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Entrapment and Near Miss: A Comparative Analysis of Psycho-Structural Elements in Gambling Games and Massively Multiplayer Online Role-Playing Games

Faltin Karlsen

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Abstract While massively multiplayer online role-playing games like World of Warcraft are often accused of leading to excessive and harmful playing, the only gaming activity that is internationally recognized as a pathological disorder is excessive gambling. The present article seeks to establish empirical data on potential harmful online gaming through a comparative structural analysis of massively multiplayer online games and gambling games. The analysis focuses on some of the psycho-structural elements that contribute to excessive gambling, with a special emphasis on the phenomena known as *entrapment* and *near miss*. The analysis is based on interviews with twelve heavy users of World of Warcraft and ethnographical observations from the game. The findings suggest that entrapment and near miss are present in World of Warcraft, but with a comparatively weaker impact, and influenced by other elements more typical of this genre, including social engagement and competition. These elements might overall have a stronger effect on the dedication to play excessively.

Keywords Addiction · Entrapment · Gambling · MMORPGs · Near miss

A highly-debated subject amongst the public during the last few years has been the possibility of becoming addicted to online games. A common response from game researchers is to describe this as unlikely by referring to the complexity of the games in question. Nick Yee, for instance, has stated that:

Online games are social worlds with their own geography, culture, dialect, and social rules ... They are places where people meet and then get married face-to-face. And to the extent that they are social places, asking whether someone can be addicted to an MMO is like asking whether someone can be addicted to the United States. (Yee 2006)

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Edward Castronova uses a similar argument, and, in this case, he contrasts computer game playing with being an alcoholic, as, allegedly, was his mother:

Now suppose she instead had been addicted to EverQuest. To me, that sentence, in comparison to alcohol addiction, sounds like someone suggesting: What if your mother was addicted to France instead of alcohol? I would reply, Fine! She likes France. Let's move to France. End of problem.'(Castronova 2005: 65)

The basis for this argument is a view of online games as complex spaces where the player has a vast number of avenues of exploration available. In their arguments, Yee and Castronova seem to imply that the many possibilities that exist in the game universe will automatically generate an equally varied form of use. An interesting aspect of this argument is that, in contrast to more traditional media types where the complex social and cultural context of the user is seen as mitigating the impact of the media, the complexity has now moved inside the medium itself. It is unclear what kind of empirical support Yee and Castronova have for their arguments and it might be pertinent to ask whether their descriptions are slightly idealistic. It would, for instance, be easy to turn their argument around and point to the fact that people get addicted to things in the real world as well, although, arguably, *this* world has a higher level of complexity to offer the 'users'.

I read Yee and Castronova's claims partly as a response to sensationalistic and imprecise use of the concept of addiction among the general public. Their emphasis on the social and cultural complexity of these games reminds us that the players often experience them as socially fulfilling and as a varied and engaging pastime activity—which explains some of the time and the effort they spend on them. In this capacity, Yee and Castronova's perspective is representative of a certain focus on social elements in game studies and media studies. In game studies, a large body of research describes how players of online games organize different activities within the confines of the games (Ducheneaut et al. 2006; Karlsen 2009; Kendall 2002; Mortensen 2003; Taylor 2006). Several studies focus more discretely on how the elements of competition and cooperation conjointly are contributing to excessive use, for instance in connection with organized group play like *raiding* (Taylor 2003; Karlsen 2008b; Linderöth and Bennerstedt 2007). These studies show that social demands related to regular group play make the players invest much more time than initially intended, which is an important finding. However, by focusing primarily on social elements, these studies do not explain if there are also particular structural elements in this genre that cause players to play excessively.

Psychologists have occasionally made the argument that computer games share many of the same structural elements with gambling games and, therefore, may be subject to some of the same psychological mechanisms with regard to excessive playing (Fisher and Griffiths 1995; Griffiths 1991). Gambling is the only play activity that is currently recognized as a pathological disorder. Regardless of whether or not players of computer games can be categorized as addicted in a strictly pathological sense, there is a general acceptance that some players show a level of involvement in computer games that can be characterized as problematic (Griffiths and Davies 2005; Wan and Chiou 2006). A research group has addressed the lack of 'rigorous attempts to classify and organize the psycho-structural elements of video games in a similar way to gambling' (King et al. 2009). One of the reasons for this lack is because computer games are structurally more complex and heterogenic than gambling games and, therefore, not as straight forward to categorize. Despite this, they have created a tentative taxonomy of structural features and psychological mechanisms in computer games, inspired by similar structural analysis of gambling games. The explicit aim with this taxonomy is for it to 'act as a catalyst for future research into

excessive video game play, particularly in those areas that the psychological literature has not explored in detail' (King et al. 2009).

Methods and Materials

The present article is an analysis of online game addiction, based on the assumption that this phenomenon, however marginal, deserves a more thorough empirical investigation than has been conducted so far. In accordance with the above-mentioned wish for structural research within psychology, as well as the lack of adequate structural analyses within game studies, my analytical approach has been to isolate different structural playing elements in MMORPGs in order to analyse whether they encourage problematic playing behaviour. Empirically, I will compare structural elements from World of Warcraft with elements from gambling games that are closely linked to addictive behaviour. I have also interviewed twelve heavy users of World of Warcraft in order to evaluate whether similar structural features are used in the same manner, and to investigate how structural and societal elements interrelate. Ethnographical observations from World of Warcraft will also inform this analysis. The interviews were conducted during the spring of 2009 using a 'snowball' approach. The informants had all been playing World of Warcraft and had experienced some, but not necessarily serious, problems related to their playing. The informants were all young adults, ranging from 20 to 27 years. They lived in different urban areas in the eastern part of Norway.

The main criterion for choosing informants was that they had been playing World of Warcraft excessively. Most of them reported that, during certain periods, they had been playing almost every waking hour, or up to 16 h a day. The length of the period varied from a few weeks to more than 2 years and the informants had experienced everything from mild to serious problems related to their playing. Of the milder, self-reported effects of this, players said that, during such periods, they were less socially active than usual and sometime skipped meals, neglected household chores or suffered from mild sleep deprivation. At the more severe end of the spectrum, the excessive playing had resulted in informants losing jobs, flunking out of school, being thrown out of home, and being abandoned by their partners. At the time of the interview they had either quit playing or played much less than before.

Before I begin the analysis of what motivated the players to play excessively, I will present relevant research from gambling addiction.

Types of Gambling

Gambling can be defined as 'a monetary transaction between two parties based on the outcome of an uncertain event' (Walker et al. 2008: 11). The presence of money and the element of randomness are two of the most significant aspects of gambling, in addition to the element of at least two competing parties. In modern, commercial gambling these are normally represented by a gambler and a house. The house will have a so-called *house edge*, which is the percentage the house will, on average, make money. The size of the house edge varies from game to game. In electronic gambling machines it is usually about 10 per cent; in European roulette it is as small as 2.6 per cent (Turner 2008: 57).

Gambling games can be sorted with regard to temporal qualities. At one end of the spectrum we find games with very short intervals between each round, like blackjack,

roulette and electronic gambling machines. These are often referred to as continuous games or games with high event frequency (Turner and Horbay 2004). At the other end, we have games with much longer intervals between each bet, like Lotto and different sport-betting games. These games are often run on a weekly basis, and are referred to as games with low event frequency, or as discrete games (Walker et al. 2008: 19).

Gambling games can also be sorted along a spectrum from games of pure chance, like roulette and lotto, to games where skills also play a part, like poker. Also, in games where skills play a role, the house will win in the long run, regardless of how skilled the player is. Most commercial gambling games are games of pure chance and the most popular of these are lotteries like Lotto and electronic gambling machines.

The Problem with Randomness

The element of randomness we find in games of pure chance is something that challenges many people's cognitive abilities. Several psychological phenomena are described in connection with this. One of the most common is the phenomenon of *chasing*, where a gambler is trying to recoup his or her losses by continuing gambling. Over time, this can have devastating economic results for the gambler. Another phenomenon is known as the *gambler's fallacy*: a belief that, after a gaming event has occurred, it is less likely that the same event or outcome will happen again. Similarly, a gambler might perceive a row of losses as strong evidence of an imminent success and bet more heavily (Rogers 1998). This reasoning can be explained by the fact that the player fails to understand that each round in the game is a separate event without any connection to previous or future events. They would rather believe that chance is self-correcting and fair (Kahneman et al. 1982). Despite popular belief, an electronic gambling machine is never 'due' to win, and every combination of numbers has an equal likelihood to win in a round of Lotto.

Both these psychological phenomena are caused by gamblers relying on heuristics or mental 'rules of thumb' rather than on a proper understanding of how randomness works. An example of this is the common belief that some combinations of numbers are more likely to win than others. In a survey conducted by a group of researchers, only 51 per cent of the general public correctly answered 'false' to the statement: 'A random series of numbers, such as 12-5-23-7 is more likely to win than a series of numbers in sequence, like 1-2-3-4' (Czerny et al. 2008: 73). Among gamblers who played excessively, only 38 per cent answered this question correctly. The reason for this misconception is that people think that a random range of numbers should 'look' random. A complicating factor is that many game designers also intentionally confuse the level of randomness involved. It is, for instance, common in roulette casinos to show a list of the last winning numbers, even though each game is a separate event where future or past outcomes have no impact on the result. This might lead gamblers to believe that there is some sort of system behind this game, and that they are about to uncover this system (Turner 2008).

Pathological Gambling

Gambling addiction or pathological gambling entered the Diagnostic and Statistical Manual of Mental Disorders in 1980. In the latest edition of this manual (DSM-IV), pathological gambling is listed as an 'impulse control disorder' (American Psychiatric Association 1994). Research on problematic or pathological gambling has shown that there are certain

structural characteristics in games that are most likely to lead to problematic gambling habits. Dickerson and O’Conner list eight different criteria where accessibility and continuous forms of gambling are regarded as the most important criteria for people in developing problematic gambling habits (Dickerson and O’Connor 2006: 17). Turner states that the most problematic types of gambling are electronic gambling machines and blackjack, due to the fact that they are ‘fast, continuous, have relatively small minimum bets, and are widely available’ (Turner 2008: 62). The high likelihood of problems related to electronic gambling machines has even earned them the dubious nickname: ‘crack cocaine of gambling’ (Mandal and Doelen 1999). The gambling forms with high event frequency are regarded as especially dangerous because of the psychological reward mechanisms on which they are based, as they reward the players with small wins at variable intervals. According to operant conditioning theory, behaviour that is rewarded on a variable, rather than a fixed, ratio schedule, is most likely to be reinforced (King et al. 2009). Variable intervals are, again, created by randomness, which is a core element in all types of gambling games.

Gamblers are playing for different reasons, including the excitement of the game and as an escape from life (Spunt et al. 1998). A study of Australian gamblers states that being in ‘the zone’ was a central motivation factor among problem gamblers. The same study also found that big payouts, frequent payouts and free games were features that the general gambling public found highly attractive (Livingstone and Woolley 2008: 79).

Studies of online games show that there is a wide range of factors that influence how people play, including the possibility of exploring the game universe, mastering the gameplay, cooperating with fellow players and pestering other players’ lives (Bartle 1996, 2003; Karlsen 2004; Yee 2007). With regard to World of Warcraft, it has been argued that one of (possibly many) gaming goals is ‘to keep developing an avatar so that the player can make further accomplishments within the game space’ (Karlsen 2009: 79). While the overall goals for playing World of Warcraft may be different from gambling, World of Warcraft has some of the same structural features as gambling games, especially if we look at electronic gambling machines. As already mentioned, these games are characterized by being fast, continuous and widely available (Turner 2008: 62). The activity demanded of the gambler is repetitive—mainly consisting of deciding between a few possible actions by pressing buttons. The gambling game rewards the gambler on a varying ratio schedule. Online games like World of Warcraft are also continuous and widely available but, unlike electronic gambling machines, consist of both fixed and variable reward schedules. In World of Warcraft, the general design scheme is a fixed level structure where the avatar gradually grows in abilities while constantly being ushered toward areas that match the difficulty level of the avatar. The main activities while developing, or *levelling*, an avatar are to kill monsters and to solve so-called quests. The outcome of a monster fight is easily deduced by the level of the avatar, and rewards the avatar with a consistent number of experience points. How many experience points the monster will give the avatar is based on the difference in level between the monster and the avatar, but the amount is not subject to randomness. Also the *questing* activity has an overall fixed structure, designed as missions with explicitly-stated objectives, usually involving killing a set number of monsters or finding a set number of items (Karlsen 2008a; Rettberg 2008; Sullivan 2009). In the following analysis I will focus on two activities in World of Warcraft that have a variable reward structure comparable to gambling. The most significant of these, which I will return to shortly, is the rewards players get from killing especially difficult monsters, so-called bosses, that they are conquering in groups. The other one, which I will give an account of in the next section, is the phenomenon known as *grinding*.

Grinding and Randomness

Grinding is an activity where the player is repeating the same simple action over and over in order to gather resources. Long stretches of levelling a character can be filled with grinding for experience points, for instance by staying in an area and repeatedly killing monsters. The motivation for grinding varies but is usually done in order to acquire specific resources. When the character reaches maximum level the player will usually kill specific monsters to change alignment with a Non-Player Character (NPC) faction (reputation grinding), or to find specific materials used for crafts. Raiders grind items like herbs or food to be able to create consumable items that can temporarily boost their character during the raids. The resources that are ground are ordinary items that usually only vary in quantity, but sometimes the player can find more valuable items or resources, like armour or weapons with high (rare or epic) quality. Compared to gambling, this will be the difference between small and frequent wins and winning a large amount of money.

Most of my informants were grinding occasionally, if not regularly. They stated that they needed to grind a variety of resources. For instance when I asked Celia if she used to grind a lot, she replied:

Well, quite a bit. My main character has tailoring as a profession so I have spent a fair number of hours trying to get hold of cloth I can use for that. Um, and also all the daily cooking quests where you need meat, chilled meat. I have spent quite some time flying around gathering as many resources as possible. Together with my other profession, herbalism, that is what I spend most time on. In addition to grinding in order to level. (F, 21)

Celia also told me that she tried to combine different activities at the same time, for instance grinding and questing. This is basically an effect of the multi-goal structure of World of Warcraft, where players can engage in different long- and short-term goals simultaneously. Other players reported grinding for items more specifically, focusing on one activity at the time. Erik, for instance, reported being after a specifically attractive mount, the frostsaber:

And it is that frostsaber, which earlier took forever to farm, which I decided was my goal to achieve. You get really huge status when you've got it, because there are incredibly few who have it, since it takes so long to get hold of. So I guess it took me about 5 weeks, almost. Minimum 5 h each day, killing the same mobs over and over again. (M, 22)

According to wowwiki.com this was earlier regarded as the longest and most repetitious reputation grind in the entire game. The time spent getting to the required reputation, called *exalted*, in order to acquire this mount, has decreased considerably since it was first introduced into the game. While, originally, it was calculated to take 17.5 days to accomplish, it is now considered to take around 42 h. Completing a goal like this displays a certain level of dedication. It is interesting to note that the reason for acquiring this frostsaber was not the mount itself, but rather the social status it represented. In this respect, it is not game resources that constitute the main currency involved but, rather, the social value this imparts to the player. Other informants stated that they shied away from overtly grinding and employed techniques to reduce the repetitiveness of grinding:

Informant: I can keep on grinding as long as I have someone to talk to, or I can watch a movie or something at the same time.

Researcher: You are grinding while you are watching a movie?

Informant: Yes, it is repetitive action, so you've got to have some other stuff to do as well. If you sit there and only kill the same mob again and again and again you'll just go nuts. (M, 21)

Grinding is obviously not an activity that has the level of excitement that gamblers often report of when gambling. The element of randomness and the possibility of acquiring rare and valuable objects do little to change this. My informant Jenny, for instance, described the occasional drop of the valuable *Arctic fur* when grinding leather as relatively trivial:

It's not that I go like: Oh, yay! I'm more like: Hey cool, more money. Spend on more shit. (F, 22)

The ways the developers have designed the outcome of grinding show some resemblances to the reward structure of gambling games of pure chance with a high event frequency. Despite this resemblance, grinding is described in less than enthusiastic terms or as rather boring. One of the reasons for this is that the outcome of grinding, represented by rare and valuable items, does not match the huge jackpots in electronic gambling machines. Comparatively speaking, a level 40 avatar will not, in one killing stroke while grinding, suddenly reach level 80. And the player will certainly not be bestowed with riches. The reason players grind is not so much the outcome of grinding, per se, but rather how the outcome, the resources, act as stepping-stones to other goals, be it a boost in raids, higher social status or simply material to advance your level in a craft. In gambling, the player knows that each bet can potentially reward him or her with a large sum of money.

This illustrates the core difference between the games: the money-versus-time paradigms. If we ignore the costs of purchasing online games and the monthly fee, playing online games in general, and grinding in particular, involves trading time for resources. By investing time, the player is slowly accumulating virtual wealth within the game space. Gambling, in contrast, will, for most players, for most of the time, lead to a loss of resources, both in form of time and money. This has different implications for the player: in one case involving the accumulation of virtual resources, and in the other a loss of very real money. However, for both game types, the real problem occurs when the player can no longer control the playing, letting game goals overshadow other vital elements in the player's life. In the further analysis I will discuss in more depth two psycho-structural phenomena known from gambling that are linked to such problematic playing behaviour: *entrapment* and *near miss*. My aim is to evaluate whether these phenomena are also present in World of Warcraft.

Entrapment

Entrapment is a phenomenon known from gambling, especially in connection with lottery games like Lotto. According to Rogers, 'entrapment is related to the point at which, despite mounting losses, players feel obliged to continue betting ("investing") both time and money through some internal sense that they have gone too far to give up now' (Rogers 1998: 120). Lotto gamblers are described as entrapped when they feel obliged to keep betting week after week. This is often caused by the gamblers betting on the same row of numbers every week and being afraid that 'their' row of numbers will come up if they stop betting (Walker 1992). This is again connected to a superstitious belief that they have chosen a particularly lucky set of numbers, or simply that they have chosen a specific set of numbers, like birthdays, instead of choosing numbers at random every week. A similar effect is

observed in connection with electronic gambling machines where players hold on to the machines for hours, because they think they are 'due' to a win and are afraid to miss the jackpot if they stop playing (Turner 2008: 46). This phenomenon is also connected to the gambler's fallacy described earlier.

The phenomenon I found from World of Warcraft that most closely resembled entrapment was connected to raiding. At first glance, World of Warcraft has few structural similarities with a game like Lotto, since World of Warcraft is a continuous, persistent game. However, the raiding activity in World of Warcraft shows some resemblances to the slow, repetitive pattern we find here. Raiding in World of Warcraft is currently done in groups of different sizes with a maximum of 10 players in the smallest or 25 players in the largest groups. The maximum size prevents the players from overpowering the monsters by sheer numbers. The object of raiding is to conquer so-called *bosses* that drop particularly valuable items that can equip the avatars. The basic structure of raiding is a chain of goals that are spread out in time. The raiding takes place inside special dungeons, so-called *instances*. These consist of a varying number of bosses, from one single boss to around 15. Normally, the deeper inside the dungeon you enter, the harder it will be to kill the bosses. Every week, and sometimes more often, the raiding dungeons reset. This means that the monsters and bosses in the instances *respawn* and the progress you have made the previous week is erased. But it also means that the raiders are able to kill the same bosses over again and get a new chance at the loot they drop. The instances are further designed with different difficulty levels, so that the players will normally focus on one or a few instances at a time, slowly moving toward more challenging ones. Dedicated raiding guilds have, as their ultimate goal, to kill every boss in this game. Players will usually raid several nights each week with the prospect of getting loot and progressing further inside the dungeons. Raiding is a type of playing that requires a specific set-up of avatar types, which again demands player accountability over longer periods of time. Raiding guilds, therefore, often demand a certain level of commitment from members and can, for instance, require members to raid four or five evenings each week. Players with avatars that are scarce, such as healers, may also be asked to raid when they have not signed up for raids (Karlsen 2009: 111).

As part of my ethnographic research, I was member of several raiding guilds in World of Warcraft. My participant observation here suggested that some kind of entrapment mechanism was involved. After raiding for some months, a guild would normally have *cleared* the instances several times and got most of the items they needed from the place. At this stage, I sometimes observed how players would get some sort of fixation on a specific item they were still in need of. They could sign up week after week for raids in order to get this particular item. Some of them were convinced that, if they did not participate in the raid, an item was certain to drop and displayed a noticeable level of distress if they, for some reason, were unable to participate; as with the Lotto players, they were frightened of not being present when 'their' item dropped. During my interviews I asked the informants about this phenomenon. The general finding was that few of them currently had this kind of fixation on items but some told me they had experienced this earlier in their playing career. Keen attention to gear was evident in most of the interviews. For instance Geir, who had his most intense raiding period a couple of years before the time of the interview, described the interest like this:

In Blackwing Lair, yes it was that sword that dropped from that Chrono something. Cromatic Blade, which I was very, very keen to get. Before that it was the dagger from Ragnaros and then different item pieces. You need your armour set or ... it is always something. Gear was something that, when you had beaten the content, gear was what you were farming for. (M, 27)

When the bosses no longer represent a challenge, they are *farmed* for their drops in order for the players to get hold of items that are especially powerful for their class. This informant also told me that items had been even more important when he played a different online game, EverQuest, around 5 or 6 years earlier:

In EverQuest, items were very, very much more powerful than in World of Warcraft. I remember leading a raid on a drake called Nagafen and got a cloak called Cloak of Flame, which was the dream item for all melee characters because it gave 36% haste. This was the real big deal and an incredibly valuable item. If you were to buy it, it would have cost thousands of in-game cash. (M, 27)

This informant described, with passion, for how many months and how many Nagafen raids he had been on in order to get hold of this item. In this final successful event, the player had to wager against 21 other melee players, and was ecstatic when he won. An interesting aspect of this recount is how vivid the memory still is for the player, many years after the incident. This might bear some resemblance to problem gamblers who can recount a large win early in their playing career. This is a subject on which I unfortunately have no reliable data, and, therefore, will pursue no further. This intense recollection of getting a specific item, however, illustrates the importance that gear or items may have for the players.

One of the reasons my informants now had a more relaxed attitude toward items, compared to earlier, can partly be explained by the fact that the development company, Blizzard, has made it easier to get hold of high quality (epic) loot than earlier. As Andreas explains:

Researcher: So you sort of have enough equipment?

Informant: Yes, nowadays so much of it just drops. On a Naxxramas run, in 25-man mode, it drops like a hundred epics. Earlier when we ran around in Molten Core we were 40 players and the bosses dropped 1 or 2 epics each. It was quite different then. (M, 27)

The current Naxxramas instance is, regarding length of play, somewhat comparable to the earlier Molten Core instance but the loot to player ratio is currently many times better. Despite the noticeable inflation in epics over the years, some of my informants also gave me enthusiastic accounts of much more recent gear acquisitions. Ivar for instance told me that:

Well, the best thing about WOW is when you have been in a raid for 7 h and then finally the gear you are waiting for drops, and you get it. That has to be the best thing about WOW, the best feeling. It happened to me on Sunday about a week ago when I had been in a raid for 7 h without getting anything. Then my tier 8.5 leggings dropped, and I got it. Yes! Then I ... I screamed a bit, I have to admit. I was happy. I was very happy. (M, 24)

He further explained that he was currently after an item called *Leviathan Fueling Manual*, which he actually had seen drop 12 times without being able to get. This illustrates an important difference between World of Warcraft and Lotto: the much higher chance of achieving goals in World of Warcraft. While players might have a dry spell and get no loot for a period of time, they will, if they keep raiding, acquire the items they are after. The dedication to keep on raiding is, in this respect, a rational choice, while to keep betting on the same row in Lotto, in the great majority of cases, will not lead to the desired outcome. The relative abundance of high-quality items will generally weaken the potential of an entrapment effect to occur in World of Warcraft, as this makes 'winning' individual item pieces less special.

Dragon Kill Points

To Ivar, acquiring gear was, as we see above, an important motivation to raid. However, he told me that of equal importance was gaining so-called *Dragon Kill Points* or DKP. DKP is a player-invented distribution system based on effort, and the most common method for distributing items during raids (Fairfield & Castronova 2006; Karlsen 2008b). There are many different DKP-systems, but most of them have in common that the players earn points by participating in raids: points that, later, can be used to ‘buy’ items that drop during raids. The player with the highest number of points will then have first-right to take the item. The distribution system developed by Blizzard is, in contrast, based on chance. Here the players *roll* on items with the */roll* command, which will randomly distribute numbers between 1 and 100 to each player. The highest roller wins the item. This is still the normal way of distributing items in smaller groups.

The use of DKP is interesting, as it shows that players are taking measures to reduce the level of randomness connected to loot distribution—they simply prefer loot distribution based on effort rather than luck. This makes distribution of resources acquired through raiding more predictable for the players, but also influences their playing habits. To my question, about whether he often raided more than intended because he is after specific gear, Ivar answered:

Well, that might happen. Sometimes. But mostly, not because I am after gear but because of the DKP. So that on bosses later on I can get gear. I do that quite often. (M, 24)

Most of my informants who had been in a raiding guild told me that DKP made them more likely to participate in raids. The main reason was that they needed more DKP to be able to outbid other players for especially popular items. Geir for instance said that:

It was a really hard competition among the rogues to acquire items you were interested in. Of course you needed to have max DKP, which you can only acquire by farming, which you only get by participating in raids. It was a lot of raids you didn’t really bother about but which you still went on only because of the DKP, that’s for sure. (M, 27)

The DKP system allows the players to minimize the element of luck. They are not able to change the basic reward structure of raiding, which is the likelihood the items have for dropping, but they are trying to eliminate the randomness in loot distribution as designed by the game developers. From the perspective of the leaders of the raiding guild, DKP ensures that the most active players obtain gear before the more casual players. This is a rational way to make certain that the most active players have the best gear and, in effect, to ensure optimal raid progress. The irony is that the players get ‘trapped’ by their own rationality, as they will fight to get on top of the DKP list in order not to fall behind fellow guild members in getting gear. Rather like Lotto players who bet on the same row each week, these players feel obliged to keep raiding. While this behaviour in the Lotto setting is based on a misconception about the randomness involved, or an irrational fear of missing out on a win should the numbers come up, in World of Warcraft the repetitive behaviour is based on sound reasoning combined with a strong focus on gear, accentuated by the competitive environment of the game.

In sum, there seems to be some, albeit weak, entrapment mechanism present in raiding, as players are sometimes afraid of missing out on opportunities to acquire specific items. However, what seems to be of greater importance is the competitive environment of the

raiding guild and, especially, how this is expressed through the DKP system. DKP is a method for dealing with randomness, which indirectly contributes to a higher level of dedication. As such, the structural elements of the game represented by the reward system are only partly accountable for players' dedication to excessive play. The social, competitive component seems to be just as important, as well as each player's focus on their individual achievements. The element of randomness, important in gambling, is of less importance in online games in this respect.

In the next section "Introduction" will take a closer look at another psycho-structural phenomenon known from gambling: the so-called *near miss* principle, which might potentially increase the involvement of the player.

Near Miss

A near miss is a losing situation which the gambler interprets as being close to winning. The excitement the player feels in this situation can lead to more dedicated play. Near miss in a slot machine setting will be two winning symbols out of three on the payout line. It has been argued that a slot machine gambler is not constantly losing, but rather constantly 'nearly winning' (Griffiths 1999). Applied to Lotto, near miss is said to occur when the gambler, for instance, gets four out of six winning numbers and wins a small prize (Rogers 1998). King et al. have recently argued that near miss is also a common experience for computer game players. Here, they mention failing to kill a difficult boss at an end of a level as being one incident where the player might experience a near miss situation (King et al. 2009: 4). In World of Warcraft, this is quite a common experience, especially in raids. All of my informants who had been raiding seriously had examples where they had exceeded normal raiding hours in order to defeat a boss. As Frank explained, in response to the question: Did you sometime play longer, or extend the raid in order to achieve something?:

Yes, that happened quite often actually. We had a slogan: 'We'll wipe 'til it's clean.' So we run over and over again until we made it. But at some point it had to end because the players had work or something the next day. So, if we were frustrated over something we didn't accomplish, we kept going as long as we had the resources and players for it. (M, 21)

The experience of failing at something they should accomplish, or are close to accomplishing, in this case, led to an increased dedication to continue playing. Another of my informants, Ivar, had been raiding late the night before the interview:

Researcher: How long do the raids last?

Informants: Um, last night I sat up until four o'clock and we began at eight, so I was in bed at about four or half past four.

Researcher: Wow, is that common? Is it common that the raids take that long?

Informant: No, we usually try to limit it, till about half past eleven or twelve. But we had a progressing raid and we wanted to get down Mimiron who is one of the last Keepers in Ulduar. And you have to do it in something called hard mode in order to get to Yogg-Saron and the last boss Observer. And we tried that last night, but we struggled a bit. (M, 24)

Describing the prolongation of a raid by 4 h as 'to struggle a bit' may be considered an understatement. However, this is an example of how difficulty in

accomplishing a goal may extend play considerably. Getting a boss down was generally described as important, especially getting it down for the first time. Geir for instance stated that:

When our guild took down Ragnaros for the first time, the boss in Molten Core, it was very, very big. We had been working hard on it, we had wiped several times and people started to get annoyed. But then we focused, started again and then made it. And that was great! We played Queen's: *We are the Champions*, and, like, virtually opened the champagne, and ... We lived long on that feeling, the good feeling in the guild. It was very rewarding. (M, 27)

Four of my informants actually stated that getting this particular boss down was the best memory they had from World of Warcraft. Celia described a similar experience on a different boss:

I think the best experience was when our guild had spent 2 months trying to get Kael'thas down and we finally managed it, and I was there. It was ... it is one of the most challenging things we have worked for. That one particularly. It was before nerfs and everything. And then to finally succeed after working on it for 2 months, I think that was great fun. There were 25 people there and being able to work together as a group in that manner, when you finally accomplish what you have been working for, is just great. (F, 21)

In this case, however, the joyful moment was partly spoiled by her boyfriend being unable to participate:

It was also a slightly bitter experience because my boyfriend, who should have been in that raid, got ill and had to cancel on that very day. So, he became a bit grumpy when the rest of us managed to kill him. (F, 21)

The near miss experience of almost getting the boss down may increase the dedication of the players but, unlike in gambling, this is something they actually have a fair chance of accomplishing. It may be a rational choice to keep trying on a hard boss if, for instance, you may have a particularly good group set-up that evening. In contrast, a near miss situation in Lotto gives the player the illusion of almost having won, while in reality there is still a one-to-several-million chance of winning the next time you hand in a ticket.

Another interesting aspect of conquering bosses, illustrated in the quotes above, is the special value of getting the boss down for the first time. The first kill on a particularly hard boss is an important happening in a guild as it demonstrates their success as a group and creates a common reference point for the members—contributing to the lore of the guild. There will always be new chances for getting loot from the bosses but the feeling of accomplishment and success of a first kill is not possible to recreate. This might actually be regarded as a specific type of entrapment found in raiding guilds: the fear of losing out on a great occasion. Performing a first kill on a boss is, structurally speaking, similar to any other boss kills in World of Warcraft but the players regard this as a very special achievement—an added value that can, in part, be related to the social aspects of the game. A combination of reward structures, competition between the raiding guilds and the social life inside the raiding guild contributes to the existence of the concept of first kill. While the ordinary entrapment mechanism connected to rewards is relatively weak, this socially-embedded entrapment mechanism seems to have a stronger impact.

Conclusion

One general finding of the present study, which confirms earlier studies, is that excessive playing of online games is closely linked to socially-based motivation factors. The game arena is highly competitive and a place for rewarding cooperation. However, these social elements are also closely linked to structural elements of the game, especially the reward system. Psycho-structural elements known from gambling, like entrapment and near miss, are observable in World of Warcraft but their impact seems comparatively weaker.

As far as near miss goes, several of my informants reported playing longer than planned when struggling with bosses in raids. It seems that being near to defeating a boss or clearing an instance collectively increases the dedication to play. This might increase considerably the time spent on an already quite time-consuming activity. This phenomenon is also emphasized by some kind of group pressure on those who want to stop playing, as this might ruin the other group members' chances of achieving the goal. This illustrates the higher level of complexity of MMORPGs compared to gambling games, and how overall game goals, the reward structure and social obligations all influence each other.

The entrapment phenomenon observed in World of Warcraft is linked to rewards, represented by items of high quality that the bosses drop. Players report that, occasionally, they have been preoccupied with getting hold of specific items, but a gradual inflation of high quality items seems to diminish this effect. The much higher possibility of acquiring such items compared to winning a big prize in gambling also makes the dedication to play more of a rational choice than a cognitive misconception. For this reason, the entrapment mechanism here must be regarded as weak. However, another phenomenon that resembles entrapment seems to exist, namely that players are afraid of missing out on big events in the guild, like killing a hard boss for the first time. This is an event that cannot be recreated and the players will therefore have to be raiding constantly in order not to miss it. This phenomenon has less to do with the reward structure of the game and has, rather, a strong social component. A first kill has uniqueness that bears some resemblance to winning a big prize in gambling, but the reward is indirect and socially-constructed, rather than a direct outcome of the encounter itself.

An important finding in both the entrapment and near miss analyses is that randomness has a much less prominent place in World of Warcraft than in gambling games, even when the reward structure is based on randomness. Interestingly, the players are also taking measures to eradicate the randomness that exists in the game, especially in connection with loot distribution in raids. This is expressed by the player-invented DKP system, where players are going out of their way to reduce randomness connected to loot distribution. The DKP system is based on effort rather than luck and ensures that the most frequent raiders will acquire loot before others. The side effect of this is that the players may get trapped by their own rationality, as several informants report of raiding routinely in order to keep up with the DKP race in the guild.

For some players, the game goals and social commitments reach such a level of importance that they overshadow every other obligation. While this indicates that the players easily identify with game goals and get satisfaction from accomplishing them, it is also possible that rational choices within the game universe may seem irrational outside it. An important question for further research is to achieve a better understanding of how some players manage to balance game goals with other requirements in their lives, while, for others, commitment to game goals and social obligations within the game reach a level of importance that causes all other priorities to be ignored.

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