

Turning Data into People

Player perspectives on game addiction

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Abstract— Internet gaming disorder, also known as video game addiction and pathological gaming, has officially been proposed as a psychiatric disorder. Numerous studies have investigated the prevalence of the disorder, but the prevalence rates that they arrive at vary in the extreme (from 0.6% to 44.5%). This discrepancy between studies inevitably raises questions about what they actually measure. To explore this further five young men who were candidates for this new diagnosis were asked to fill out a questionnaire probing pathological gaming and interviewed about how they understood the questions and their thoughts on video game addiction in general. Thus, this paper presents the results of a qualitative investigation of the face-validity of quantitative research on video game addiction. The interviews showed that the respondents often misunderstood the intention of the questions, misjudged the severity of the negative effects that the questions probed and often interpreted the questions very differently. Only one of the respondents believed pathological gaming to be a primary disorder, but he also believed it to promote more positive than negative effects. The rest of the respondent either did not believe in the disorder at all or believed it to be secondary to other problems, such as anxiety or depression.

Keywords—game addiction; excessive gaming; video game questionnaires; Internet gaming addiction

I. INTRODUCTION

The Diagnostic and Statistical Manual of Mental Disorders (DSM) is the American Psychiatric Association's (APA) official handbook, which describes all currently accepted mental health disorders [1]. The manual is continuously revised and updated in order to reflect the current state of the art within psychiatric and psychological science and assessment. The manual provides the definitions and the common vocabulary necessary for researchers and practitioners alike to describe, treat and conduct research into mental health problems. Aside from the officially recognized conditions there is a section on conditions for further study. One of these conditions for further study is Internet gaming disorder. Currently, gambling disorder is the only non-substance-related disorder, which is included under the heading: Substance-Related and Addictive Disorders. Internet Gaming Disorder would be the second, should enough research support it. With the APA's encouragement for further research it stands to reason that this will be one of the emerging fields of psychological research in the foreseeable future.

According to the APA and the DSM-5, the literature on the subject suffers from multiple deficiencies such as; 1) a lack of a standard definition from which to derive prevalence data, 2) a lack of understanding of the natural histories of cases, with or

without treatment. This paper proposes to add a related point to this list, namely: 3) a lack of studies on the validity of the concept of Internet Gaming Disorder. The APA argues in favor of the inclusion of the disorder as an addictive disorder on the basis of the current literature because: "the literature does describe many underlying similarities to substance addictions, including aspects of tolerance, withdrawal, repeated unsuccessful attempts to cut back or quit, and impairment in normal functioning." [1, p. 796]. A further argument from the APA for the inclusion of the disorder for further study is the seemingly high prevalence, especially in Asian countries but also, albeit to a lesser extent, in the West [1]. However, this paper argues that we cannot know if these studies are actually measuring what they purport to measure because of mainly two shortcomings: 1) Quantitative research in the form of questionnaires can only reveal what they were constructed to reveal. Asking respondents about the times where playing games has hindered normal function neglects the possibility that the same game, for the same person, may also promote normal function. 2) Answers to questions in a questionnaire do not contain information on how the respondents understand the question. Therefore, it is important to investigate how a particular question may be understood.

Prevalence studies that seek to determine how large a percentage of a population is addicted to computer games needs to translate unique and complex individuals and the circumstances of their lived lives into a binary verdict; addicted or not addicted. This paper presents research that takes a different tact: What happens when we reverse the labeling process that is at the core of prevalence studies of game addiction, and how does that inform our understanding of the concept? Or more concisely: What is the face-validity of instruments used to measure game addiction? In order to answer this question, six students were tasked with recruiting and interviewing five gamers who played enough hours a week to indicate that they were pathological gamers according to the questionnaire developed by Douglas Gentile [2].

Previous research in the field of game studies has offered qualitative data on gaming and highly engaged players' experiences, which has provided a different perspective than the quantitative psychological one employed in prevalence studies (see e.g. [3]–[7]). It is unclear whether the highly engaged players described in the qualitative game studies literature are the same ones that are deemed to be pathological players in the quantitative psychological literature. This paper tries to bridge that gap between the two fields of research.

II. PREVALENCE STUDIES

Prevalence studies of non-gambling game addiction started with R. Iain F. Brown and Seonaid Robertson's Home Computer and Video Game Addictions in Relation to Adolescent Gambling: Conceptual and developmental Aspects [8]. The study used the following five questions, which were inspired by the twenty questions used by Gamblers Anonymous to assess pathological gambling in 134 schoolchildren aged 12-16 years in Scotland in 1986: 1) Can you pass a Space Invaders machine without wanting to play?, 2) When you have played a game do you always want to play another?, 3) Do you sometimes spend more money than you were going to?, 4) Do you often leave only when all of your money has run out?, and 5) Do you often borrow money in order to play the machine?

In 1994 Sue Fisher [9] was the first to adapt questions from the DSM about gambling to videogames, and thus started the trend that has dominated the research ever since. Mark Griffiths and colleagues [10] provide a list of the 23 largest questionnaire studies between 1994 and 2012 and their estimated prevalence. Even though these studies for the most part (15 out of 23) are based on various editions of the DSM the prevalence rates range from 0.6 percent [11] to 44.5 percent [12]. The underlying theoretical assumption behind these prevalence studies is that addiction to games is basically the same as addiction to drugs and gambling. This is made explicit in the description of the diagnostic features of Internet gaming disorder. The DSM description reads: "Internet gaming disorder is a pattern of excessive and prolonged Internet gaming that results in a cluster of cognitive and behavioral symptoms, including progressive loss of control over gaming, tolerance, and withdrawal symptoms, analogous to the symptoms of substance use disorder." [1, p. 796]. Gentile's national representative U.S. study [2] states that a conservative estimate labels 8,5% of U.S. teenagers as pathological players. If this is correct and if these teenagers are experiencing the abovementioned cognitive and behavioral symptoms, this is an epidemic that needs to be taken seriously. However, as this paper will argue, there might be a discrepancy between what researchers believe they are measuring and what they are in fact measuring. This paper is the first attempt to turn the 8.5% in the data back into people, and describe their experiences.

III. METHOD

A. Recruitment of Informants

The present paper was written on the basis of data gathered by six undergraduate students at the IT University of Copenhagen. The students sought players who spent at least 24 hours per week playing because this is the reported average for pathological video game users according to Gentile [2], compared to non-pathological players who only spend half that amount time on average. The students established contact with a World of Warcraft (WoW) player, who served as the subject for the pilot interview and also helped recruit other players from his guild through snowball-style recruitment in their online forum.

B. Procedure

The informants were asked to answer the 11-item scale developed by Gentile [2, p. 598] before the interview began. The questions are answered with either yes, sometimes or no. Each yes is worth one point, each sometimes is worth half a point and each no is worth zero points. A score of six or more points is considered to be an indication of pathological use. It is important to note that Gentile does not consider the instrument to be a definitive diagnostic tool, but rather a screening tool. The respondents were then interviewed in a semi-structured interview with a special focus on how they understood the items in the questionnaire and their thoughts on computer game addiction. Unfortunately, question 5 was missing from the questionnaire that was sent to William and Noah so their data are incomplete.

The students conducted and recorded interviews over Skype, and focused on the facets of pathological gaming that are listed by Gentile: "salience (the activity dominates the person's life, either cognitively or behaviorally), euphoria or relief (the activity provides a "high" or the relief of unpleasant feelings), tolerance (over time, a greater amount of activity is needed to achieve the same "high"), withdrawal symptoms (the person experiences unpleasant physical effects or negative emotions when unable to engage in the activity), conflict (the activity leads to conflict with other people, work, obligations, or the self), and relapse and rein-statement (the person continues the activity despite attempts to abstain from it)." [2, p. 595, emphasis original]. Gentile's questions are based on, and are an interpretation of, these facets, which are proposed to be the facets of behavioral addictions according to R. Iain F. Brown [15]. The questions are, however, also based on his interpretation of DSM-IV [16] criteria for pathological gambling.

C. Ethical Concerns

Early in the process, possible ethical issues were discussed. Research has highlighted how labeling young people as computer game addicts places a stigma on that person, which has to be dealt with, either in the form of acceptance or rejection [14]. The heavily stigmatizing nature of the term and the negative effects that might result from it were kept in mind throughout the project. Aware of the possibility of adding to a preexisting socially created stigma, and in order not to alienate the informants, the student helpers extended a guarantee of anonymity to the informants. Moreover the informants were informed that the goal of the project was not to put them and their gaming habits in a bad light, but rather to explore their genuine experiences in the light of prevalence studies of pathological gaming. This was an attempt to forge a bond of trust between the team, as researchers, and the players, as informants; as well as to ensure candid answers on their part.

IV. RESULTS

Three of the five informants scored as pathological gamers according to the questionnaire, the remaining two scored just below the threshold. There are some limitations to this study, however. First of all, most of the informants were older than the age range of 8-18, which is the focus of Gentile's [2] study. This has the drawback that our informants were not

specifically the intended target of Gentile's survey. However, it did not appear to be an issue because the informants all scored as pathological. Having older informants provided the added benefit that they were perhaps more mature and better able to articulate and reflect on their experiences without being too old to remember them. Furthermore, some of them had moved out of their parents' houses and had therefore experienced significant shifts in their lives. These shifts may be important because research has demonstrated that excessive playing relates to specific phases of the lives of the individual that allows extreme indulgence in gaming. This indulgence in online activities typically stops when the player experiences a significant change in their off-line lives, such as getting a job, moving away from home, meeting a partner or becoming a parent [7].

A. Who are the Pathological Players?

The five informants are presented in the following.

1) *William*: Is 22 years old and describes himself as being very passionate about computers; he is pursuing an education within the field. William has a girlfriend whom he met in an online game, she lives in another country. William scored 7 points, one point over the threshold for pathology.

a) *William's Perspective on Games and Addiction*

William thinks that he plays a little too much and that there probably are other things that he should give more priority to. For example he explains that he never spends time doing homework during the weekend because he feels that's the time to relax. When William relaxes he plays computer games. Going out on the town to drink a beer with friends is logistically much more cumbersome. One of William's very good friends lives in the suburbs and it takes William an hour and a half to get there with public transportation. The computer, on the other hand, is right there in William's bedroom. William has felt a need to stop playing WoW on multiple occasions. At these times he has felt that the game has taken over and that it is no longer healthy. In his own words: "it's fine to think about playing computer games a lot, I've always done that. But if I have to go to sleep and there's a devil that sits on my shoulder telling me to play, then I'm *too* addicted". It is interesting to note that it appears that William distinguishes between an appropriate or healthy level of addiction and an unhealthy one. Addiction then is a continuum and not binary.

William has seen first-hand what it does to people when they let games get the upper hand: "they become depressed when they lose and ecstatic when they win". According to William that's why he stops when he feels that he is becoming stuck in such a rut. "Computer game addiction is when you lose self-control over when you play computer games. Computer games are not reality and that is what you forget when you lose self-control. It's just like any other type of addiction, except that the "drug" doesn't kill you like heroin does".

William doesn't think that computer game addiction is something that needs a specific treatment because the root cause is always something else. An addiction to games might

only last a few days or it might last several years, but it is always a symptom of something else. For William being let down by friends or what he calls "mild depression" are things that could trigger a bout of intense play.

2) *Lucas*: is 22 years old and works as a craftsman at the journeyman level, but feels that he has the intellectual capacity to complete a longer and more academically oriented education. Lucas however feels that he does not have the time to pursue an academic degree because of how much time he spends playing WoW, which he usually plays from 4 p.m. to 10 p.m. on weekdays. Lucas scored 6 points, precisely the threshold for pathology.

a) *Lucas' Perspective on Games and Addiction*

When asked about whether or not he feels that he has made sacrifices because of computer games he answers that it does take up a lot of his time, where he could have done something else, but that it is perhaps more due to his personality than the game: "It does take a fair amount of time. But that has just as much to do with the person I am. I am very self-contained. Damn it, I do love having my space". The only negative aspect of computer games, in Lucas' opinion, is the large amount of time they take. However, this is only partially negative because of the positive social experiences they provide. Lucas enjoys the types of social interactions that the game and the guild provide. Lucas also has a group of friends that he used to play with in a guild that he now only sees "in-real life so to speak". They meet up regularly once every three months to catch up and they just planned the yearly Christmas party.

Lucas also has friends and colleagues who don't play computer games, but Lucas finds it hard to explain the appeal of games to them. And when he has to decline an offer to go do something *in real life* because of his *in-game responsibilities*, he usually just says that he has other plans without specifying that those plans are on-line. Lucas doesn't want to tell acquaintances about his gaming because he feels that gaming is sort of taboo. It conjures up images of nerds who sit in darkness and eat chips and drink cola. It's different with his family and close friends; he doesn't have to keep up pretenses with them and can freely admit to skipping parties and such in favor of gaming.

When asked to define computer game addiction, Lucas says: "Computer game addiction must mean that there is something in the game that hooks you so you can't let go". However, Lucas thinks that the concept of computer game addiction is laughable: "It [the concept of computer game addiction] makes me say: desperation for researchers because they need something to do. I don't think it exists. I just can't imagine it. Even though you hear of people who die from playing too much on the computer I almost see it as a joke. It is simply so far out if you ask me".

Lucas thinks that the questionnaire is too narrow in scope because it does not consider differences in games and in player personalities. According to Lucas, dedicated players of competitive multiplayer games should not be judged by the same standard as single player games and introverted people should not be judged by the same standards as extroverted

people. The questionnaire also neglects the positive aspects of being in a guild. Lucas thinks that being a raid leader and managing small teams of 15 people has taught him valuable lessons about juggling widely different personalities while at the same time ensuring that everyone on the team is happy.

3) *Victor*: is 26 years old and is a full time university student. Victor scored 5 points, one point below the threshold for pathology.

a) Victor's Perspective on Games and Addiction

Victor argues that computer game addiction should only refer to single player computer games; because multiplayer games are very much about the people you play with and the social interaction is also something you can become addicted to. According to Victor it is important to distinguish the online social worlds from the games.

Victor plays somewhere between 4-8 hours a day, however, it is unclear how much of this is actual playing as he doesn't distinguish clearly between all of the different things he does on the computer: hanging out with friends over Skype, watching streams of other people playing etc. Because he likes to immerse himself deeply into games and spends time trying to perfect his playing he doesn't play a lot of different games but instead focuses on a few games. Victor hasn't owned a TV since he moved by himself. TV doesn't appeal to Victor because it is too "passive". The computer offers a much more social, active and interactive type of leisure. Victor thinks the computer offers a kind of freedom that the TV doesn't. He doesn't really put much stock into the opinion of people who tell him that he spends too much time on the computer because those same people spend so much time watching TV. The only difference being that Victor spends all of his screen time on one screen, whereas others might divide their screen time on multiple screens.

Victor is not playing as much as he usually does at the moment. He is trying to get ahead with his course work at university in preparation for the upcoming release of new content in WoW.

Victor did not have his completed questionnaire with him during the interview. This offered an unforeseen opportunity to assess the test-retest validity of the questionnaire. Out of the survey's eleven questions Victor gave different answers on three questions, on two of the questions Victor is unsure about what he answered the first time around but ends up giving the same answer as before.

4) *Noah*: Is 26 years old and also attends university in Copenhagen. Noah describes that he has been spending way too much time partying lately, which has been hurting his gaming, and his time spent exercising. Still, Noah scored 5.5 points, 0.5 points below the threshold for pathology.

a) Noah's Perspective on Games and Addiction

Noah's father is a programmer, which is perhaps why he got his first computer when he was just six years old. Noah describes that the amount of time he spends playing varies a lot. If he has a lot of days off he can spend a lot of time playing. He mostly plays during the week because he spends the weekends out and about with friends. Noah has often

declined to attend social event because of his gaming but he does not think that it has affected his social life. He thinks that one weakness in the questionnaire is that it does not ask about what games contribute socially, but only what it subtracts. As an example of the close social ties that he has forged through gaming, Noah was recently invited to one of his close friends' sister's birthday party. His friend is someone he met in a game. Gaming has always been a part of Noah's life and when he eventually becomes a parent he looks forward to have gaming be something he can share with his children.

Noah thinks that everything that gives people a sense of happiness can be viewed as an addiction: "Everybody has something that they like so everybody has an addiction". For Noah it's computer games, and especially their social aspect, for others, he says, it might be television or their smartphone. Noah would not play WoW if he couldn't play with people who were "a little bit older and competent". He continues, "it means a lot that people have something between their ears".

When Noah hears the term *computer game addiction* he is reminded of pathological gambling: "It's sort of the same. No matter the cost you just got to have your drug". For Noah, however, gaming has never escalated into a problem. He has always sought a compromise between the things that are important. For Noah, what sets gaming apart from other things is the social stigma that it carries. Because gaming is a niche activity, as opposed to watching television for example, it is frowned upon. Noah thinks that the questionnaire measures what a person prioritizes, and because in this case it's about gaming it is labeled an addiction.

5) *Fredrik*: is 18 years old and lives with his mother. Fredrik is currently in high school, he used to have a part time job but doesn't any more. Fredrik has moved a lot and now live far away from most of his friends. Fredrik scored 7 points, one point over the threshold for pathology.

a) Fredrik's Perspective on Games and Addiction

Fredrik partly volunteered to do the interview because he wanted people to know about the positive experiences he has had with gaming, and how those in turn has helped him deal with social and psychological problems. Fredrik plays computer games in most of his free time when he is not in school and is not working; this amounts to 7-8 hours a day. It is not feasible for Fredrik to meet up with his close friends in person because they live too far away. This is partly due to the fact that Fredrik recently moved from his father's house to his mother's house and partly due to the fact that a lot of his good friends are people that he met at boarding school. Fredrik does not hesitate to label himself as a computer game addict, which he defines as follows: "It's a hobby that you are heavily invested in because it is easily accessible and because your thoughts kind of shut down. They switch to another channel, that's what they do, and that's just how it is. You are in a totally different place when you play computer games, even if people try to deny it, for better or worse".

Fredrik has voluntarily admitted himself to a psychiatric ward twice in order to receive treatment for generalized anxiety. Fredrik felt depressed and was experiencing panic attacks. He is currently under medical treatment for his

anxiety, but is doing well. Fredrik feels that the turning point on his road to recovery came when he reconnected with an old friend and the two started playing online while talking over Skype. This provided the positive social contact that Fredrik needed. At the same time it gives him comfort to know that the computer is always there. In the past it has been a great tool for him to cope with panic attacks. Fredrik describes himself as a very social person, but being social is easier for him on the computer because he suffers from mild social phobia.

V. ANALYSIS

This section presents and discusses the answers given to the questionnaire by the respondents.

A. Question 1: Salience

“Over time, have you been spending much more time thinking about playing video games, learning about video-game playing, or planning the next opportunity to play?” [2, p. 598]. Noah answers *sometimes* because he usually does not think much about gaming, but in anticipation of the release of new content he and his friends spend an increased amount of time planning when they can play by arranging vocational and educational activities in order to accommodate heavy play. Furthermore, they spend time plotting out tactics and strategies, something that is unusual in the interim between updates.

William provides a very different answer when asked about his experience of that same item. William thinks that it is a leading question that implies the answer, and if you provide the wrong answer you are of no use: “It is as if you have to answer ‘yes’, otherwise we can’t use you.” William then adds: “It seems like one of these questions where if you answer ‘no’ then the questionnaire ends.”

Victor on the other hand thinks that the question is well formulated; he understands the question to mean: “Does your addiction consume increasing amounts of time?” Victor answered *yes* in the survey, but answers *sometimes* in the interview, even though he does not consider himself to be addicted.

Lucas, who doesn’t believe in computer game addiction, answers *yes*. Basically, he doesn’t want to play anything that is not worth studying as well. He wants to be the absolute best that he can within the class that he is playing. That means doing a lot of research and calculations. Even if something only adds 0.1% to his character’s damage output it is worth looking into and doing.

Fredrik answers *sometimes*, because he reasons that: “that is probably what they mean”. However, he might just as well have answered *no* because the amount of time he spends has been constantly very high (not increasing).

B. Question 2: Tolerance

“Do you need to spend more and more time and/or money on video games in order to feel the same amount of excitement?” [2, p. 598]. William (correctly) assumes that this question equates gaming with gambling. He answers *no* to the question. This is interesting because he stated earlier in the

interview that he has had times where he has felt that he needed to cut back because gaming was ‘taking over’. During times of very heavy play he has had dreams of playing games, something that caused him to take a step back. In this respect, William is an interesting case because he provides an example of how, in his case, gaming is incommensurable to gambling (because you cannot increase wagers) and drug use (because you cannot increase dosage) and because the organism (William) therefore does not experience an increased tolerance. In William’s case this item gives a false negative. William is undoubtedly extremely dedicated to gaming at times and sometimes he does experience it to be problematic, however, the drug metaphor obscures these problems. It would seem that the concept of tolerance is not well suited to gauge the kinds of problems that William has experienced.

Noah on the other hand answers *sometimes*, despite the fact that he currently does not even play. He is not planning on playing the newest WoW expansion and therefore is no longer subscribing to the service. In the interview he mentions that he is partying too much at the moment and doesn’t have time for gaming. William clearly puts a lot of emphasis on the word *need* and therefore answers in the negative. Noah doesn’t seem to put any emphasis on the word *need*, because even though he answers *sometimes* he clearly does not *need* to play, which is evidenced by the fact that he is currently not playing.

Lucas answers *no*. The question makes him think of drug addiction and the two things are not compatible. Since WoW runs on a subscription he does not need to spend increasing amounts of money.

Victor answers *yes* in the interview even though he answered *sometimes* in the survey. Victor elaborates by saying that games are products like everything else and you cannot consume without purchasing: “It’s an industry like everything else, if you want to have the new things, you buy the new things”. Because, as he argues: nobody wants to play Donkey Kong for the rest of their lives.

Fredrik answers *yes*. He says that he is constantly trying to make money buying things cheaply and trading them for something of a higher value. His ambition is to make virtual gold and sell it for real-world currency. This answer seems to miss the intention behind the question, which is supposed to measure tolerance.

C. Question 3: Relapse

“Have you tried to play video games less often or for shorter periods of time, but are unsuccessful?” [2, p. 598]. William answers *sometimes* to this question. In the interview he describes how when he was young he was almost obsessed with playing PlayStation2, he remembers being “bored out of his skull” and begging his father to let him play. Now, however, he does not have any problems cutting back when he feels that gaming is taking too much energy. Two things are worth noting here, 1) unlike diagnostic manuals this particular questionnaire does not define a time frame. Defining a time frame, such as the last six months, for example, would have eliminated this kind of error. 2) William seems to conflate two different scenarios, one where he himself wants to stop but is

unsuccessful, and one where his father tries to stop him from playing.

Noah initially misunderstood the question and answered yes, but changed it to a no during the interview. This answer sheds further light on our previous discussion of Noah's need to play games. This need apparently is not strong enough to cause him to play when he does not want to.

Lucas also misunderstood the question. He answers sometimes, not realizing that the question deals with the concept of relapse. When he expands on his answer, he says that when his equipment has been broken he has not been able to play. At those occasions he was content: "just puttering about in the apartment", something that he otherwise does not do much. At other times people in his guild have grown tired of killing the same bosses again and again and they have had to turn down their raid frequency in order to avoid "burning out". In other words: growing bored waiting for new content has encouraged them to play less frequently.

Victor answered sometimes in the survey, but no in the interview. Victor argues that if you want to stop you stop, but all that time needs to be invested in something, and if you have nothing else to do then you are not going to want to stop. He thinks that this is an instance where the questionnaire is too one-dimensional.

Fredrik answers sometimes. Others have tried to reduce the time he spends playing. But he doesn't want to stop. He finds the idea that someone would not be able to stop if they wanted to, unrealistic.

D. Question 4: Withdrawal Symptoms

"Do you become restless or irritable when attempting to cut down or stop playing video games?"[2, p. 598]. William answers *sometimes* and then goes on to clarify: "I don't become irritable, I become restless. I'm bored when I can't think of anything to do and that's why I play video games". William does not feel that he becomes restless because of withdrawal but because of boredom. So even though William answers in the affirmative, what he actually describes in his clarifying comments reverses the implied causality of the question.

Noah also answers *sometimes*. This is interesting because he started the interview by stating that he really doesn't play all that much at the moment because he is partying too much and has started studying at the university. Noah elaborates on his answer by stating that he used to have an *all or nothing attitude* towards certain things, which he doesn't have any more. Now he has struck a better balance "I used to go to these extremes, but I don't any more. Now I play instead of reading a book or watching a movie and I don't have these types of problems. Now I've found the golden mean." Asked what he thinks the intent behind the question is, Noah says that he believes that the question is about self-discipline. Again, since the questionnaire does not specify a time frame, Noah's answer reflects his entire lifespan and not just his current circumstances. Thus, Noah's answer seems to reflect two major disparities between how he understands the question and what the question is intended to gauge. One has to do with time: are we talking lifetime prevalence or just

recently? The other disparity has to do with severity: are we talking about drug induced withdrawal symptoms or minor lapses in self-discipline?

Even though Lucas describes playing six hours a day on weekdays he answers *no* to having ever experienced withdrawal symptoms. Again he says that games cannot be meaningfully compared to drugs. If he could not play he would put his energy into something else. Lucas says that just like some people enjoy going to the gym, he likes to hang out with friends on TeamSpeak (voice chat software).

Victor answers *no*. He thinks that this question is related to the previous question. Fredrik also answers *no*. He has had fights with his mother because she has cut off the Internet to make him stop. He doesn't feel that his mother understands what goes on in a game. It is interesting that he answers *no* because he is a self-described game addict.

E. Question 5: Mood Modification

"Have you played video games as a way of escaping from problems or bad feelings?"[2, p. 598]. Lucas answers *yes* and explains that even though playing always makes him feel good he doesn't do it to modify his mood. He does, however, sometimes do it to escape from problems. But that has more to do with his personality than anything else. Lucas describes himself as someone who is a bit shy and not fond of large crowds.

Victor answers *no*, he hasn't personally used games in that way. But he knows someone who withdrew a little from the world and focused on games following the death of a spouse. This case, he feels, shows that games can offer a positive avenue for coping with trauma: "It's a fine way to keep interacting with people on your own terms. So it's not just negative aspects that are associated with maybe spending a lot of time on it [the game]".

Fredrik answers *sometimes*, but he feels the computer has been a good way to cope, first with his parents' divorce and later with his anxiety.

F. Question 6: Lies and deception

"Have you ever lied to family or friends about how much you play video games?"[2, p. 598]. William answers *yes*. On this item: "Yes I have. If my mother asks me how long I've stayed up playing video games I tell her an earlier hour because I think it's embarrassing". William further says that he thinks that the question is leading. It implies that if someone is lying about what they are doing, then that thing is wrong. Here William seems to point to a few inherent problems that arise when items from a pathological gambling scale are adopted to create a pathological gaming scale. These might be said to revolve mainly around *age* and *consequences*. Pathological gambling studies generally deal with adults; Gentile's pathological gaming study deals with children and adolescents. When adults lie to their spouses, friends and therapists about how much money they have lost, that is a different scenario than when children lie to their parents about how much time they've lost to (or invested in) games.

Noah also answers *yes* to the question of having lied about gaming. He expands on that answer by saying that it was especially when he was younger that he would lie about gaming. According to Noah, people categorize you as a certain type of person if you admit to playing more than one hour a day. Liking games is still a bit taboo in Noah's perspective, and this sense of a taboo would only increase if games addiction ever were to become a recognized diagnosis, this leads Noah to ask: "Should everyone who plays computer games be branded as mentally ill, then? That would definitely ensure that everyone would lie about it!"

Lucas answers that he does lie *sometimes*. When people ask him how much time he spends playing he usually answers vaguely because it is easier to say a couple of hours a day than eight hours a day. And he continues: "It's better if it sounds like you're also doing other stuff even though you really aren't".

Victor also answers *yes* to having lied about the extent of his gaming. However, he feels that gaming has become more socially acceptable during the last five years. He feels that the need to lie has decreased as acceptance has increased.

Fredrik answers *yes*. He has told his dad that he was doing homework when he was actually playing.

G. Question 7: Criminal Acts

"Have you ever stolen a video game from a store or a friend, or have you ever stolen money in order to buy a video game?" [2, p. 598]. William answers *sometimes*. He elaborates by stating that he has never stolen anything, per se, but once he used money from a joint account to pay for his WoW subscription (\$15 a month). Here it is interesting to note how William is familiar enough with questionnaires to answer *sometimes* (which only earns him one point) instead of *yes* (which would have earned him two points). Strictly speaking he should have answered *yes* (which implies once or more) and not *sometimes* (which implies more than once). Answering *yes*, however, would have earned him twice as many points on the pathology scale. It could, of course, also be argued that he should have just answered *no*, because \$15 is a trifling sum.

Lucas can't imagine that computer games would ever be cause enough for someone to steal anything. Victor answers *no*, because of how the question is phrased. Had it been phrased differently, however, he would have answered *yes*. Victor has downloaded his fair share of single player games from torrent sites and he doesn't know anyone who hasn't done the same, which is technically and legally stealing.

Fredrik answers *no*, he thinks that if anyone is that far out they have other problems going on.

H. Question 7: Conflict with House Hold Chores

"Do you sometimes skip household chores in order to spend more time playing videogames?" [2, p. 598]. William, Noah, Fredrik and Lucas all resolutely answer *yes* to having skipped household chores. Noah goes on to say: "You bet. Most definitely. Whether to sit down and relax or to scrub the toilet, that's a very easy choice".

I. Question 9: Conflict with Homework

"Do you sometimes skip doing homework in order to spend more time playing video games?" [2, p. 598]. William, Noah, Victor, Fredrik and Lucas all answer *yes* to having skipped doing homework. William adds extra emphasis by dryly adding: "I think that's safe to say". Lucas adds that it is more fun to play games than do homework, and that it has not affected his education, he still got a perfect grade on his final exam. Victor thinks that the question is biased because there are a lot of things that he would do instead of homework, gaming isn't the only thing and it seems unfair to ask this question in such black and white terms. This sentiment is echoed by Fredrik who sometimes composes and plays music instead of doing homework.

J. Question 10: Conflict with School Assignments

"Have you ever done poorly on a school assignment or test because you spent too much time playing video games?" [2, p. 598]. William answers *yes* and elaborates by saying that he could have prioritized school more than he has done. Victor also answers *yes*, and adds that he has learned from his mistakes and has gotten better at prioritizing. Noah on the other hand answers *no*. He has always gotten good grades, both in high school and at university. Good grades have always come easy for him. Lucas also got good grades, but still he answers *yes* to the question. "There have been times where it has been sort of half-assed." He could have done better but it has not been a problem that he didn't.

Fredrik thinks that this question is exactly the same as the previous one, and that they are too one-sided when they only and specifically focus on computer games.

K. Question 11: Bailout

"Have you ever needed friends or family to give you extra money because you spent too much money on video-game equipment, software, or game/Internet fees?" [2, p. 598]. For William this question has to do with what you chose to prioritize. He answers *yes* even though he cannot remember a specific time it has happened and elaborates: "The question is about priorities. I should spend money on something that's serious and not on something that's fun". William seems to underestimate the gravity of the concept that the question is designed to measure.

Fredrik says that he has had to borrow money from his sister to pay for game fees, because he has had a lot of expenses recently related to his education. Noah, Victor and Lucas all answer *no*.

VI. SUMMARY

The interviews showed that the respondents interpreted the questions in a wide variety of ways. There also seemed to be a significant disconnection between the concepts that the questionnaire aimed to measure and what the respondents understood the questions to be. The respondents felt that the questionnaire was one-sided and negatively biased towards gaming, and perhaps also certain personalities. The respondents further tended to conflate lapses in self-discipline with relapse.

VII. DISORDER OR SOMETHING ELSE?

A key argument in this paper has been that those defined as addicts in quantitative prevalence studies might not be suffering impairments that are severe enough to warrant a mental health diagnosis. Margaret Shotton's work in the 80s [17], [18] argued that those defined as computer addicts were better understood as outsiders who adopted a successful coping mechanism and adaptive strategy to navigate their life circumstances. There is no question that the respondents in the present study spent a lot of time in virtual worlds, and that some of that time could well be spent in other pursuits in order to achieve a more balanced life. However, none of them appeared to be either distressed or dysfunctional as a consequence of their gaming; both of which are required part of mental disorders according to the DSM-5 [1]: "A mental disorder is a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress in social, occupational, or other important activities. An expectable or culturally approved response to a common stressor or loss, such as the death of a loved one, is not a mental disorder. Socially deviant behavior (e.g., political, religious, or sexual) and conflicts that are primarily between the individual and society are not mental disorders unless the deviance or conflict results from a dysfunction in the individual, as described above." [1, p. 20]

VIII. CRITICISM

Critics would argue that the respondents are not qualified to answer whether they are playing video games because they have difficulties or if they have difficulties because they play games. This is a problematic limitation. However, asking respondents if they are experiencing problems might be preferable to simply assuming that they must have them.

Critics would also argue that it is irrelevant that games might also exert a positive influence on the lives of those who play excessively since the instruments are only designed to measure problematic behavior. By that logic, however, any behavior may be described as an addiction no matter how rational it is.

Other critics might argue that respondent's beliefs that they could stop or cutback on their gaming if they so chose is irrelevant. However, when we are dealing with non-substance everyday activities, it is not until the individual tries to stop and realize that she cannot that we can say that she's addicted.

IX. LIMITATIONS

This study is limited by the fact that respondents were recruited through snowball sampling. We ended up with a highly homogenous sample of only male, World of Warcraft players from the same guild.

The study only considers one questionnaire and thus might not be representative of other instruments. However, the chosen study [2] does feature strong qualities, such as being administered to a nationally representative sample instead of a convenience sample.

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