Evaluating the impact of anonymous tables in the world of online poker

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Case: Company X

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The aim of this thesis is to evaluate the impact of anonymity in a poker table from various viewpoints and to form a comprehensive, up to date information framework about the topic.

Online poker is now in a state where it is absolutely necessary to make changes to the current poker economy by setting enhanced focus on the net depositing player. Whilst the transition has been going on since 2009, some networks have been slower to react than others. Seven years later, networks are still making changes, trying to create a sustainable ecosystem for online poker. Anonymous tables are the very first upfront product of the transition and there is need for further research on the topic.

The subject was initially requested by a company which operates in the gambling and casino industry. Essentially, the thesis aims to benefit the client company by evaluating how the anonymous tables have impacted the nature of online poker. Ultimately, the thesis is trying to assess if the future of online poker lies in anonymous gaming.

A similar study was conducted by Microgaming poker network in late 2014. In this thesis, however, the main focus is set on different areas while utilizing the earlier study as a part of the theoretical framework. Other research data is acquired from various online sources. Due to lack of accessible resources, the final outcomes and conclusion of this thesis should be considered more as validated opinions rather than concrete facts. Therefore, it needs to be emphasized that this thesis is not a scientific study.

Anonymity brings players closer to the pure poker experience where the role of tells, reads and psychology are emphasized. It eliminates the impact of heads-up displays and targeting of weaker players. However, anonymity creates issues with player identities and threatens the future of sustainable poker in a different way. Moreover, anonymous tables provide an auspicious environment for cheaters and raises questions in terms of security.

Ultimately, the anonymous tables are not necessarily the best solution while trying to create a sustainable ecosystem for online poker but it has been an important trendsetter, inspiring networks to take action and create new alternative solutions.

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1   Introduction

The aim of this thesis is to evaluate the impact of anonymity in a poker table from various viewpoints and form a comprehensive, up to date information framework about the topic. Ultimately, the thesis is trying to evaluate if the future of online poker lies in anonymous gaming.

A similar study was conducted by Microgaming poker network in late 2014. In this thesis, however, main focus is set on different areas while utilizing the earlier study as a part of theoretical framework. Other research data is acquired from various online sources. Due to lack of accessible resources, the final outcomes and conclusion of this thesis should be considered more as validated opinions rather than concrete facts. Therefore, it needs to be emphasized that this thesis is not a scientific study

Lennaárd (2015) expresses it the best "Imagine a business model where the non-paying users are allowed to use sophisticated software to slaughter the paying customers even faster – the system is broken." This has been the case in the world online poker since the early 21st Century. It took some time for online poker networks to react and show notable countermeasures trying to tackle this phenomena but it has been a progressively trending approach for the last five years. This thesis will dig deeper into one of these countermeasures.

In this project, most of the data was gathered from online resources such as articles, e-books, information services and forums. The report can be encapsulated into following 5 segments:

- A clarification of the current state in the field
- A comparison of regular and anonymous tables
- An evaluation of anonymous tables' impact
- An analysis of different approaches
- A discussion and evaluation for future

The thesis project is industry based meaning the client is a real company which operates in gambling and casino industry. The topic was initially requested by the client company. Due to client's demand, the thesis report will be written in a way that company identity is kept anonymous. All references made towards the client company will be indicated as "Company x".

Essentially, the project will benefit company x by providing them with supportive framework in form of written report. The author will also benefit by gaining knowledge on the topic as well as having an interesting thesis project to work on in order to graduate.

2   Background

Online poker is the game of poker played over the Internet. Poker is a skill game, in which chance is an obvious element. The game is played against other players rather than a house. Obviously, the knowledge of odds, strategies or even the rules vary between different players. This makes one player better than other and therefore some players who are consistently better than their opponents win more money in the long term.

The poker professionals and some proportion of the better players have always taken notes of the players who lack the knowledge and mostly lose money in the game. Therefore, they can often choose a table and sit in knowing that they are a better player and are likely to win, at least in the long term. Furthermore, even more significant factors are real-time tracking software and seating scripts. They are basically automated processes of taking notes and sitting down to a poker table, which gives a professional player even more compelling edge over a recreational player. Obviously, this is not an optimal situation from network's point of view because the recreational player will lose their money even faster and are more likely to have a bad experience. Therefore, less rake is generated to the operator and the recreational player is less likely to make another deposit.

Many solutions have been tested and implemented in order to eradicate this phenomena. All of them follow the same principle, trying to enhance the playing experience for recreational players and tougher the conditions for professional players. One of these solutions was to create completely anonymous poker tables where no one can have prior knowledge or data of the other players beforehand. Therefore, there isn't a chance to choose the optimal table nor to use any tracking software in the table.

Alex Scott is an expert in the field, especially when it comes to anonymous poker tables. Scott commented that he knows from experience that when the game organizers allow some players to gain an excessively large advantage, the games die. He uses a great example from the video game industry to further demonstrate the concept. Titanfall is currently one of the most popular first person shooter games. Played exclusively online, Titanfall has had many updates in the past, adding new functionality and rebalancing the game when necessary. He argues that the game of online poker is in a similar state right now and needs to be rebalanced again. Seating scripts and tracking software has become too powerful and the entire future of the online poker hinges on whether the game remains fun or not. (Scott 2014a.)

3   Comparing regular and anonymous tables

3.1   Tracking software and seating scripts

Various poker tracking software have been available almost as long as online poker itself. Poker players consider tracking software extremely useful, ability to get real-time data of other players and possibility to analyze players' personal performance gives competitive advantage over a player who is not using this kind of software. Since the note taking process is now largely automated, players can increase the amount of tables they play in and maximize their average hourly profit.

Real time data is presented through heads-up display, better known as a HUD. HUD is defined as transparent display that presents data without requiring users to look away from their usual viewpoints. The origin of the name stems from a pilot being able to view information with the head positioned up and looking forward, instead of angled down looking at lower instruments. Similarly, poker players can keep their viewpoint on desired table without getting distracted by looking away. Ultimately, it provides players with ability to play large amount of tables at once. (Stevenson 2010, 809.)

Figure 1 Example picture of author's HUD

Market leader products, HoldemManager and PokerTracker, have been dominating the market for a long time now. These applications record all the plays made by other players as well as visualize and analyze the data in real-time by hundreds of different ways. Ultimately, this will assist the player in decision-making and adjusting their strategy accordingly. These products can be purchased for one-time investment of 100 dollars. The price is often too much for recreational player, let alone the time investment player has to make while configuring settings and learning how to use the application. New competitors like Hand2Note and Jivaro have recently attempted to break in to the market, introducing less components but simplified features with more attractive design and lower monthly subscription fee. Despite the fact that these factors indicate targeting recreational players too, the user base of tracking software still consists mostly professional players.

Angioni (2014) defines seating scripts as computer programs that are designed to automate and optimize the process of table selection. He says that the purpose of a seating script is to get a seat, optimally to the left of a recreational player. The seating script constantly scans tables and once certain player joins a table, the seating script will automatically reserve a seat next to this player. According to Scott (2014a) there is no way to eradicate seating scripts from the regular tables at the moment. He explains that seating scripts interact with a

tracking program to get the data. Therefore, seating scripts do not work at anonymous tables because tracking programs cannot gather data on who is a winner and who is a loser.

3.2 The spread of the anonymous tables

3.2.1 Cash games

Anonymous tables have already proven to attract crowd in cash games. At present, variety of smaller networks offer anonymous tables alongside with regular tables. Despite being increasingly popular option, most networks limit the anonymous environment for cash games only.

3.2.2 Sit & Go's

Similar to cash games, Sit & go's also known as SNG's are usually played in a single table. Even though, there is a mixture of anonymous tables and regular tables in cash games, almost every network has decided to not offer anonymous option for SNG's. Only network offering anonymous SNG's at the moment is Ignition casino, which does not offer regular tables in any form of their game selection, including multi-table tournaments.

3.2.3 Multi-table tournaments

There is only one network offering anonymity in multi-table tournaments, the previously mentioned Ignition casino. It is much easier to understand why the transition has not happened in multi-table tournaments. There is a reason why almost explicitly all media attention towards poker is focused in multi-table tournaments. Like in any sport, there will always be one man or team left standing in the end - one winner. Furthermore, the prize money distributed to the top runners is huge compared to their initial investment. The prestige of winning a tournament would be compromised if the networks chose to remove the identity of its players. Imagine if the winner of 2014 FIFA world cup was remembered as "team 17".

3.3 Identity

One of the fundamental parts of poker is that it is social. It is the reason why most online poker sites have strived to enhance personality and customization. There is a list of social supplements added in by poker sites, chat boxes, player profiles, avatars, country flags and screen names all belong to that list. None of these supplements exist in an anonymous table. As Jones (2011a) has commented anonymous tables, it is certainly a strange experience playing in this manner, identified by seat number alone, as if you were playing against a table of computer opponents in some dry video game. He also uses adjectives like sterile, mechanical, boring and ordinary while expressing his experience on anonymous tables. (Jones 2011a.)

It was argued in Poker Life podcast (2016) that poker players can be divided into 3 groups: winning money, competition and entertainment. The groups are equivalent to what each player is seeking from the playing experience.

Generally, players who fall into the first category will or at least should feel positive about the anonymous tables since it was proven by the MPN study that winners actually win more at anonymous tables. It is obviously not that black and white, however, some players have invested hundreds if not thousands of hours trying to master strategies and exploits enabled by HUDs. Anonymous tables open a whole new world for them and measure their ability to adapt and adjust. Furthermore, the players who are used to play multiple tables at once are now forced into playing less tables which deducts their hourly win-rate and increases variance in the short term. (Scott 2014b.)

The competition category is mostly filled with winning professionals but instead of money they get motivated by the competitive environment. Typically, competitive players gravitate into games where they can make a name for themselves or achieve something which will give them the feel of succeeding. There is no future for this kind of players if online poker chose to go full anonymous, on top of eliminating the player base, taking away the competitive nature of the game would eventually have disastrous consequences, perhaps killing online poker for good.

The last category is by far the hardest to evaluate. Entertainment can mean winning money, competing or something totally different for each individual. MPN study taught that winners win more and losers lose more as well as go broke quicker in anonymous tables. This suggest that the entertainment value would be smaller due to the fact that the players didn't last as long as in a regular table. In the other hand, the MPN study proves that there is much more action and the variance is higher at the anonymous tables. It is suggested that the amount of action alone might give better entertainment value for some player, even though the player had lost money. Due to higher variance, there is greater chance for the beginner to end up winning money in the short-term as well. As stated earlier, there is no way to know what entertains each individual. Therefore, the optimal approach for category 3 players remains a mystery for now. (Scott 2014b.)

It is unknown to which of these groups Jones (2011a) falls into but he says it is short-sighted to go anonymous. He compares it to pushing buttons on an elevator. Similarly, it could be argued that HUDs are causing the same phenomena, just in a more complex way. At present, it is important to keep all player types satisfied by having a good balance between both regular and anonymous tables. (Jones 2011a.)

3.4   Key differences

As discussed many times before, the biggest difference between regular and anonymous tables is the inability to use tracking software and seating scripts. However, there are various other elements with smaller impact as well. In anonymous tables the pots are bigger, fewer hands are played, winners win more and the variance is higher as it is proven by the MPN study. Additionally, there are many issues with player identity that could lead major impacts in the world of online poker as a whole. (Scott 2014b.)

While it might be astonishing to someone outside poker, the strategies vary a lot between anonymous and regular tables. While the winning strategy was mostly based on something close to Game Theoretical Optimum, also known as GTO, the gameplay itself would be very different, simply because the decisions could not be based on specific data.

At present, the player base of anonymous tables consist higher frequency of recreational players than regular tables. Large scale transition of professionals has not happened yet because there has not been a reason for that. The games are still running on a decent scale in regular tables. Additionally, it would be unorthodox to see professional wanting to increase variance and decrease hourly win rate.

According to Scott (2014) 40% of the cash game players choose to play in anonymous tables. There are valid arguments for both, regular and anonymous tables, and there is a demand for both. Nevertheless, one thing is for sure, there will be new innovations and the game of poker will change over time. The future of poker is not heading solely towards regular nor anonymous tables but somewhere in between.

4   Current state in the field

4.1   History recap

4.1.1   The time before MPN study

In 2013, amateur Chris Moneymaker started the poker boom by turning his initial investment of $39 into $10,000 World Series of Poker main event entry, which he later proceeded to win for $2,500,000 (Silver 2011). The end of the boom is generally considered to be October 2006, when the Unlawful Internet Gambling Enforcement Act became law in the United States (Kirk 2008). Poker boom was great time for the networks and operators, business was thriving and future looked bright for everyone. Due to high growth levels in the international market, poker maintained its popularity in the upcoming years.

Earliest versions of tracking software and seating scripts already existed during the time of the poker boom. At the time, networks were making money like never before and there was no reason to worry about the tracking software, as they were just getting popular amongst the big crowd. It wasn't until late 2010, when some networks announced first countermeasures against tracking software and seating scripts.

The following timeline represents major actions taken by networks in order to eradicate issues with tracking software and seating scripts. The actions are limited to anonymity-related operations only.

Figure 2 Major actions taken by networks

PartyPoker was the first network to try anonymity in some form, they went full anonymous in heads-up cash games in November 2010. At the time, anonymous tables were considered as a unique experience and many professionals questioned if it is worth their time. In the other hand, it was predicted that recreational players would enjoy the anonymity as the leaks in their game didn't stand out statistically. (Showell 2010.)

PartyPoker wasn't the only network to go anonymous in November 2010. Virtually, Microgaming and PartyPoker introduced anonymous tables simultaneously but in addition to making heads-up cash games full anonymous, Microgaming decided to spread anonymous tables to all of their cash games formats, still offering regular tables as an alternative, though. (32RedPoker 2010.)

In October 2010, Cake poker made their own step towards anonymity by allowing players to change nicknames every 7 days. While it was nothing compared to full anonymity, it had other issues as well. The nicknames were changeable but always associated with the same player ID. Therefore, even if a player constantly changed nicknames, all notes taken by other players would transform to the new nickname. Theoretically, the only ones in disadvantage were those who didn't take notes, which more often than not meant the recreational player base. (Lund 2010.)

In late 2009, Bodog introduced concept called recreational player model that would focus on the net depositing recreational players rather than net withdrawing players such as professionals and multi-table grinders. Ultimately, the idea is to block third-party data mining sites and eliminate the use of HUD's. The process started off in 2011 by capping overlays in multi-table tournaments and changing the rake distribution on the network. The first two changes were beneath the surface but the final change to the Bodog network was something that wouldn't slip beneath anyone's radar. In December 2011, Bodog updated their software to remove usernames and any identifiers, which created a completely anonymous poker experience across the entire network. (Beatty 2012.)

Bodog continued to promote the recreational player model as they announced a year-long anonymous poker series to take place in 2013. It featured several tournaments, both live and online, and ultimately culminated into $100,000 guaranteed live main event in Manila. (Hintze 2012.)

The Vice President of the Bodog Poker Network Jonas Ödman, was confident that other poker networks would adjust their business practices to mimic Bodog's recreational player model. It was in spring 2013, when iPoker joined Bodog, PartyPoker and Microgaming, bringing anonymous technology into their software as well. iPoker used similar approach as Microgaming did, spreading anonymous tables to all of their cash game tables but still offering regular tables as an option, though. (Ferrara 2013.)

In February 2014, Unibet migrated away from the Microgaming network to become a standalone network. Daniel Eskola the head of gaming at Unibet, commented being part of other poker network is not sustainable for Unibet in the long term. The migration gave Unibet the possibility for a fresh start and the ability to define what they think is important for a fun poker experience, setting clear focus on the recreational players. Unibet's approach provides players with opportunity to change username and avatar up to 3 times a day. While it is not full anonymity, it can be used in a way that practically produces the same effect as anonymous tables. The ultimate decision is left for the players in perhaps more visible manner than elsewhere. (Collson 2013.)

Winamax, the online poker market leader in France, launched their version of anonymous tables in late 2014. The incognito tables, as they described it, were spread over to all forms of the cash games similarly to Microgaming and iPoker. In addition, Winamax decided to remove chat boxes from the incognito tables.

In 2014, Microgaming network conducted a study on the anonymous tables, 175 million hands were analyzed in order to outline the effects of anonymous tables. For the first time in poker

history there were statistical data on anonymous tables and the key findings were discussed publicly.

4.1.2   The time after MPN study

Microgaming continued to modify their poker environment. This time the revision gave new opportunities for tournament players too, as they started to allow nickname changes every 30 days or 1000 hands, even though, the change was not directly targeted to tournament players. MPN's head of poker Alex Scott explained that they want to stop parasitic players from ruthlessly pursuing weaker players, hoping that regulars would play versus each other every once in a while. In addition, Microgaming didn't want players creating a new account with a new poker room just because their alias was unlucky. (Katz 2015.)

In July 2015, FullTiltPoker or in shorter FTP, introduced their solution to attract and retain more recreational players. The principal change was the removal of table and seat selection from the lobby to mimic the feel and set-up of a live poker room and eliminate the targeting of weaker players. Alongside with the seat selection, heads up tables were completely eliminated, multi-tabling was limited and virtual timers were put into play. While FTP's solutions were not directly associated with anonymity, they were a production of general movement towards anonymous tables and HUD-free environment. At the time, FTP's managing director indicated that more changes are to come and the banning of HUD's and all third-party software would be discussed in the near future. (Oetzmann 2015.)

Only 8 months later, FullTiltPoker announced migration to PokerStars. The migration was completed on May 2016. Even though, each site could still retain its own appearance and some brand-specific promotions, FTP's player base were moved to PokerStars. (Pitt 2016) Essentially, this meant that all changes and plans made by FTP in 2015 were scratched. Current market leader PokerStars has not made any sort movement towards anonymity or blocking third-party software and things are expected to stay that way. There is no way to tell for sure though, as poker reporter Ken Lennaárd (2015) claimed FTP's table selection changes were the best move a network can make, maybe PokerStars saw the potential too.

4.2   Current state

Recently, PartyPoker announced major change to their software that will help recreational players, one that only Bodog has had courage to make so far. All of the cash game tables at PartyPoker are now completely anonymous. (PokerHomeGames 2016) That makes PartyPoker the first European network to make all cash games fully anonymous. History has shown that the effects of such changes will be negative in the short-term but eventually turn positive

through time. Only time will tell the true consequences of the change and if the other networks are to follow the suit.

Current market leaders, PokerStars and 888poker have shown no significant signs of moving towards anonymous tables. They have managed to attract their share of recreational players with so called spin & go tournaments, a 3 player SNG with a chance of winning a progressive jackpot. Spin & go's have no table selection and they are played with extremely shallow stacks, therefore the edge for skilled player is greatly reduced. Patrickson (2016) says that original SNG's are now dying off due to the popularity of spin & go tournaments.

Since the black Friday on April 15th 2011, players located in the United States have been blocked from the international player pool. Over the years, USA's online poker legislation have taken steps towards returning to the international market but we are not there yet. States have been legalizing online poker one by one, it is said that there is real growing momentum push for licensing in California, Michigan, New York and Pennsylvania, at the moment. It is not realistic to think that USA would join the international player pool in the near future but given a 5 year period, the odds get substantially higher. As if that was to happen, it could lead into minor poker boom simply due to the size of USA market.

4.3   Trends and projections

It is definitely interesting to see how things will develop in upcoming years. Are the smaller networks going to follow PartyPoker's latest revision? Are the current market leaders going to implement anonymous tables of their own? Will there be other revolutionizing innovations that solve the issues with third-party software?

One thing is for sure though, online poker is shifting more and more towards mobile gaming. Opportunities provided by the rapidly developing mobile technology have already affected the industry massively and will continue to do so. To put this in perspective, this means smaller percentage of the players are HUD users since there is no mobile HUD's available at the moment. In the other hand, it can be assumed that most of the mobile players are recreational players whom the networks are ultimately trying to protect. This makes a whole new case for the anonymous tables.

Under the guise of mobile poker's rise, opportunities given by virtual reality are already actively discussed amongst the poker community. We don't know much about virtual reality yet since it is still in the early phases of its development, positive impact is still estimated. According to 888poker's review (2016), combining poker and casino games into the same virtual environment has enormous potential to be the next big thing in poker.

5   Evaluating the impact of anonymous tables

5.1   The MPN study

In 2014, Microgaming poker network conducted a study on the anonymous tables, 175 million hands were analyzed in order to outline the effects of anonymous tables. For the first time in poker history, conclusions were drawn based on real data and evidence. Even though the underlying numbers are confidential, the main conclusions were still published and discussed publicly. (Scott 2014b.)

In anonymous tables there is more action, more bets are called in each hand, more money is bet and called in each hand, the average size of each called bet is larger and the average pot size is larger. Essentially, more money changes hands in anonymous tables, per hand dealt, which means that winners win more and losers lose more, therefore the variance is higher as well. Additionally, winning players pay more rake but win more money at the anonymous tables. The net of winnings minus rake is higher at anonymous tables than it is at regular tables, which determines that winner's win rate is actually higher at anonymous tables. Lastly, players multi-table less in anonymous tables. (Scott 2014b.)

Conclusively, the data suggests that in regular tables the games are tighter, less fun and everybody win and lose more slowly. Despite the fact that rake per hand is lower in regular tables, in the course of player lifetime more rake is paid per amount won. (Scott 2014b.)

5.2   Poker economy

The most basic example of the poker economy is presented by Ruddock (2015) "deposits – rake - withdrawals = the amount of money in poker economy". He says it is difficult to keep things in the proper balance, making sure the site rakes enough money to market and be profitable, and the winning players are happy with the amount of money they are able to withdraw. Rake is central cog of poker economy. The rake a site generates influences the amount they can devote to marketing to bring in new players.

A thriving poker economy is achieved when the site can bring in more new players and money than it is dropping. Conversely, when rake and withdrawals overcome the deposits the site will have to say goodbye to their profits and marketing budget. Ultimately, it leads into fewer new deposits and further erosion. (Ruddock 2015.)

Over-raking players can quickly lead into trouble as the site becomes less attractive for the players and they go broke faster. In the other hand, under-raking or offering many loyalty rewards can be appealing but it will not be able to generate enough capital to replace players who have gone broke. It is important to find the golden mean.

In 2012, forum alias Pow introduced a simulation demonstrating the power of rake pricing and how it can make or break a sustainable poker ecosystem. He uses one year sample of an average-skilled player and a professional player, while the rake plus additional rewards are set to equal the monetary amount of 7 big blinds over every 100 hands, or 7bb/100, 4bb/100 and 1bb/100. Additionally, he set standard deviation to 80bb and winning player to win at 2bb/100. (TwoPlusTwo poker forum 2012.)

Big blind is a mandatory bet made before any cards are dealt, either in addition to or instead of an ante. (PokerZone dictionary 2016b)

In the first figure, 7bb/100 rake produces less than 1% winners among average skilled players and the professionals experience huge variance.
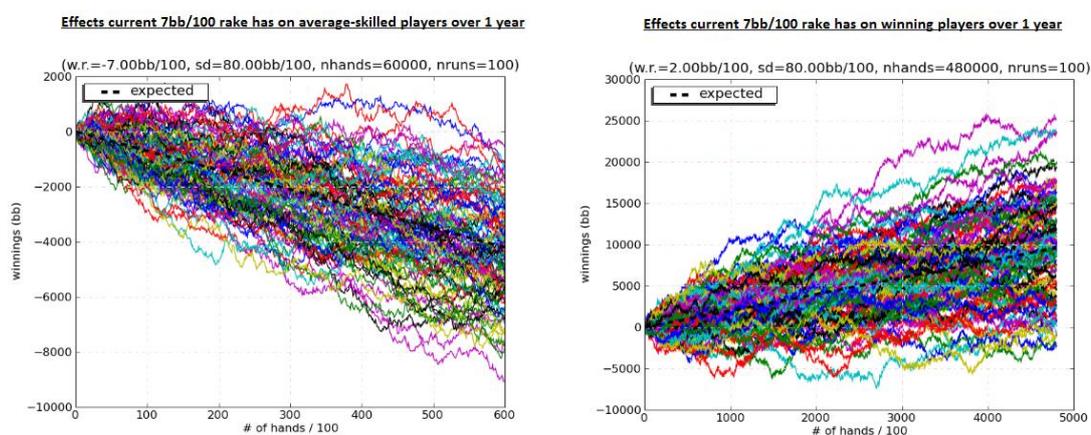

Figure 3 Rake pricing for a sustainable poker ecosystem 1 (TwoPlusTwo poker forum 2012)

When rake is set to 4bb/100, there is a huge increase in the amount of average-skilled players making profit, over 10% of them are now profiting. Additionally, the winners have more desirable variance.
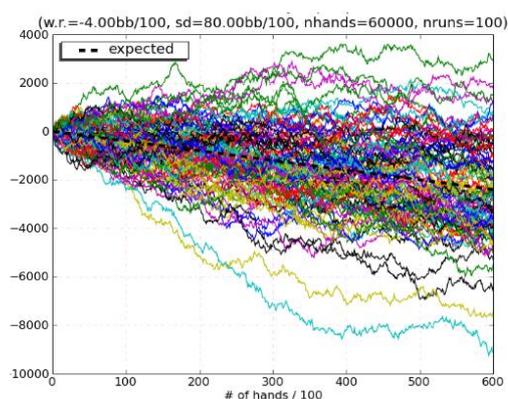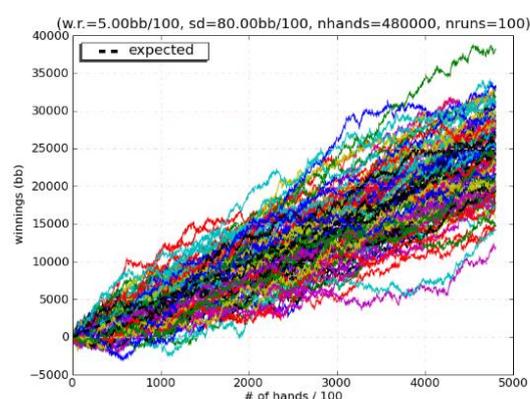
Figure 4 Rake pricing for a sustainable poker ecosystem 2 (TwoPlusTwo poker forum 2012)

It is virtually indistinguishable to see how many average-skilled players profit when the rake is set to 1bb/100. In the other hand, winners' variance is now well controlled.
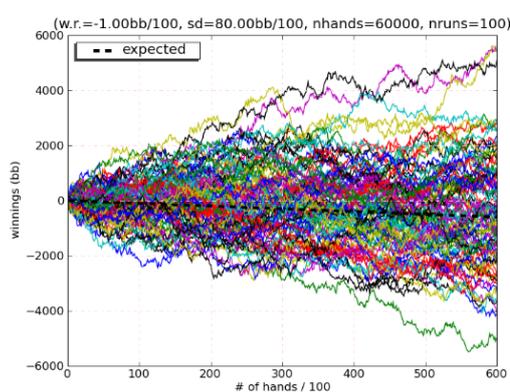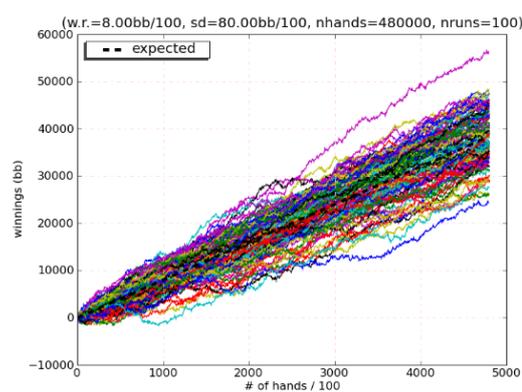

Figure 5 Rake pricing for a sustainable poker ecosystem 3 (TwoPlusTwo poker forum 2012)

5.2.1   Sustainability

As we already know, networks have shifted towards the recreational player model, trying to level the playing field in various ways. Most importantly, the ultimate goal is to make the poker more fun and appealing again.

The majority of recreational players have their days filled with work, school, family or something else. Additionally, they have to deal with all the other responsibilities that life has to offer, the time for entertainment often is a small proportion of a day. At present, online poker is competing for that entertainment time more than ever before and it is safe to say that the competition is fierce. While new games are introduced and innovations made in daily

basis, poker has always remained fundamentally invariable. Technology and innovation has given birth to things such as Netflix and Candy Crush which are great examples of the heavy partakers of the entertainment time. Furthermore, it can be said that the developing technology has brought online poker more risks than opportunities. (Poker Life podcast, 2016)

While the other sources of entertainment are well ahead of online poker in pretty much every area possible, poker still has one thing that most of the other sources do not offer, the chance of winning money. In 2015, PokerStars announced considerable cuts in their popular loyalty program which especially benefited the high-volume professional players. It was estimated that the benefits being cut equal to around $17 million in yearly basis. Now PokerStars have announced four $1 million freeroll tournaments and indicated that other yet-to-be-announced promotions are in the pipeline, at the cost of their most loyal high-volume players. Figuratively, the money is taken directly from top of the food chain and handed out to the poor, while in theory, the elite still has a chance of retrieving some of it back. To summarize, PokerStars is trying to attract recreational players by using the only element that is partially unique to online poker anymore – money. (Ruddock 2015.)

In anonymous tables, the focus is set more into improving the user experience and attract the recreational players that way. We know that variance is higher in the anonymous tables which improves the user experience and leads into higher amount of unlikely winners in the short term. However, assuming the unlikely winners continue to play they ultimately end up being the funders. Although, online poker has always been funded by the losing players. While anonymous tables claim to protect the recreational players, they actually continue this long lasting tradition. This can even create a moral controversy for some, seeing that in their mission to attract recreational players PokerStars model uses professionals as funders whereas anonymous tables uses the recreational players. It is definitely interesting to see, which method turns out to be the best solution to attract recreational players in the long run, winning money or having fun.

5.3 User experience

In chapter 3.3 three player types were introduced, winning money, competition and entertainment. Even though, it is hard to determine individual preferences, fairly accurate generalization can be made at the player type level. While players in the entertainment category appreciate influential design, special effects, customizability, selection of avatars and usability, conversely the other player types do not pay attention for such things but care more about scalability, navigation, simplified design, HUD availability and that the software is stable and secure. The only thing that anonymous tables are lacking is the HUD availability, the rest is up for the networks to decide.

Jones (2011a) argues that tells, reads, psychology and table talk are particularly important aspects for a recreational player. It is site dependent if they have a chat at the anonymous table or not. However, the importance of tells, reads and psychology are emphasized at anonymous tables. It is safe to speculate that the games are much more psychological at anonymous tables where the partial mathematic aspect has been taken away. Each time you sit into an anonymous table, it is like starting a certain game from beginning over and over. The process of developing tells and reads starts from the first hand and ends when the player leaves the table.

Three years after introducing the recreational player model, a vote was held asking if players have changed their views on the recreational player model through time. Unfortunately, the vote ended up being indecisive, the results were 50% positive and 50% negative. 37,5 % of the voters felt like it is better than they thought while 12,5% said that they knew it would be good and still feel the same way. In the other hand, 31,25% felt like it has not lived up to expectations and 18,75% answered that they have always disliked it. (Hombrebueno 2014.)

Internet's most active poker forum TwoPlusTwo has convened two notable polls regarding anonymous tables. In the first poll, it was asked if players would like to have HUD's banned for good. Out of 404 voters 55% did not want to see HUD's go while 40% gave a green light for the ban and 5% remained nonaligned. (TwoPlusTwo poker forum 2013.) In the second poll, which was held much recently, the question was directly related to anonymous tables. Forum alias Jungmit wanted to clarify if Bodog, the site that had gone full anonymous in 2011, should revert back to regular tables. This time around, the result was quite decisive. With the sample size being 140, 70% of the voters favored the anonymity and only 30% percent wanted the site to shift back to regular tables. (TwoPlusTwo poker forum 2015.)

5.4   Railing

Poker rail is defined as a barrier that separates players from spectators, the location from which spectators may observe a game. (PokerZone dictionary 2016a) In the world of online poker, railing corresponds to spectating games. Now there are different ways of railing online games, most commonly, it is done through site's client or via live streaming platform like Twitch. Typically, the reasons for railing are to watch a friend play, learn strategy, entertainment purposes or when one has bought a share of someone's action and want to see if their investment is successful or not.

5.4.1   Selling shares

Selling shares are extremely popular amongst the poker community, which means that it is important part of the railing scene. It is comparable to horse racing where people bet on

some horse or horses to win. Similarly, people are betting for someone to win in poker but the experience can often be more exciting, due to the length and diversity of the experience. Selling shares combine horse racing into poker in a unique way, which grants poker influential amount of additional entertainment value.

5.4.2 Word of mouth marketing

According to Whitler (2014) 92% of consumers believe recommendations from friends and family over all forms of advertising. When somebody is railing their friend in a poker table, it can be equated to word of mouth marketing. In weekly basis, several thousand players rail the Sunday million, the biggest weekly online poker tournament. That means an individual tournament is consistently reaching crowd of several thousand players. What makes it even better is that the top players win life-changing amounts of money every time.

5.4.3 Game type separation

At present, multi-tables tournaments are the most railed form of online poker. It is mostly due to its sports-like nature and the ability to turn small investment into large sum of money in matter of hours, as discussed in chapter 3.2.3. Even though, cash games and sit & go's are generally railed significantly less, there are a two exceptions – super high stakes cash games, also known as nosebleeds, and spin & go tournaments when the jackpot round hits. During the golden ages of nosebleeds, cash games were dominating the railing game. The popularity can be sensed from the fact that FullTiltPoker's nosebleed tables were mutually named "Rail Heaven"-tables. The nosebleeds are rare occurrences nowadays so it is safe to argue that tournaments are gathering the largest railing crowds. There is a rallying point to all game types, though. The more money is involved, the bigger crowd is attracted. (Carter 2015.)

5.4.4 Live Streaming

The standard way to rail games used to be through the poker client. The problem with this type of railing is that it requires a poker client, as well as a player account to the respective network. In some cases, a player would share their screen via Skype or TeamViewer to give a glance of what's going on for their friends outside poker. Given the ultimate power of railing and what it can do for online poker marketing-wise, it was certainly lacking its potential a few years ago, not reaching nearly as many people as it would like to.

Twitch and other livestreaming providers have revolutionized the railing experience. Using the headword "poker" in Twitch on a Tuesday night found over 8 individual livestreams with more than 200 viewers in them, highest individual stream peaking at 3000 viewers.

Livestreaming provides numerous positive aspects that could not be achieved in any other way. It allows viewers to see streamers hole cards, which is not possible when railing games via client. Showing hole cards proved to be vital cause for the rise of televised poker in 2002. The usage of the hole cam, which reveals players hole cards to the viewers, expanded from Europe to North America in 2002. The World Poker Tour was formed later that year and began airing in 2003, attracting numerous new poker fans and leading to increased numbers of entrants to live poker tournaments and increased investment in online poker. The fact that it is now possible to see hole cards in online poker has surely attracted new poker fans. Most importantly, easily accessible platform like Twitch allows poker to get much needed visibility amongst people who perhaps would never be reached otherwise. (Sfetcu 2014.)

Additionally, the streamers can use variety of methods to make poker interesting and entertaining. They can provide a chat and organize raffles for improved interaction with the viewers or increase entertainment value by doing live commentaries and producing additional content to go alongside with playing poker. Altogether, railing poker has never as intriguing as it is via livestreaming platforms.

5.4.5   Importance of identity

If online poker was made fully anonymous it would have considerable effects on railing. Anonymity would make tracking results virtually impossible. Players selling shares would take a major blow and the whole scene could even die out for good as it provided scammers with opportunities to exploit the starry-eyed. Most likely though, selling shares would be limited to trusted groups only and over time lose its visibility amongst the community. The final table of the Sunday Million would be decided by bunch of numbers. Nobody would know if a big name made it to the final table. Railing via poker clients died out too since it would be hard to keep track of who is who, even if it was known initially.

However, it was argued earlier that the more money is involved, the bigger crowd is attracted. Of course, there cannot be decisive answer to this but it is speculated that the argument would be true only to certain extent. To put this into perspective, a game of American football in National Football League attracts tens of thousands attendees while top level Finnish football game draws an average crowd of 2551. Now if both leagues were always played between "team A" and "team B" while all the players were completely unknown, it would not be interesting or appealing to anyone. The outcome was to be the same for both leagues, nobody would watch them anymore.

As discussed the future of railing is focused on livestreaming platforms. Thus it can be argued that overall effect of anonymity could not be that bad after all. However, railing experience

of online poker is a combination of things, from selling shares to rooting for your fellow countrymen in a big final table. If networks took away every other possibility to rail except for livestreaming, it would limit the marketing benefits of railing. It could ultimately endanger the whole meaning of recreational player model and that is not what the networks want.

5.5   Security

When Bodog launched their new fully anonymous poker software in 2011, CalvinAyre press release (2011) stated that anonymous tables would make it impossible to execute any sort of data mining. Bodog's software was broken in under 3 hours, and several exploits were found. The main issue was that Bodog violated the client-server trust. They used to send the data to the client, hoping that no one will fire up a debugger and take a look at the software. (hhSmithy 2011.)

Not only were the supposed anonymous tables not anonymous but they also represented a huge security risk. It turned out that it was possible to fetch player ID's from players sitting in anonymous tables and combine those ID's with hand histories which were written to personal disk. Ultimately, this allowed exploiters to run tracking software in combination with HUD, just like in the regular tables. More importantly, Bodog's web login form was attackable via the shotgun method. It locked out repeated login attempts for a given user ID but it allowed computer to make attempts from the same IP on a different user ID. Now this was a huge security risk considering exploiters could retrieve player ID's by just spectating an anonymous table and running their program. The author behind the discovery wanted to demonstrate how simple piece of code can be used to execute this kind of attack once the player ID's are known. (Bodog account security vulnerability: PartyCrasher exploit part 2 2011.)

```
1    // username and password global lists
2    username = array('4025500', '1240159', '8856161', ...)
3    password = array('password', 'bodogpoker', 'badbeats', ...)
4
5    // attempts a bodog login with a username and password
6    function attemptBodogLogin(user,pass)
7        failure = 'Required information' // failure string
8        response = webFormSubmit('https://www.bodog.eu/account/app/Login',
9                        user, pass) // submit a form with user and password
10       if (response == failure)
11           return FALSE // nope, user and pass pair failed
12       else
13           return TRUE // hacked!
14
15   // tells you if the bodog login succeeds and prints account details
16   function hackUser(user, pass)
17       result = attemptBodogLogin(user, pass)
18       if (result == TRUE)
19           print 'Broken password! User: ' . user
20           print 'Password: ' . pass
21
22   // main function that is called first, nested for loop (O(n*m) for nerds)
23   function main()
24       foreach(password as pass) // for every password in the list
25           foreach(username as user) // for every username in the list
26               hackUser(user, pass) // try a user with the first pass
27           endforeach // next user, try the same password
28       endforeach // next password, loop through the userlist again
```

Figure 6 Demonstration of the vulnerability (Bodog account security vulnerability: PartyCrasher exploit part 2 2011)

Similar vulnerability were discovered in PartyPoker's anonymous heads up tables. Instead of anonymizing the data and sending it to the client, the PartyPoker server sent full player screen names across the wire. Because the data was available client-side, a programmer could extract this information and display it in real-time at the table. (Jones 2011b.)

Burnett (2015) tells about an anonymous team who alleged that there were major security breaches at Bovada poker. They claimed that millions may have been siphoned from the site by some form of super-user accounts coupled with the use of bots. They found issues with the number of multi large hands, collusions teams and bots. All of those issues were proven correct through data collection, analysis, and then using the techniques themselves. Particularly, they claimed that the users were being edge-cased in big hands that they tend to lose a large pot over, and that there were zero counter measures against bots nor a front-end way to try and detect them. The team reported three possible causes for the issues, compromised random number generator, inadequate random number generator or a loophole in the software. No official response were found for these claims but as of now, Ignition casino former Bovada poker, is still alive and well ranking third in player traffic worldwide. (Burnett 2015.)

While there has been many vulnerabilities in anonymous tables, there has been some unintended benefits as well. In 2013, PokerStars players experienced denial of service attacks while playing high stakes heads up sit and go's. The attackers would disconnect victims in significant pots to make them time out and lose the pot. This type of attacks can be done easily if the attacker can determine one's online poker username and IP address. Most commonly, IP addresses can be obtained from instant messaging service like Skype or forum accounts. Anonymous tables shield the players from targeted denial of service attacks as long as operators are implementing proper security protocols and user information cannot be retrieved. (Amsel 2013.)

5.5.1 Bots

For years, bots have been a major nuisance for the online poker industry. They exist or at least have existed in every network worldwide, and often seem to target anonymous tables. Hitherto, the biggest bot scandal were revealed in 2015 when a bot-ring, involving players primarily from Russia and Kazakhstan, won an estimated amount of $1,5 million dollars in Pot Limit Omaha (Glatzer 2015). With the help of rapidly developing technology and machine learning, bots are becoming even more sophisticated which makes them harder to detect. Furthermore, there is even a free report available online offering detailed step-by-step guidelines on how to create a pokerbot.

5.5.2 Collusion

Collusion usually stands for two or more players playing together with a secret, common strategy. Collusion in online poker is relatively easy and much more difficult to immediately spot if executed well enough. Colluders can share their hole card information via telephone calls or instant messaging. Sometimes there might be just one person using multiple accounts on different computers to play in the same table. The likelihood of immediate detection is small due to the fact that many broadband plans offer multiple IP addresses to begin with. (Cheating in poker 2015.)

Scott (2014b) suggests that the most powerful argument against anonymous tables is that they must be a magnet for fraud and collusion. Players cannot police the game if they are anonymous, and report suspected collusion and cheating. According to Collson (2012) Bodog tried to introduce a solution by allowing players to request hand histories with a 24 hour delay. If someone suspected any hint of collusion, they could contact Bodog's security team for further evaluation. Gentile (2014) confirms that that the use of hand histories has led to discovery of collusion by identifying the frequency at which accounts play at the same table together.

Nevertheless, networks have been unable to fully eradicate collusion, the cases still happen at regular intervals.

5.5.3   Detection systems

Many networks claim to have sophisticated tools to detect collusion and other types of unethical behavior like bots, one of these networks is the MPN network. (Scott 2014b) With the help of these tools networks can investigate millions of hands in a very efficient manner. According to Scott (2014b) 97% of the game integrity cases investigated by the MPN network are proactively generated, and just 3% are reported by players or operators. However, many professional poker players claim that if the players didn't take the initiative to investigate and report clues on the $1,5 million PokerStars bot scandal in 2015, it is possible that it would have never been revealed.

5.5.4   Trust

Despite all the abuses that have occurred at anonymous tables in the past, poker networks are appealing to trust their detection systems. From player's perspective this certainly is not the most comfortable situation. Knowing that the cheaters will always find new ways to cheat, some players might have hard time surrendering the control to networks.

6   Analyzing different approaches

6.1   Case network models

The poker industry has put a renewed emphasis on attracting recreational players, in lieu of the longstanding model that almost exclusively appealed to and rewarded the highest volume players. The move towards recreational model is not a new development so much as it is a return to the marketing campaigns and rewards programs that were in place during the years of poker boom. (Ruddock 2014.)

In the following chapters focus will be set to three case-network models, introducing how each network has implemented the recreational player model in the recent history and provide succinct analysis of each approach.

6.1.1   Ignition casino

As we know, the pioneer of recreational player model, currently known as Ignition casino, has taken the approach of site-wide anonymous tables. In addition, they have prohibited rakeback

deals of any kind. None of the European competitors have been bold enough to go full anonymous except for some networks that have implemented anonymous tables into their selection of cash games. Without Ignition's initiative, the poker industry would not have shifted towards the recreational model in such fast pace. They have successfully acted as the trendsetters.

The soft games turned out to be strong enough lure for a lot of grinders. Considering Ignition's current dominance of the U.S. market, it is hard to argue with their results, particularly when poker is a secondary product for the sports betting giant. Despite the fact that there has been considerable issues with security in recent years, as discussed in chapter 5.7, it has not slowed the network down. (Ruddock 2014.)

The ability to keep the games soft while rising to the position of market leader in the U.S. is an honoured achievement. Furthermore, when a network does not have to deal with additional costs for rakeback and VIP rewards, it must be generating greater profit as well.

Conclusively, high player traffic and soft games are the key characteristics of great poker environment for many different player types. There is no reason why the success should not continue in the near future.

6.1.2   Unibet

In 2014, Unibet migrated away from the MPN network to become a standalone network. Unibet launched its own, new poker software with a complete focus on the new and casual poker player. (Pokerlistings 2014.)

Unibet's approach is to offer an environment where the focus is set to recreational player rather than the established professional. Players cannot choose which tables they want to play in, they can only choose the limit. This was later implemented to FullTiltPoker's software as a result of benchmarking. The software also prevents players from using HUDs, trackers, scripts or any other external programs. Furthermore, perhaps as a production of the anonymous tables, Unibet offers nickname changes up to three times a day, providing players with indirect anonymity. Lastly, they have decided to remove the possibility to chat at the tables. (Pokerlistings 2014.)

The fact that the software itself prevents players from using tracking tools or any external programs eliminates the primary effect which anonymous tables were set to achieve in the past. Moreover, the software is not the most convenient for multi-tabling purposes which probably drives a proportion of the professionals away. Combining these two factors should result into soft games in the year of 2016. The possibility for regular nickname switches has

an additional effect for the casual player, making them feel more secure and improving the overall gaming experience.

Unibet's new software has commonly been well-received within the poker community. According to Glatzer (2016a) the site reported a growth of 37 percent in player traffic while at the same time the rest of the industry declined by 20 percent. Furthermore, the growth was also shown in gross winnings segment where the gross winnings revenue increased by 45 percent in the first quarter of 2016 (Glatzer 2016b).

Essentially, Unibet's approach has the same benefits as Ignition's model which are achieved in a way that is perhaps more appealing to the recreational player, the software allows the player to be in control of their identity and it has not experienced any major security issues. Unibet does not rate as high as Ignition in player traffic at the moment but if they manage to keep up the current growth-rate they are set to overtake Ignition in a few years.

6.1.3 Pokerstars

PokerStars started shifting toward recreational model, making their own alterations in early 2015. They made major changes to their bonus structure and VIP reward program at the cost of their high-volume players. They launched massive campaigns featuring soccer stars Cristiano Ronaldo and Neymar Jr. PokerStars was also the innovator of the lottery style spin & go's which are nowadays the most played format amongst recreational players. (Hollreiser 2015.)

PokerStars has not entered the world of anonymous tables nor prevented the use of HUDs . In fact, they think that an important part of poker is knowing an opponent. They justify their policy by saying that if someone changes their user ID, the other players will think it is someone new, but that person still knows them, thus gaining an experience advantage at the tables. (Reddit 2014.)

It was estimated by Ruddock (2015) that the benefits being cut from the high-volume players equal to around $17 million in yearly basis. This money was reallocated to various promotions and marketing purposes which aim is to target recreational players. Nevertheless, it is hard to quantify if any of these promotions are a direct result of the VIP reward changes, as PokerStars has always run promotions, or if the money given away represents an increase in this type of promotional spending compared to 2015. What is apparent, though, is the nature of the promotions, as PokerStars indicated they would be aimed at recreational players. They are designed to get people playing, not to reward consistent high-volume play. (Ruddock 2016.)

According to PokerScout's online poker traffic report (2016) PokerStars has almost seven times higher weekly average of players than the closest competitor, it is only logical that they do not take the same approach as smaller networks. The changes they have made should obviously be considered on a different scale. While other networks level the playing field by blocking tracking software and aim to extend a lifetime of recreational player, PokerStars is using aggressive marketing and perhaps the most powerful tool when acquiring new customers, money.

Ultimately, it is hard to evaluate how sustainable PokerStars' approach is, as recreational players will still be exposed to tracking software and are unable to change identities. It is inevitable that there are a number of recreational players winning money from promotions but their experience at the regular tables remain invariable. It is likely to see PokerStars hold on to their position as market leader, due to the fact that they can spend massive amount of money to marketing, and remain the most visible network in the eyes of potential new customers. Moreover, they have the highest player traffic, great company image and online poker's biggest prizes continuously distributed in promotions.

7   Discussing and evaluating the future

7.1   Major on-going changes

There are three major developments to look for in the near future. Each of these developments might have enormous impact on the industry and it is certain that these occurrences will set the tone for respective networks in 2017.

Recently, PartyPoker went full anonymous in their cash game tables, making them the first European network to do so. Only time will tell the true consequences of the change and if the other European networks are to follow the suit. (PokerHomeGames 2016.)

Secondly, Unibet has announced that they will be unveiling the second version of their popular software by the end of 2016. Glatzer (2016) opines that all recreational friendly features will stay but big changes are to be made in graphical design and UX design. After the success of the first client the poker world is eagerly waiting to see what is coming up next. Unibet head of poker Andrew West says that the new release will change the industry once again.

Finally, there are the changes in bonus structure and VIP rewards at PokerStars. It is yet unknown what kind of promotions they are going to run but the aim is to target recreational players. There might be a significant loss of high-volume professionals now that the rewards

are being cut to minimum. Will they be able to justify the cuts by attracting enough new players or will this turn out to be a costly missclick?

7.2 Author's take

I believe that the popularity of online poker will fall steadily in the upcoming years. The fall will not be stopped by anonymous tables nor any innovations regarding the recreational player model. Opening the U.S market could lead into temporary poker boom but online poker will not see another over 3-year period of sustainable growth in player traffic.

At present, online poker is competing for entertainment time more than ever before and it is safe to say that the competition is fierce. While new games are introduced and innovations made in daily basis, poker has always remained fundamentally invariable. Technology and innovation has given birth to things such as Netflix and Call of duty which are great examples of the heavy partakers of the entertainment time. Even if someone manages to navigate into an online poker table instead of Call of duty, the experience is likely to be not as thrilling for beginner.

Anonymous tables can make the games partially softer. Recently, an uncredited person demonstrated the level of play at Ignition casino's mid and high stakes tables. According to his examples, the games indeed appear to be a lot softer than elsewhere. Although, he said it might not be the anonymity alone that has led to lack of professional players but the general threats with security and money transactions. Nevertheless, the soft games is a recipe for thriving player traffic as Ignition has already proven. Hence, I believe that there is a slot open for European network to implement fully anonymous gaming environment. To be successful, it should be the first network in Europe to do it as well as contain large enough player base beforehand.

As a first concrete product of recreational player model, anonymous tables has given networks food for thought which has led into measures and improvements in the online poker ecosystem. Anonymous tables are not the ultimate solution but I believe its impact has been crucial for online poker's sustainability. If I had to give an estimate, I would say that the PokerStars' form of the recreational player model will be the best for the health of the online poker ecosystem in the long run.

8 Conclusion

Online poker is now in a state where it is absolutely necessary to make changes to current poker economy. Whilst the transition has been going on since 2009, some networks have been slower to react than others. Seven years later, networks are still making changes, trying to attain the full potential of the recreational player model. The ultimate goal is to make poker ecosystem healthy again.

Anonymous tables are the very first upfront product of the recreational player model. Although, the anonymous tables aren't necessarily the best solution to achieve intended benefits of the recreational player model, it has inspired networks to take action and create new alternative solutions.

Anonymity brings players closer to the pure poker experience where the role of tells, reads and psychology are emphasized. It eliminates the impact of HUDs and targeting of weaker players. However, anonymity creates issues with player identities and threatens the future of sustainable poker in a different way. Moreover, anonymous tables provide auspicious environment for cheaters and abusers. In terms of security, anonymous tables have a mediocre track record at best.

Anonymous tables should be considered a functional part of the recreational player model, not the preeminent solution.

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