moneymaker can win the *WSOP* then anyone can truly win big. Other poker professionals have become media celebrities, such as Chris Ferguson, Doyle Bronson and Phil Ivey; and many celebrities are now playing poker and endorsing the game, such as Ben Affleck, Tobey Maguire and Meg Tilly (Hardy, 2006), thus gaining further celebrity through their poker play.

Online poker is one of the fastest growing forms of online gambling (Griffiths, Parke, Wood & Parke, 2006). The rise of electronic games, online games, and professional poker has generated a greater legal interest in measuring and determining the skill component involved in games (Heubeck, 2008). Skill has been defined as 'the extent to which a player, properly motivated, can perform the mandated cognitive and/or physical behaviours for success in a specific game' (Larkey, Kadane, Austin & Zamir, 1997). While there are many games that could be considered a game of skill, poker may arguably be the game that provokes the greatest debate (Heubeck, 2008). The question whether poker is a game of skill or chance has been a topic of much debate and several cases have gone before court to determine whether poker is primarily a game of skill, and if so, whether the law prohibits it (Dreef, Borm & van der Genugten, 2003; Kelly, Dhar & Verbiest, 2007; King, 2007).

Larkey et al. (1997) suggest there are three types of games in terms of skill: *Pure chance games* (e.g., lotteries, keno, roulette, craps) are those in which players compete against a random device that cannot be influenced; the probability of a particular player winning is simply a function of the games random device. *Skill chance games* (e.g., poker, blackjack,

backgammon) are games that have both a random device – cards or dice – and significant elements of skill. Pure skill games (e.g., chess) are those games where the probability of a particular player winning is essentially a function of that players' skill relative to the other players. The argument is that, although there are elements of chance, poker is primarily a game of skill, therefore should not be classed as gambling in the same sense as roulette or lotteries.

Poker is a game of inference and investment played with limited information (Burns, 2004). A player must infer the strength of their own cards compared to their opponent's cards based on the information they get from their opponents wagers. As poker is primarily a game of skill, it can take years to master. As a result, successful poker players are always seeking to improve by being critical of their own play, and understanding the playing styles of their opponents (Parke, Griffiths & Parke, 2005). A professional gambler relies upon skill, knowledge, and experience to win consistently (Hayano, 1984). Professional gamblers also derive all or a significant part of their income from gambling activities and are able to win enough money to sustain themselves financially.

Several researchers (Burns, 2004; Dreef et al., 2002; Larkey et al., 1997) have attempted to develop a theory, or optimal strategy of play for poker to predict outcomes and to advise play. But the difficulty is incorporating skill concepts in game theory. Dedonno and Detterman (2008) conducted a study to determine if tutored instruction would make a difference in poker performance. They found that the group receiving written strategy information about poker play showed statistically significant improvement in poker performance compared to a control group who received information on the history of poker. However, lack of motivation to play well may have been a limiting factor. The participants had nothing to gain apart from the personal satisfaction of playing their best. Dedonno and Detterman conducted a second study to test the value of multiple strategies and provided more time to practice the strategies. Again the participants who received poker instruction outperformed those who only received information on the history of poker. Additionally, the group that received poker instruction played significantly lower hands than the control group indicating that education made an impact on the number of hands played. These results indicated that playing fewer hands resulted in improved performance. After instruction, the treatment group reduced their

number of hands played from a mean average of 67% to 37% of hands dealt. Most poker professionals recommend playing 15% of hands dealt (Hilger, 2008).

Griffiths, Parke, Wood and Rigbye (2009) investigated some of the predicting factors of online poker success using an online questionnaire. They found that financially successful players were more disciplined and were able to stick to their budget; they played at higher stake levels; they did not over-estimate the skill involved in poker; and they perceived themselves to be more skilful. However these results were from a self-selected student sample so it is unclear whether the results can be generalised to other online poker players.

Croson, Fishman and Pope (2008) looked at whether poker is a game of skill or chance by comparing the similarities with golf – a game that is thought to be primarily skill-based. They found that previous success in poker, and the number of times a player has previously finished in the top 18 of a tournament is significantly and negatively correlated with a players rank in the given tournament, suggesting an increase in finishing; and the average rank for the player in previous tournament finishes is significantly and positively associated with a players rank in the given tournament. Their findings suggest that poker is, at least somewhat, a game of skill. Furthermore, they found that the differences in skill among top poker players are similar to the differences in skill across top golfers.

Howard Lederer, a four-time poker champion, makes a living playing cards, having won $3.3 million in tournament prize money. He argues that poker is a game of skill because the 'vast majority' of high betting poker hands are decided after all players except the winner have folded, so if no one shows their cards can a person legally argue that the outcome was determined by luck? (King, 2007).

Texas Hold 'Em is a relatively simply game to learn but a difficult one to master. In addition to luck, playing good poker requires skill in reading tells, reasoning and money management (Hardy, 2006). But what kind of skill is most important in poker? Is it an ability to bluff? Is it a skill at calculating the odds of getting a certain hand and then betting accordingly? Or is it a combination of those skills? Parke, Griffiths and Parke (2005) summarised some of the key skills needed to successfully play poker. These

include critical evaluative skills; mathematical skills; interpersonal skills; problem-solving skills; self-awareness skills, self-control skills and analytical and strategic skills.

The research suggests that there is skill involved in the game of poker, and this is why some people are able to make a career out of playing poker. Professional poker players are well known, but it is rare to see professional slot machine players or professional roulette players, therefore poker is likely to be one of the few games were people, if they are skilful enough, can actually make a living from it. Therefore, the aim of this exploratory study was to investigate the differences between professional poker players and recreational poker players. The following qualitative research study examines this issue in both a descriptive and exploratory manner. In addition to the main aim of the study, the following research questions will be considered: How are professional poker players able to make a living from playing poker? What characteristics do professional poker players possess? What strategies do professional poker players adopt? How do these characteristics and strategies differ from recreational poker players?

Methodology

Design: A structured Grounded Theory approach (Strauss & Corbin, 1990) was adopted. This approach was employed to enable an emergent theoretical framework to conceptualise what differentiates professional poker players from recreational poker players.

Participants: A total of nine poker players were interviewed (three professional poker players, one semi-professional poker player, and five recreational poker players). Their ages ranged from 23 years to 47 years (M = 31 years; SD = 7.4 years). Of these poker players, eight were male and one was female. All professional and semi-professional poker players were male. All participants played poker both online and offline but predominantly online. The professional poker players were self-defined 'professionals' and all reported making over $150,000 US dollars profit a year from playing poker and this was their only source of income. The semi-professional poker player reported that he made approximately $30,000 US dollars profit a year from poker but also had a full-time job.

The poker players were sampled from across the UK including Nottingham, Sheffield, Manchester, London, and Wolverhampton. Upon receipt of interest in taking part in the study, participants were fully briefed about what was required of them, and of their right to withdraw at any point. Across all participants, online poker was their preferred form of gambling, and 4 participants regularly participated in other gambling activities such as roulette, sports betting, horse race betting, and blackjack (interestingly, non of the professional poker players regularly participated in any other form of gambling).

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Problem gambling diagnostic measures: Participants defined themselves as problem gamblers on the basis that their gambling behaviour had caused them significant problems either in the past and/or present. The study also administered two problem gambling diagnostic measures to all gamblers, i.e., DSM-IV (American Psychiatric Association, 1994) and the Problem Gambling Severity Index (Ferris & Wynne, 2001). The problem gambling diagnostic measures indicated that one of the players was a problem gambler, and one recreational poker player self-identified that he had been a problem gambler in the past (more than 10 years ago). However, he no longer felt his gambling behaviour was problematic. For this self-identified ex-problem gambler, neither of the problem gambling screens indicated problem gambling behaviour.

Procedure: A semi-structured interview guide was developed based on a schedule of key questions and themes, as identified in the gambling studies literature. Additional themes were incorporated in later interviews in response to emerging data and to follow-up emerging concepts to confirm theories and/or look for exceptions. Handwritten notes on the transcripts were taken, in addition to field notes of emerging themes and concepts throughout the research process to maximise the dependability of the data analysis (Charmaz, 1996). Data were collected between July 2008 and July 2009. Participants were interviewed face-to-face at a location of their choosing (e.g., their home, the researcher's office, a local coffee shop). All interviews were recorded with the consent of the participants using a digital voice recorder. These were then transcribed verbatim. Field notes were taken during all interviews. The participants were interviewed only once, and the interviews lasted approximately 35 to 75 minutes. Informed consent was obtained before each interview started. The main focus of each interview was the participant's

account of their gambling behaviour, and how and why they first started gambling. They were asked about what it was that they liked about gambling, why they chose to gamble online and/or offline, the emotions they felt when gambling, any strategies they had, and their opinions about online and offline gambling.

Analysis: The transcriptions were entered into *QSR Nvivo* (Version 8), a computer software package for the management and organisation of qualitative data. Each participant was given a unique identifier. Using a process of open coding, axial coding, and selective coding (Strauss & Corbin, 1990), in addition to constant comparison of the data, a number of themes and categories emerged. The dynamic relations between the categories were thus explored further.

Results

The majority of poker players viewed poker as primarily a game of skill (rather than mostly chance based or a combination of both skill and chance). Although all of the participants believed that poker was a game of skill, it was the professional players who took it one step further and considered poker a sport, or compared it to the stock market.

> *'For me poker is completely different to any other form of gambling. It's like playing chess…it's a skilled game…It's all about the competition. Playing against other people…It's like any other sportsmen would do. I consider playing poker to be like a sport, not like a gamble' (Martin, 26).*

> *'I mean I see it more as…like investment bankers, they invest money and they're basically taking a gamble every day whether shares go up or down and on a given day they don't know what's going to happen but long term there skill in sort of predicting what's going to happen they should make money and so…I consider it like that' (Anthony, 29).*

The central theme as to what distinguishes professional poker players from recreational players is that professional poker players are much more disciplined in their gambling behaviour. They treat their poker playing as work, whereas the recreational poker players are more likely to see as a form of entertainment. To make a living from poker, players needed to view the game as a financial exchange rather than a social entertainment

activity (Parke, Griffiths & Parke, 2005). Recreational poker players are more likely than professional poker players to gamble for entertainment than profit:

> *'To me it's just fun…Something to do at night…If you're not going out for the night…have a quick half an hour, hour of poker…bit of a treat isn't it…you've got to have a treat when you finish work whether it's a drink or whatever' (Joseph, 28).*

Four sub-themes emerged that lead to disciplined poker play among the professional players. These were: emotionally detaching from the game; engaging in controlled gambling behaviour; not taking risks; and not chasing their losses. Additionally the professional poker players reported engaging in multiple games of poker (up to eight games at a time) when playing online, to increase the potential win amount, whereas none of the recreational poker players reported playing more than two games at a time when playing online. The following figure highlights the strategies adopted by the professional poker players:

INSERT FIGURE 1 ABOUT HERE

Online poker as 'work'

All of the professional poker players said they considered their poker playing as a job.

> *'Well I try and treat it like a proper job, so I try and play at least five days a week for sort of eight hours a day' (Martin, 26).*

Professional poker players played more frequently and had longer sessions than recreational poker players. The recreational poker players played less frequently than the professional poker players, and the sessions were generally shorter, lasting up to 2 hours. However, the professional poker players sometimes played for up to 10 hours a day. The recreational poker players were also more likely than professional poker players to play for lower stakes:

> *'Online I play $5 tables so it's about £2 or £3 table, and live tournaments £25 plus £5 buy in registration fee' (Emma, 23).*

> *'Some sites it's like $5, so about £3.70 something like that, other buy-ins range from about, well anything from $1 up to sort of $11 which is about £7.50 or something like that'* (Tim, 37).

Treating their poker play as 'work' allowed the professional poker players to emotionally detach themselves from the game, and as such were not affected by wins and losses in the same way as recreational poker players.

> *'I mean to me it's become much more like work…I won't say I'm not affected by losing but I think I'm affected by losing in such a minor way and the same with winning because basically poker for me is just one big session over the course of the next however many years I play it for. So for example, if I get unlucky in a big pot it doesn't really matter because I will play so many of those big pots in a day or a month or a year that it doesn't matter. So I don't think I get particularly excited by it….it is just kind of quite workman like for me'* (Leon, 25).

<u>Emotionally detaching from the game</u>

The data indicated that what separated professional poker players from recreational poker players was self-control. Professional poker players were able to emotionally detach themselves from the game and this allowed them to avoid recklessly chasing losses.

> *'It doesn't matter how good you are, you will go through periods where you lose money because that's the nature of the game…but you have to just keep the belief that you will make money because poker is slightly different to every other game, you do put the odds in your favour if you're a good player and I know that over time I might have one bad session but I know that if I play 10, 20 sessions in a week I will make money from it'* (Martin, 26).

Recreational poker players or problem gamblers were much more emotional and this could therefore affect their ability to play logically:

> *'Poker…it's infuriating. I mean the reason I don't have a computer is because I got a bad beat in poker and I smashed my computer. It evokes that kind of emotion in me and I like to think…I'm relatively intelligent…but I think that's where the frustration comes in sometimes, I mean I'm 95% certain I'm going to win a hand and….then I don't because…someone gets*

lucky on the last card then it gets quite frustrating and emotions come out more and that's why I smashed the computer' (Nathan).

'I generally get quite annoyed when the other person gets what I think is lucky against me...I'm quite a bad loser!...When I'm playing and...I'm winning, I feel like everything's fine...but then when you're losing it can be extremely frustrating as well. So, it, it goes from one extreme to the other' (Ed, 23).

Engaging in controlled gambling behaviour

Engaging in controlled gambling behaviour involved playing a logical, rational game; playing with a clear head and not being under the influence of alcohol or drugs, being able to accept a loss, and not acting hastily. Professional poker players played the game carefully and made gambling decisions with accrued knowledge (i.e., knowledge of probability and of their opponents). Parke, et al (2005) found that novice or problem gamblers were much more likely to make reckless hasty decisions.

Doyle Brunson, a two-time world poker champion, has stressed the importance of alertness and control over emotions, in addition to social factors such as developing a reputation (Brunson, 2003). Additionally, professional poker players were able to realise their boundaries. They played at a level in which they were financially comfortable with. Furthermore, they played at a level where they 'could keep their head above water' (Parke, Griffiths & Parke, 2005).

'I am a winning player at this level, the only way I could lose all my money would be to go vastly over my head into a game that I wasn't rolled for and...for a start I don't go into those games...I mean bank roll management is the only way you can be a winning player really, that's the first rule, bank roll management. I mean you get some guys every year who take massive shots at games way above where they should be playing...I'm very good at not playing outside of my bank roll, I mean that's my first rule' (Leon, 25).

Professional poker players also knew when they were beaten. They accepted a loss and sat out a few games if they had a 'bad beat'. This allowed them to regain their composure before playing again. Losing one game of poker does not equate to losing a war as the war in poker consists of hundreds of battles. All of the professional poker players

interviewed reported that they did not play if they were not in the right frame of mind and/or mood because it would affect their game play.

> *'It basically tends to go on how confident you're feeling. If you take a few bad hits early on you might want to get up and walk away and take an hours break or whatever, but I mean if I'm playing well and I'm confident I'll just play all day, I'll play for hours on end because I have to treat it like a job and put the hours in just like any normal job'* (Martin, 26).

> *'Because its my profession. You have to…have the right state of mind and be relaxed…if your sort of agitated or anything like that then you're probably going to lose money'* (Anthony, 29).

> *'Often if I'm losing…if I lose a big hand I'll just stop just because if you're not in the right frame of mind to play you're going to lose a lot more money…so I clear my mind and then try again when I'm more calm'* (Anthony, 29).

Lee (2004) concluded that professional poker players choose the degree of risk-taking depending on monetary incentives (i.e., expected gains and losses implied from their relative position in the prize structure). They make more informed decisions, rather than acting hastily as a recreational player would be more likely to do. The professional poker players were also aware that playing poker under the influence of alcohol and/or drugs could affect their game so they were adamant that they would not gamble under these conditions:

> *'I keep somewhere between $30,000 and $100,000 online at any one time, and you could lose that in three or four clicks of a mouse if you went to the wrong table and it would be so easy to do, so I don't play drunk. I don't play on drugs, I don't play under any sort of circumstances that could make me likely to do that'* (Leon, 25).

However, some of the recreational poker gamblers reported they enjoyed an alcoholic drink while gambling and the ex-problem gambler reported he was more likely to gamble while drunk:

> *'I think [alcohol] takes the inhibitions away to a certain extent but…in my case I'll gamble drunk, sober…It takes my judgment away which again is why I never usually do well in big*

poker tournaments that last four, five, six hours because…if I go further then I've had enough alcohol to then not use my sense I'll just go with my addictive side as opposed to my analytical side' (Nathan, 34).

He was aware that gambling while drunk would lead him to make hasty, reckless decisions but he was still unable to stop doing it.

<u>Not taking risks and not chasing losses</u>
Professional poker players were much less likely to take risks and would never ever consider chasing their losses:

'I would never chase my money back. I would never chase to try and make back what I'd lost. I'd continue to try and play what I thought was the right game' (Martin, 26)

'Lots of poker players chase…I mean that's something I absolutely do not do, and you have to be very careful online because it's a few clicks of the mouse' (Leon, 25).

However, recreational poker players sometimes took risks in the game because it was 'exciting', and for them it was just a form of entertainment. It has been well documented that pathological gamblers are much more likely to chase their losses (Lesieur, 1979), but instead this can get them deeper into debt and they become determined that a big win will repay their loans and solve all their problems (Breen & Zuckerman 1999; Griffiths 2003; Lesieur & Custer 1984). Some of the recreational poker players reported occasionally chasing losses:

'I really like to win. I hate to lose, but if you lose you think, okay, well I can get that back tomorrow' (Clive, 47).

This was much more likely if they had a 'bad beat'. However, most professional players recognised that this was not sensible behaviour and were careful to stick to a limit. Rugle (2004) suggested that 'chasing' may not just be about financial losses but also an attempt to meet emotional and spiritual needs. Problem gamblers use gambling as an escape from life's problems and they continually return to gambling to chase an illusory feeling of peace. Chasing might therefore be about evening the score for the emotional losses,

inequalities, and mistakes of the past. It is also about chasing a fantasy that will bring an end to the suffering, in the hope that the next bet will solve their problems and alleviate their pain (Rugle, 2004). This was certainly true for the problem gambler as he repeatedly reported gambling to 'escape'. It may also explain why the professional poker players were much more able than the recreational poker players to emotionally detach themselves from the game. This finding also supports Wood, Griffiths and Parke (2007) who found that playing to escape from problems was a predictor of problem gambling among a student sample.

Additional strategies

Other strategies that professional poker players had were to engage in multiple gambling opportunities, target weaker players, and provide very little information to others about themselves.

Multiple gambling: Online gambling provided the medium in which players had the potential to participate in multiple games of poker simultaneously. The professional gamblers perceived that because poker was largely skill-based, they would become more profitable per gambling session because they were no longer restricted to playing in only one game at any given time. Playing multiple games reduced the risk of losing too much money. As reported above, the professional poker players reported playing up to eight games at a time:

> *'If I play online I play about six tables at once, between six and eight, whereas when you play live you can only play one table and you have to travel somewhere and if you're going to win any significant money you'll be there until 4 or 5 in the morning…the way I play I have two monitors up so eight different tables at once. Basically when you play live, you get dealt a hand the cards get taken in, the dealer shuffles them, you probably get like 20 hands an hour, if you play online and you're playing eight tables the cards get dealt quicker anyway obviously its much quicker online so you could be playing 200 hands an hour' (Anthony, 29).*

However, the recreational poker players only played one or two games at the same time:

> *'Normally just one. Sometimes two. I don't really play more than two at a time' (Emma, 23).*

As the popularity of online poker has increased in recent years, professional poker players perceived that there was a greater chance to make money playing poker online than there was offline because of the opportunity to play multiple games simultaneously.

Targeting weaker players: Professional gambling thrives on the failure of others (Hayano, 1984). The professional poker players reported playing 'weaker players' because that is how they made their money:

> *'Well you get a feel for the table when your sat at the table, I try and identify weaker players at the table and then pick on them, it's kind of like bullying but you have to it's the nature of the game' (Tim, 37).*

One participant even talked about how he was glad that the gambling advertising might tempt people to start playing online poker:

> *'I want [gambling advertising] to be allowed because I make a living off people who can't control their gambling problems…I want people to gamble because that's who I make a living off so from a personal point of view I'm glad they advertise and to be honest I'm glad there are people who lose money gambling because otherwise I wouldn't make a living doing this' (Martin 26).*

Providing little information about themselves: Some of the recreational poker players reported having a profile on gambling sites, and being completely honest about who they were:

> *'I actually put my picture on, so there's no mistaken that…I'm an old bloke playing poker, if anybody wants to chat to me they can but no, I never pretend to be anything that I'm not. If anybody says to me you know, are you male or female? Male. How old are you? 47. Where are you from? England. I'm always dead straight down the line with that' (Clive, 47).*

However, the professional poker players gave very little information away about themselves:

> *'I mean you can put a profile up and things like that but I just don't like to give any information away to anybody, I don't want anybody to know anything about me because it could help them get leads on me…when I'm playing poker against people I don't want them to know*

I'm a professional poker player because straight away that would make them more cautious against me. I want them to think that I'm just somebody there for a gamble' (Martin, 26).

'I'll have like an alias…and then it might say I'm from Nottingham but that's about it…I don't like too much information up there because you don't want people you're playing against to have any information about you…if you're playing someone and on there profile it says they're a 60 year old man you know they're not going to be gambling as much as a 20 year old would and stuff like that and if it says on their profile they have been playing professionally for 30 years you know they're a decent player and you'll stay away from them' (Anthony, 29).

They did not want people to have any information about them – especially that they play poker for a living – as this could put other people off from playing against them.

Conclusion

Playing poker for a living requires dedication, hard work, and players must constantly strive to achieve more and learn more. Players must have a real passion for the game and a desire to constantly improve. Unless budding professional players have total dedication to play poker, they will struggle to be successful. Not many can succeed, but for those that do it offers greater freedom to work their own hours. Most people do not succeed – most see the game as a form of entertainment that may possibly provide a supplementary income. To rely on poker for a living is difficult – those that do would say that it is not down to luck. It is important to 'keep a cool head' and have good money management skills.

All of the poker players in this study viewed poker as a game of skill. Similar findings have been reported elsewhere. Wood, Griffiths and Parke (2007) found that in their sample of 422 student poker players, the majority viewed online poker as mostly a game of skill. Croson, et al., (2008) found evidence for skill being a factor in poker, and Dedonno and Detterman (2008) also concluded that poker is a game of skill, as they found that participants who were instructed outperformed those who were not. The reason that poker may appear to be a game of luck is that the reliability of any short session is low. Chance can play a significant role in a single hand of poker, and an unskilled player can always draw aces and win. Skill is more likely to be the determining

factor in long-term outcome (Dedonno & Detterman, 2008). However, poker cannot be a 'pure skill' game as a player's skill does not control the random 'deal' of the cards. A poker player's main skill lies in the ability to recognise possible combinations and basic statistical probabilities. In short, to play the best hand with what they have been dealt.

This study found that professional poker players were much more disciplined than recreational online poker players in their gambling behaviour. They treated their online poker playing as work, and as such they were more likely to be logical and controlled in their behaviour, take fewer risks, and were less likely to chase losses. This supports Griffiths et al., (2009) finding that skilled poker players were more disciplined and able to avoid spending over their monthly gambling budget. Additionally, Lee (2004) found that compared with recreational poker players, professional poker players make far more informed decisions rather than taking risks.

Furthermore, the present study found that recreational poker players were more likely than professional poker players to engage in chasing behaviour, show signs of lacking control, take more risks, and engage in gambling while under the influence of alcohol or drugs. Also of importance was the number of games and time spent playing online. Recreational poker players will only play one or two games online at a time, whereas professional poker players were much more likely to engage in multiple games of poker online, thus increasing the potential win amount. It is well known that multi-table poker play (a strategy adopted by the top professional poker players) allows a player to learn and improve at a much faster pace than live poker would allow (*Multi-table,* 2010). Table 2 highlights the fundamental differences between the two types of poker players. These are generalisations based on the findings from this study and obviously there will be exceptions to the rule, but generally this is how the authors believe the two types of players engage in poker play.

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A limitation of the present study is clearly the small sample size. However, as this was an exploratory study the aim was to provide insights into the differences between professional poker players and recreational poker players and to recommend what further research is required. It did not seek to draw definitive conclusions or generalise the findings to all professional poker players.

There is much work required to understand exactly what skill is and how it can be represented in many different types of games (Larkey et al., 1997). It has been established that skill is involved in the game of poker, but further research is clearly needed to identify which skills are at play (Croson et al., 2008). For example, are professional poker players skilled because they are good at calculating odds and probabilities, or are they good at reading their opponents' tells, or are they better at bluffing and intimidating the rest of the table? However, Heubeck (2008) has argued that it can actually be very difficult to measure skill in games. To define skill, researchers would also need to define a lack of skill, or how an unskilled player would perform.

Future research could also examine why some players engage in multi-table gambling (i.e., playing poker at more than one table at a time), and whether different skills are required for this. There is a lot of anecdotal evidence as to why players do it, such as the chance to win increased amounts of money but this has not been confirmed empirically. Playing on a higher stake table may provide more risk as it is likely to house better players. But playing on smaller stake tables may provide less risk to the skilled player if there are less skilled players at the table (Griffiths et al, 2009). Research into the differences between online and offline poker is also required, including the role of non-verbal communication, and whether poker players adopt different strategies online and offline and what these strategies might be. As online poker is anonymous because it is non-face-to-face, research could examine how much information players give away in online situations. Are professional poker players less likely to give information away than recreational players (as the present study would suggest)?

Further research is also needed to examine the relationship between problem gambling and professional gambling and whether becoming a professional gambler reduces the likelihood of developing a gambling problem. Currently there is very little research on this. It has been suggested by Griffiths et al. (2009; Wood, et al, 2007) that online poker may be producing a new type of problem gambler where the main negative consequence is loss of time (rather than loss of money). Further research could examine whether professional poker players who exhibit some signs of problem gambling consider their behaviour problematic if they do not have financial problems. Longitudinal studies would also be useful to determine the length of success for a professional poker player. It is unclear how long professional poker players can make a successful living from playing

poker. Playing poker for a living is very possible for a minority of players, but it takes a combination of talent, dedication, patience, discipline and disposition to succeed.

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Table 1: Basic demographic details of study participants (n = 9)

Identifier	Age	Gender	Problem gambling status	Had ever sought treatment for problem gambling	Type of player
P01	32	M	No	No	Recreational
P02	47	M	Ex-problem gambler	No	Recreational
P03	28	M	No	No	Recreational
P04	34	M	Yes	Yes	Recreational
P05	25	M	No (professional)	No	Professional
P06	26	M	No (professional)	No	Professional
P07	29	M	No (professional)	No	Professional
P08	23	F	No	No	Recreational
P09	37	M	No	No	Semi-professional

Table 2: Differences between professional and recreational poker players

Professional poker players	Recreational poker players
Mental skills	
• Discipline	• Take risks
• Emotionally detach from the game	• Emotional play
• Patient	• Frustration
• Accept a loss	• Chasing
• Controlled	• Lack of control
• Logical	• Act hastily
Attitude toward poker	
• Consider it 'work'	• Consider it 'entertainment'
• Focus on long-term goals	• Focus on short-term goals
• Realistic perception of own skill	• Overestimate own skill level
• Steady game plan	
Specific strategies/ behaviours	
• Multi-table	• One or two tables
• Give little information away online	• More likely to have information in profile
• Target weaker players	• Play at too high a level
• Keep a clear head	• May gamble under influence of alcohol and/or drugs
Poker sessions	
• Play frequently	• Play less frequently
• Long sessions	• Shorter sessions
• Play higher stakes	• Play lower stakes
• Record play information	• Less likely to record play information
Knowledge	
• Decisions based on knowledge	• Less knowledgeable
• Build knowledge of opponents	• Lack of knowledge on opponents
• Constantly striving to improve	• May think they know all there is to know
• Good bank roll management	• Lose track of money in/out

Figure 1: Strategies adopted by professional poker players

Strategies		
Emotionally detaching from the game	Disciplined poker play	Professional poker player
Poker as 'work'		Additional Strategies
Controlled gambling		Multiple gambling
Not taking risks		Striving to improve
Not chasing losses		Targeting weaker players
		Providing little information

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