

# The genealogy of video game addiction

*A critical account of how Internet gaming disorder came to be proposed as an officially recognized mental disorder<sup>1</sup>*

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## Introduction

A relatively large body of empirical research has emerged globally on the prevalence of the phenomenon commonly known as ‘video game addiction.’ In the US, the American Psychiatric Association (APA) has proposed the term ‘Internet gaming disorder’ to cover the phenomenon, included in their official handbook as a disorder for further study in 2013 (American Psychiatric Association 2013). Having been added as a “disorder for further study” is the first step towards fully recognizing the disorder, pending further research. The work group that proposed Internet gaming disorder as a distinct addictive disorder reviewed more than 240 articles on the subject before making the recommendation (Petry & O’Brien 2013). The World Health Organization has also proposed a new disorder that describes addiction to digital games, namely ‘gaming disorder’; this disorder has been suggested in a draft version of the upcoming edition of the official handbook, the ICD-11 (Bean et al. 2017).

The APA notes that the decision to include Internet gaming disorder as a distinct addictive disorder rests on research from geographically and culturally diverse areas of the world (American Psychiatric Association 2013). Some of this research stems from Scandinavia.

## Purpose

This chapter will map out how Scandinavian research fits into the genealogy of Internet gaming disorder. The term ‘genealogy’ is fitting in the context of this chapter because of its multiple meanings. On the one hand, it refers to the medical study of family histories. On the other hand, it refers to the philosophical investigation of social beliefs that are otherwise taken for granted and rarely questioned. This chapter will argue that the concept of video game addiction has several significant weaknesses and that these weaknesses can be demonstrated by examining the family history of the concept.

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Through a close examination of the theoretical underpinnings of the concept of video game addiction, as well as the empirical tools used to measure it, this chapter aims to highlight the problematic genealogy of the concept. In doing so, this chapter will adopt an extremely critical perspective of the evidence. By questioning the validity of the medical model of video game addiction, the chapter aims to pave the way for the alternative conceptualizations of problematic gaming of the rest of the book.

In order to be able to meaningfully discuss game addiction, the next section discusses what the word addiction means and has meant historically.

## The multiple meanings of the term addiction

The word ‘addiction’ has Latin roots and dates back to ancient Rome, where it did not have the insidious and pathological connotations that it does today. Originally the Latin verb *addico* meant ‘giving over’, which could just as easily be positive as it could be negative. In the positive sense *addico* signaled devotion as in “*senatus, cui me semper addixi*” (‘the senate, to which I am always devoted’) (Alexander & Schweighofer 1988: 151). This meaning is similar to the traditional English meaning. *The Oxford English Dictionary* in 1933 defined the word addiction as follows:

[...] a formal giving over or delivery by sentence of court. Hence, a surrender or dedication of any one to a master [...]. The state of being (self-) addicted or given to a habit or pursuit; devotion. (Murray et al. 1933: 104, in Alexander & Schweighofer 1988: 152)

The word ‘addiction’ did not attain its current negative medical connotations until the emergence of the nineteenth century temperance and anti-opium movement when it replaced terms like ‘intemperance’ and ‘inebriety’ for excessive alcohol and opium use (Alexander & Schweighofer 1988). For the first time, this new usage closely linked addiction to drugs and harm, with strong connotation of illness or vice. Also, it came to be linked with withdrawal symptoms (associated with abstinence) and growing tolerance (associated with increased use) or exposure (Alexander & Schweighofer 1988). This understanding is arguably still the most salient one in our contemporary medicalized understanding of addiction, particularly harmful involvement with drugs that build physiological tolerance and are associated with unpleasant (or even fatal) withdrawal symptoms. Thus, addiction is now commonly understood as a primary, chronic, and relapsing disease of the brain. The American Association of Addiction Medicine (ASAM) (2011) defines addiction as follows:

Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death. (ASAM 2011: para. 1)

It is self-evident that people devote (or addict) themselves to digital games today in the same way that Roman senators claimed to be devoted (or addicted) to the Senate thousands of years ago. This chapter is concerned with the question of whether people today can be said to be addicted to digital games in the *medical* understanding of the word addiction.

As mentioned in the introduction, the evidence that game addiction exists comes mostly from questionnaire studies (also known as prevalence studies) (American Psychiatric Association 2013). The following section will introduce the five prevalence studies that, as of this writing, constitutes the entirety of Scandinavian prevalence studies.

## Prevalence research in Scandinavia

As far as I can tell, based on my best efforts to find studies on game addiction, Norway is the only Scandinavian country where prevalence studies on video game addiction are conducted. I have found one estimate of the prevalence of 'pathological playing' (Johansson & Göttestam 2004b), one estimate of 'excessive playing' (Wenzel et al. 2009), and four estimates of 'game addiction' (Frøyland et al. 2010; Mentzoni et al. 2011; Brunborg et al. 2013; Brunborg, Mentzoni & Frøyland 2014). An overview of Norwegian prevalence studies is presented in Table 1.

Johansson and Göttestam (2004b) use a questionnaire developed by Kimberley Young (1998b). Wenzel and colleagues (2009) define everyone who plays for more than four hours a day as excessive players. The rest of the studies use an adapted version of the Game Addiction Scale developed by Lemmens and colleagues (2009). The strength of such screening tools is that they can give an estimate of the prevalence of a given disorder in a population. However, such studies are not designed to determine cause and effect, as correlation does not imply causation.

The quality of a screening tool, therefore, is dependent on how well it measures what it is supposed to measure, more technically referred to as 'measurement validity' (e.g. Bryman 2016: 41). One common critique of quantitative research in the social sciences is that the measurement process may produce an artificial and spurious sense of precision and accuracy (Bryman 2016). In other words, the connection between a given screening tool and the concepts that the tool is supposed to reveal is assumed rather than rigorously demonstrated. We see this problem even with respect to concepts

**Table 1.** Overview of Norwegian prevalence studies

Year	Authors	Sample	Screening tool	Terminology	Prevalence rate
2004	Johansson & Gøtestam	A national representative study of 12 to 18 year olds	Diagnostic Questionnaire for Internet Addiction (Young 1998)	“pathological players”	2.7 % (4.2 % for boys; 1.1 % for girls)
2009	Wenzel et al.	A sample of 16 to 74 year olds	Time spent playing > 4 hours per day	“excessive playing”	2.2 % (played for more than 4 hours per day)
2010	Frøyland et al.	The ‘Young in Norway 2010’ survey	Game Addiction Scale (Lemmens et al. 2009)	“addicted”	0.9 %
2011	Mentzoni et al.	A nationwide survey	Game Addiction Scale (Lemmens et al. 2009)	“addicted”	0.6 % (only males were found to be addicted)
2013	Brunborg et al.	A nationally representative sample of Norwegian eighth graders	Game Addiction Scale (Lemmens et al. 2009)	“addicted”	4.2 % (6.5 % for boys; 2.2 % for girls)
2014	Brunborg, Mentzoni & Frøyland	The ‘Young in Norway 2010’ and ‘Young in Norway 2012’ surveys	Game Addiction Scale (Lemmens et al. 2009)	“addicted”	1.5 %

that most people believe to be familiar with, such as ‘happiness’. When the world’s countries are ranked in terms of happiness, how reliable and valid are the results? This problem, of course, is much more salient when it comes to controversial concepts such as ‘game addiction’ or ‘behavioural addictions’ in general. This problem has been referred to as ‘measurement by fiat’ in the literature (Cicourel 1964, in Bryman 2016).

Because of this inherent uncertainty, the following section will describe the genealogy of the abovementioned screening tools as a way to provide context to the numbers they produce.

## Screening tools

This section will primarily deal with the theoretical basis for different screening tools used to measure ‘pathological’, ‘excessive’ or ‘addicted play’.<sup>2</sup>

### *Diagnostic questionnaire for Internet addiction*

Johansson and Gøtestam base their studies of ‘Internet addiction’ (2004a) and ‘pathological playing’ (2004b) on Kimberly Young’s “Diagnostic Questionnaire for Internet Addiction” (Young 1998b). In the book *Caught in the net: How to recognize the signs of internet addiction – and a winning strategy for recovery*, Young (1998a) describes how she was inspired to create a short questionnaire to assess the prevalence of Internet addiction. Young had heard Internet use described as an addiction on TV and in

newspaper stories. One night Young receives a telephone call from her friend Marsha, who had been reduced to tears by her husband's Internet use. Young (1998a) describes how Marsha was almost ready to leave her husband because of how she was being neglected and ignored in favor of the Internet. Young based her questions on criteria for gambling and alcoholism and the DSM-IV (American Psychiatric Association 1994):

- Do you feel preoccupied with the Internet (think about previous online activity or anticipate next online session)?
- Do you feel the need to use the Internet with increasing amounts of time in order to achieve satisfaction?
- Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?
- Do you feel restless, moody, depressed, or irritable when attempting to cut down or stop Internet use?
- Do you stay online longer than originally intended?
- Have you jeopardized or risked the loss of significant relationship, job, educational, or career opportunity because of the Internet?
- Have you lied to family members, therapist, or others to conceal the extent of involvement with the Internet?
- Do you use the Internet as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression)? (Young 1998a: 3–4)

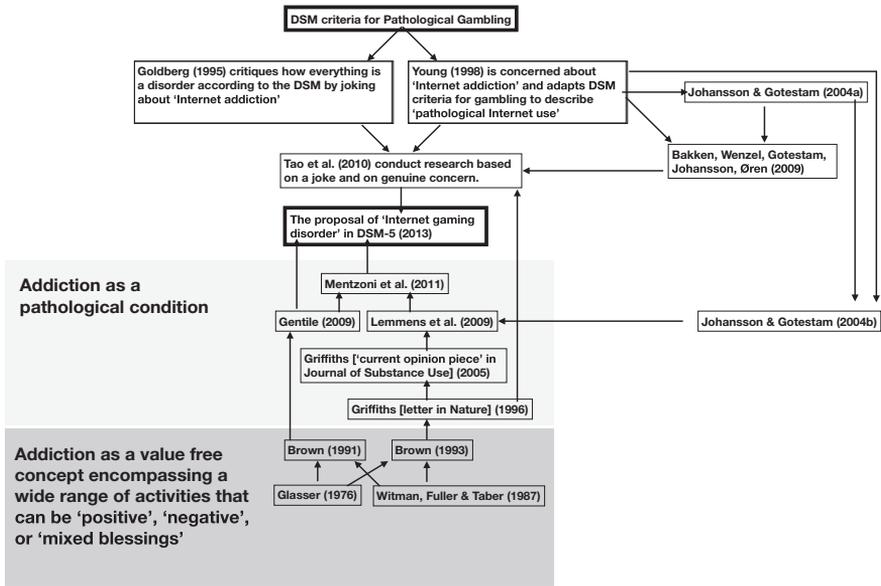
In their study, Johansson and Götestam (2004b) made slight changes in wording to make the questionnaire fit digital games instead of the Internet in general.<sup>3</sup>

### *Game addiction scale for adolescents*

Mentzoni and colleagues (2011) use the 7-item version of the Game Addiction Scale originally developed by Lemmens and colleagues (Lemmens, Valkenburg & Peter 2009). Lemmens and colleagues developed the 7-item scale as well as a 21-item scale on the basis of multiple sources: the DSM criteria for pathological gambling (American Psychiatric Association 1980, 1994, 2000), and the seven components of game addiction as defined by Griffiths (2005) and Griffiths and Davies (2005). These authors, in turn, base their components on a letter to the editor of the journal *Nature* by Mark Griffiths (1996) and a book chapter by R. Iain F. Brown (1993).

In the letter, Griffiths argues that despite how most definitions of addiction require ingestion of substances, there are other potential behavioral addictions. He mentions gambling, overeating, sex, exercise, computer-game playing, the Internet, pair bonding, and work. The letter outlines six components: *salience*, *mood-modification*, *tolerance*, *withdrawal symptoms*, *conflict*, and *relapse*. Perhaps because of the brevity of the letter, Griffiths forgets to credit these components to Brown.

In later writings (e.g., Griffiths & Davies 2005), the components are described as having been originally outlined by Brown (1993) and reworked by Griffiths (1996). Brown's (e.g. 1993) conceptualization of addiction therefore forms the basis of contemporary Scandinavian prevalence studies. Figure 1 is a diagram of the relationships in the outlined genealogy of the concept of video game addiction.



Genealogy of 'positive and negative addictions'

Figure 1. Genealogy of the concept video game addiction

The next section presents Brown's perspective on addiction and why it might not be a suitable foundation for the definition of a mental disorder.

### Mixed blessing addiction

R. Iain F. Brown writes about the psychological features of 'gaming and simulation addiction' as early as 1991. The aspects of any addiction, according to Brown (1991) are *salience or precedence over other behaviors, conflict, relief, tolerance, withdrawal effects, and relapse and reinstatement*. Brown (1991) describes the case of an academic who attended a conference on gaming and filled out a questionnaire about his involvement with gaming and simulation. The man describes a level of involvement that Brown argues feature all of the aspects of addiction. The man is initially described like a drug addict, as he exhibits the following features of addiction:

- (1) The man quite often finds himself thinking of drugs and taking drugs at odd times of the day. Furthermore, he often likes to think about drugs and taking drugs when he is supposed to be engaged in other preoccupations. (This is what Griffiths [1996] refers to as “salience”; and what Brown [1991] calls “salience or precedence over other behaviors”.)
- (2) The man quite often becomes irritable, tense, depressed and restless when he cannot get his drugs. (This is what Griffiths [1996] refers to as “withdrawal symptoms;” and what Brown [1991] calls “withdrawal effects”.)
- (3) Quite often the man finds that he must return at the earliest possible opportunity to take a drug to compensate for a bad trip or to repeat a particularly good one even after he has stopped many hours ago. (This is what Griffiths [1996] refers to as “relapse”; and what Brown [1991] calls “relapse and reinstatement”.)
- (4) Quite often the man finds himself doing drugs when he should be fulfilling some social, educational, or occupational obligation; he quite often finds himself persisting with his drug use despite at least one financial, domestic, social, occupational or legal problem being exacerbated by continuing. Aside from these intrapersonal conflicts the man also experiences interpersonal conflicts: he quite often finds that he is criticized by other people about the time and efforts he devotes to doing drugs (This is what Griffiths [1996] and Brown [1991] both refer to as “conflict”).

Brown (1991) later reveals that the object of the man’s obsession is not drugs but gaming and simulation. It is unclear to me why Brown does not mention the final two features of addiction, relief and tolerance (what Griffiths [1996] calls mood modification and tolerance) in the description. Given the extent of this man’s involvement with games and simulation it would be reasonable to suspect that his behavior could also be described in terms of tolerance and mood modification (or relief). After all, one can hardly imagine a hobby that does not provide some form of pleasure and relief from everyday life. Based on the above-mentioned case, Brown (1991: 111) notes that: “Heavy involvement in or commitment to games and gaming can obviously take on the pattern of an addiction. It is likely that there are several other leisure activities which can do so also.”

It is important to note here that Brown does not view addictions as necessarily negative phenomena. On the contrary, he advocates for a value-free use of the word, and he laments the fact that addiction has become a pejorative term to the point that it is “even a panic-mongering ‘bogey word’” (Brown 1991: 107). In Brown’s view, the word addiction has been coopted by drug enforcement agencies, the American medical establishment, socially conservative groups, and especially by sensationalist media to the point where it is harmful to those labeled as addicts. In opposition to this, Brown argues that addiction-like phenomena can occur in association with behaviors that are not centered on substance use, and as a notable example he mentions gambling. In support of this view, Brown references William Glasser’s (1976) book *Positive Ad-*

*diction* in which Glasser outlines the concept of positive addiction using examples such as running or meditation:

According to Glasser, [positive addictions] must be new, rewarding activities, such as exercise and relaxation, which produce increased feelings of self-efficacy, and there are six criteria to be fulfilled in the identification of a positive addiction. They must be (1) chosen, non-competitive and needing about an hour a day; (2) easy, so no mental effort is required; (3) able to be done mostly alone, not dependent on others; (4) believed in as having some value – physical, mental or spiritual; (5) believed in that, if persisted in, some improvement will result; (6) involve no self-criticism. (Brown 1991: 111–12)

This leads Brown to write that games, with their potential mix of positive and negative associations, could be considered a “mixed blessing addiction” (Brown 1991: 112).

If games can be mixed blessings, what might some of the positive effects of playing video games then be? Isabel Granic and colleagues (2014) recently argued that games benefit their players in various ways and in diverse domains, but that research on this topic is only now slowly beginning to emerge.<sup>4</sup> Their review of the research literature focuses on cognitive, motivational, emotional, and social benefits of digital game play. Similarly Kevin Durkin and Bonnie Barber (2002), in a sample of American high school students, found that those who played computer games were exhibiting more positive psychological development than those that did not; this was true across all variables from family closeness, activity involvement, positive school engagement, positive mental health, substance use, self-concept, and friendship network, to obedience to parents. A review of this issue is way beyond the scope of this chapter; the main point here is that there is no reason to assume *a priori* that games have only negative consequences.

### *Is everything addictive then?*

If addictions can be negative and positive and if they can involve activities or behaviors as well as substances, are there limits to what the term can be applied to?

Brown (1991) asserts that the range of activities and substances that can be appropriately described with the term addiction is much wider than has previously been believed. With reference to a conference paper by Witman, Fuller and Taber (Witman, Fuller & Taber 1987), Brown lists 40 such activities and substances. Among the perhaps more surprising activities are: “talking for talking’s sake,” “reading for reading’s sake,” and “trying to get others to take care of me and do things for me.” The list also includes a range of “addictive” substances that some may find equally surprising, including laxatives; antacids, stomach remedies; fatty, oily or greasy foods; and highly seasoned foods.<sup>5</sup>

It seems then that almost any human activity can be described as an addiction and that these addictions might be positive, negative, or mixed. It stands to reason

then, that Brown's (1991) criteria, adapted by Griffiths (1996), translated into questionnaire items by Lemmens and colleagues (2009) and employed by Mentzoni and colleagues (2011), Brunborg and colleagues (2013), and Brunborg and colleagues (2014) to measure game addiction in Norway, do not necessarily measure what we commonly understand as addiction (i.e. primary, chronic, relapsing, neurological disorders). It further stands to reason that these studies do not measure uniquely addictive qualities inherent in video games, per se. Rather they apply criteria that can describe any activity (even health promoting ones) as an addiction. Presumably, the same methodology and theory could be employed to discover as many addictions as there are human activities.

## Gambling disorder and addiction

Brown's (1991) notion of addiction is not the only basis for contemporary prevalence research into Internet gaming disorder; gambling disorder has also been influential. Gambling is currently the only behavior officially recognized by the DSM as an addictive behavioral disorder, sex-addiction and exercise addiction are not included, nor does the DSM recognize such categories as shopaholism or workaholism, even if these words have long existed in the lay vocabulary.

Lemmens and colleagues (2009) state that their screening tool is inspired by DSM criteria for gambling disorder, as well as the above-mentioned components model. As mentioned earlier, the first Scandinavian prevalence study on video game addiction (Johansson & Götestam 2004b) is also inspired by the DSM (though in a roundabout way through Kimberly Young's [1998a] concept of Internet Addiction). The next section provides a critical historical account of how pathological gambling became a mental disorder.

### *Gambling as a mental disorder*

Gambling disorder was first introduced in the DSM in 1980; at the time, it was called Pathological Gambling. According to Reilly and Smith (2013) this change came about largely due to the efforts of one man, Dr. Robert Custer. As a clinician, Custer had been working with treatment-seeking gamblers and writing about it for years when the disorder was finally recognized. The diagnostic criteria were based on Custer's and other treatment professionals' clinical experience (Reilly & Smith 2013). The DSM-III (American Psychiatric Association 1980) classified pathological gambling as an impulse control disorder, not as an addiction. The disorder was characterized as an experience of a mounting loss of control over gambling behavior due to inability to resist gambling impulses. The disorder severely damages and disrupts the individual's life in one or more important domains: family, personal, vocational, or financial. The description of the disorder focused on negative consequences such as having been ar-

rested for forgery, defaulting on debts, borrowing money from loan sharks, and losing employment due to absenteeism related to gambling (American Psychiatric Association 1980: 293).<sup>6</sup> Various stressors will typically exacerbate the gambler's preoccupation with gambling, urge to gamble, and gambling activity. The problems that ensue will only serve to intensify the gambling behavior (American Psychiatric Association 1980). Pathological gamblers are described as people who believe that money is the cause of, and at the same time, the solution to all of their problems (National Research Council 1999). According to the DSM-III, 'social gambling', gambling with friends mainly on special occasions and with predetermined acceptable losses, is not a disorder.

With the inclusion of pathological gambling in the DSM, gambling problems were medicalized. No longer did gamblers suffer from a moral failing; they now came to be seen as suffering from a robust disease state (National Research Council 1999). Gambling became a chronic psychiatric illness that the sufferer never fully recovers from. This is in line with the Gamblers Anonymous perspective, where pathological gamblers, like alcoholics and drug addicts, are never fully cured – no matter how long they abstain from gambling, they are in a state of perpetual recovery. However, according to the National Research Council (1999) it is unknown whether it is possible to return to moderate social gambling or not: "There is no direct empirical evidence supporting either the possibility that pathological gamblers can or cannot return to and remain in a state of social or recreational gambling" (National Research Council 1999: 20). The question of whether or not pathological gamblers can ever return to non-pathological gambling might be related to the question of whether all pathological gamblers suffer from the same disorder or whether there are subtypes within the disorder. One review of the literature has argued that pathological gambling can be divided into three such subtypes: behaviorally conditioned, emotionally vulnerable, and antisocial impulsivist (Milosevic & Ledgerwood 2010).

According to the National Research Council (1999), pathological gambling, later known as 'gambling disorder', was included in the DSM-III without further empirical testing of the criteria; the decision was made solely on limited clinical experience. In comparison, the concept of 'Internet gaming disorder' has been introduced into the DSM in more or less the opposite way. Thus, Internet gaming disorder has been proposed as a disorder for further study based primarily on prevalence studies (American Psychiatric Association 2013). The APA has called for more qualitative data on the subject before the disorder can be officially recognized.

The DSM-5 definition of Internet gaming disorder does not focus on negative outcomes like the DSM-III definition of pathological gambling, instead it resembles the DSM-III-R (American Psychiatric Association 1987), which is focused instead on psychological features such as being preoccupied, experiencing tolerance, withdrawal symptoms etc.<sup>7</sup> In other words, features of addiction similar to the ones discussed previously in relation to the work of Brown (e.g., 1991).

The DSM-III-R's focus on psychological experiences such as thinking about something is more ambiguous in terms of negative impact. Borrowing money from illegal

and criminal sources is arguably inherently tied to negative outcomes, whereas simply being preoccupied with something is not necessarily dangerous.

This shift from a focus on negative outcomes to ambiguous psychological experiences creates a necessity for caution when trying to apply the criteria to new domains. Meaningfully applying criteria for gambling disorder to work, sports, hobbies, etc., is made difficult when the criteria focuses on psychological experiences instead of negative outcomes. Further difficulties arise in the translation process between activities (i.e. gambling and playing video games) and between age groups (i.e. adults versus children). To highlight this point, the world's first prevalence study of video game addiction might be instructive. As far as I have been able to ascertain, the world's first prevalence study of video game addiction in children was conducted in Scotland in 1986 by Brown and Robertson (1993), who asked 134 school children aged 12–16 years of age the following five questions adapted from the Gamblers Anonymous' "Twenty Questions":

- 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?
- 5) Do you often borrow money in order to play the machine?

Based on this questionnaire, the researchers suggest that "a sizeable percentage of the general population of school children may have a significant addiction to video gaming alone" (Brown & Robertson 1993: 453).

However, one might question if it is at all commensurable when adults borrow money from loan sharks (and then risk that money on gambling) and when children borrow money to play video games. I would venture that this problem still haunts video game addiction research today. Questionnaire items such as "How often during the last six months [...] Did you think about playing a game all day long?" (Lemmens, Valkenburg & Peter 2009: 95) do not distinguish between the disturbing and intruding thoughts of the tormented addict and the pleasurable feeling of anticipation of the virtuoso (maybe even professional) video game player.

### *Validity issues*

The section above implicitly raises questions about the validity of the construct that is measured by questionnaire studies. We have seen that the Game Addiction Scale for Adolescents, developed by Lemmens and colleagues (2009), forms the basis for prevalence studies of game addiction in Scandinavia (Mentzoni et al. 2011; Brunborg et al. 2013; Brunborg, Mentzoni & Frøyland 2014). In their paper, Lemmens and colleagues call for more diligence in the study of the validity of using DSM criteria to measure game addiction:

Despite the widespread adaptation of DSM's pathological gambling criteria to measure addiction to (online) games, little research has been done on the validity of this method. It is generally assumed that the criteria are correlated and together measure the underlying construct of game addiction. (Lemmens, Valkenburg & Peter 2009: 79)

In their examination of the instrument (Game Addiction Scale for Adolescents) Lemmens and colleagues focus on two types of validity: 'population cross-validity' and 'concurrent validity'. The former (population cross-validity) can be assessed by investigating whether the construct found in one sample of a population can also be found in another sample of the same population. The latter (concurrent validity) can be assessed by measuring the correlation of the construct with similar constructs or with variables that are known to be associated with it (Lemmens, Valkenburg & Peter 2009). Lemmens and colleagues assess this type of validity by comparing scores on the game addiction scale with "time spent on games (i.e., usage), life satisfaction, loneliness, social competence, and aggression" (Lemmens, Valkenburg & Peter 2009: 80). The hypothesis is that if the game addiction scale correlates with these concepts in the expected direction that can be taken as validation of the construct. However, this data is insufficient evidence that a causal relationship exists between playing video games, developing an addiction, and suffering negative outcomes as a consequence. It may very well be that a third, underlying, factor is causing both the undesirable psychological states and the increased engagement with video games.

One underlying factor that can be misconstrued as video game addiction is social anxiety (Nielsen 2015). Anxiety can cause lower life satisfaction and increased loneliness and cause people to increase the amount of time they spend on games. This raises the question of whether video game addiction might sometimes be a misnomer for coping strategies. In the last century, when computers first started to enter households, there were concerns that people were becoming addicted to programming. Margaret Shotton (Shotton 1989, 1991), however, argued that computer dependence was not a disorder but a successful coping strategy. Her work reveals how 'microholics' were no more in need of treatment than hobbyists of other kinds. How should one go about the business of discerning whether excessive engagement with video games is best characterized as an addiction or something else entirely? The next section will dig deeper into this question.

### *Transient coping strategy or chronic disorder?*

As mentioned earlier in the chapter, addictions are currently conceptualized as chronic relapsing disorders. Faltin Karlsen (2011, 2013) has conducted participatory ethnographic research on excessive gaming and finds that excessive gaming is a transient phenomenon that is connected to certain life phases. The subjects of Karlsen's research have addiction-like experiences with the massively multiplayer online roleplaying game, *World of Warcraft*. However, their pseudo-addictions stop when they enter a

new phase of their lives, such as moving out of their parents' house, graduating and getting a job, or finding a partner.

Karlsen's (2013) research points to the need for different kinds of investigations of the validity of the notion of video game addiction and the screening tools used to measure it. One such type of validity might arguably be 'face validity'; that is, the degree to which a certain test subjectively appears to be measuring what it purports to measure. One way this can be achieved is to interview the purported addicts, often referred to as 'respondent validation' in the literature. Such interviews can be conducted with the objective of comparing the experiences of purported addicts with the APA's DSM-5 (2013) description of a mental disorder, the DSM-5's (2013) proposed description of Internet Gaming Disorder, and the ASAM's (2011) definition of an addiction, which we reviewed at the start of this chapter. Based on the DSM-5 (2013) definition of mental disorders we might examine whether the purported addicts:

- Experience clinically significant disturbances in cognition, emotion regulation, or behavior
- Experience significant distress in social, occupational, or other important activities because of their gaming,

On the other hand, we might also look for evidence that their gaming behavior might otherwise be described as:

- An expectable (or culturally approved) response (or coping strategy) to a common stressor or loss, such as the death of a loved one,
- Behavior that is not pathological in and of itself, but nevertheless results in conflict with significant others because they consider it to be socially deviant

In these cases, they might not be addicted.

In relation to the American Association of Addiction Medicine's (ASAM) (2011) definition of addiction, we might examine whether the syndrome:

- Appears to be primary (as opposed to a secondary symptom)
- Chronic (as opposed to transient)
- Whether the individuals appear to be able to abstain from playing when necessary, exhibit impaired behavioral control, craving, and diminished recognition of significant problems
- Whether the individuals exhibit recurring cycles of relapse and remission.
- Whether the syndrome appears to be progressive
- Whether it appears to result in disability (or in the worst-case scenario: premature death).

As far as I have been able to ascertain, my own study (Nielsen 2015) is the only study, to date, that has examined the measurement validity of video game addiction screening tools in this way. This interview study found that, for some adolescents playing online, video games might be perceived as the best tool to cope with severe anxiety;

for others, the game playing behavior did sometimes become excessive, but never to an extent where it was not possible to cut back; the players did not experience distress and disability or other hallmarks of addiction; for them, playing seemed to be mostly a ‘positive’ or ‘mixed blessings’ addiction in the words of Brown (1991).

### Is it the Internet or just games on the Internet?

The work group that decided to include Internet gaming disorder as a disorder for further study did so based on multiple studies (Petry et al. 2014). Among these were two Norwegian studies mentioned earlier in this chapter (i.e. Johansson & Göttestam 2004a; Mentzoni et al. 2011), but also a Chinese study by Tao and colleagues (Tao et al. 2010).

Petry and colleagues (2014) acknowledge that the concept of behavioral addictions is controversial. They describe how the DSM-5 workgroup reviewed literature on non-substance addictive behaviors such as gambling, Internet gaming, Internet use generally, work, shopping, and exercise. The work group voted to move gambling disorder to the substance-related and addictive disorders section in the DSM-5 and to include only one other “putative non-substance addiction”, Internet gaming disorder. According to Petry and colleagues,

This decision was based upon the large number of studies of this condition and the severity of its consequences [...]. Some reports demonstrated severe consequences, including seizures [Chuang 2006] and deaths [BBC News 2005; Reuters 2007] following lengthy periods of internet game-play lasting days without adequate sleep or food. (Petry et al. 2014: 2)

The description of Internet gaming disorder in the DSM is conceptually muddled. On the one hand, the description of the disorder clearly is about people who play video games, but the workgroup conflates two concepts that are clearly different, ‘Internet addiction’ and ‘gaming addiction’, evident in the following quote: “Internet gaming disorder has significant public health importance, and additional research may eventually lead to evidence that Internet gaming disorder (also commonly referred to as *Internet use disorder*, *Internet addiction*, or *gaming addiction*) has merit as an independent disorder” (APA 2013: 796, emphasis added). It speaks to the need for more qualitative data that the DSM does not distinguish between the concept of a game and that of the Internet. The description further states that: “Internet gaming disorder most often involves specific Internet games, but it could involve non-Internet computerized games as well, although these have been less researched” (APA 2013: 796). Going by this logic, a more apt term would be ‘computerized gaming disorder’.

That games, not the Internet, should be proposed by the DSM-5 workgroup as potentially addictive is made no less confusing by the fact that they, according to Petry and O’Brien (2013), base the criteria of the disorder on Tao and colleagues’

(2010) paper “Proposed diagnostic criteria for internet addiction”. In this paper, Tao and colleagues state that Internet addiction has at least three subtypes: “excessive gaming, sexual preoccupations and e-mail/ text-messaging” (Tao et al. 2010: 556). The DSM-5 work group does not explain why they adopt Tao and colleagues’ (2010) description of Internet addiction – an umbrella term encompassing gaming, sexual behavior, and textual communication – and discard two out of the three sub-types. If plenty of research on video game addiction exists, what is the APA’s rationale for basing their version of video game addiction on Tao and colleagues’ criteria, which do not mention games at all (cf. Tao et al. 2010: 563)?

### “It’s quite true!”<sup>8</sup>

A proposition is not necessarily false just because it was originally proposed as a joke. Nevertheless, it is worth mentioning that the concept of Internet gaming disorder is based on a joke made by a dry-humoured psychiatrist.

Tao and colleagues write that: “New York psychiatrist Ivan Goldberg first proposed in 1995 that Internet addiction may be considered a disorder” (Tao et al. 2010: 556). This is funny (or tragic) because Ivan Goldberg apparently proposed the disorder in order to prove a point, namely that the number of disorders included in the DSM had exploded to the point that anything could be seen as a psychiatric disorder. In Goldberg’s view, the DSM and the APA had a tendency to over-pathologize ‘normal’ behavior.

According to the American Mental Health Foundation (AMHF), Dr. Goldberg was one of the first psychiatrists to embrace the Internet in 1986, and Internet addiction was invented because people misunderstood Dr. Goldberg’s dry humor:

In 1995 Dr. Ivan made an off-the-cuff comment about the growing problem of Internet Addiction. Those who heard about this did not realize Dr. Ivan’s wonderfully dry and ironic sense of humor. Soon, the psychiatric field and media were abuzz with this ‘new phenomenon’. When asked about whether there could be support groups for this ‘addiction’, Dr. Ivan suggested that “support groups for Internet Addiction made about as much sense as support groups for coughing.” (William van Ornum 2014)

An article in *The New Yorker* from 1997 corroborates the idea that Internet addiction was meant as a hoax. In the article, Dr. Goldberg is quoted as saying:

To medicalize every behavior by putting it into psychiatric nomenclature is ridiculous. If you expand the concept of addiction to include everything people can overdo, then you must talk about people being addicted to books, [etc.]. (Wallis 1997: 28)

The joke comes full circle 18 years later when the DSM-5 workgroup used Tao and colleagues’ (2010) criteria as a basis for a new disorder in the DSM.

Tao and colleagues (2010) do not base their study solely on Ivan Goldberg’s joke, but also on more recent research. They base their criteria on clinical experience and on previously published diagnostic criteria such as Kimberly Young’s (1998) adapta-

tion of DSM criteria and Mark Griffiths' (1996) adaption of R. Iain F. Brown's (1993) features of addiction. As mentioned earlier, however, it is unclear how well the construct these criteria measure fits with definitions of mental disorders (e.g. APA 2013) and definitions of addiction (e.g. ASAM 2011). It may be that these constructs more closely resemble what Glasser (1976) calls positive addictions, in which case it would not make sense to consider them mental disorders or what Brown (1991) himself calls a 'mixed blessing addiction'.

## Conclusion

Video game addiction has been officially recognized as a mental disorder in China (APA 2013); in the West, the APA has called for more research on the subject and the WHO has included it in the beta version of the newest iteration of the international standard diagnostic tool (The ICD-11) (Bean et al. 2017). The APA (2013) laments the lack of clinical case studies on the subject and bases its proposed criteria on a Chinese study of Internet addiction (Tao et al. 2010), not specifically game addiction.

The APA is further inspired by the large number of prevalence studies on the subject, among these two Norwegian studies. This chapter has, somewhat provocatively perhaps, asked, what do these prevalence studies measure? The chapter has highlighted the problem that the term addiction can be used to describe unhealthy as well as healthy behavior. Mental disorders, as defined in the DSM, are associated with distress, dysfunction, and impairment in important aspects of daily life. It is problematic that the theoretical underpinnings of the disorder derive from works that see addiction as something that can be either positive, negative, or somewhere in the middle.

On this basis, the chapter has argued that it is problematic to build a concept of a mental disorder on such ambivalent features. The chapter has introduced anecdotal evidence that suggests that Internet addiction was first proposed as satire, only to be turned into an officially recognized disorder. The chapter has further highlighted how problematic it is that concepts such as Internet addiction and game addiction are used interchangeably.

By digging into the genealogy of game addiction screening tools, this chapter has suggested that it is still very much unclear what it is that these screening tools measure. Therefore, they should not be relied on as evidence of the existence of a new disorder.

## Notes

1. This chapter is based on the research I conducted in connection with my doctoral dissertation (Nielsen 2017).
2. The one exception is Wenzel and colleagues (2009), who instead of relying on tools that have not been standardized and validated simply categorize anyone who plays more than four hours a day as 'excessive player'. Whether four hours is excessive or not, however, is debatable and one's view is undoubtedly influenced by many factors. I don't have the relevant numbers for Norway, but statistics

from Denmark show that the average Dane watched TV for three hours and 18 minutes a day in 2011 (Thunø 2012). If video game playing replaces TV-watching, four hours may be well within the normal range for certain age groups.

3. The same authors also conducted studies to measure the prevalence of 'Internet addiction' in 2004 (Johansson & Göttestam 2004a) and again in 2009 with colleagues (Bakken et al. 2009).
4. However, this may be a truth with modifications as academic interest in the benefits of video games date back more than 30 years at least. According to Geoffrey R. Loftus and Elizabeth F. Loftus (1983: 183), researchers at the 1983 Harvard conference *Video Games and Human Development* presented "positive findings about the effects of video games on everything from medical rehabilitation to cognitive and problem-solving skills to social behavior".
5. The complete lists are as follows:

*Behaviors*

- Stealing, shoplifting, petty theft, etc.
- Spending just for the sake of spending
- Work for the sake of being busy
- Anger, fights and arguments
- Trying to manipulate and/or control other people
- Trying to get attention for attention's sake
- Reading for reading's sake.
- Trying to get others to take care of me and do things for me
- Exercise, jogging, playing sports, or working out.
- Seeking and having sex with another person
- Seeking and using pornography (sexually oriented pictures, book, etc.)
- Watching television
- Talking for talking's sake
- Searching for, buying and collecting items
- Lying (for no good reason)
- Fast and/or reckless driving (not to include driving under the influence)
- Physical violence

*Substances*

- Fatty, oily or greasy foods
- Salt from the shaker and/or salty foods
- Highly seasoned foods
- Laxatives
- Nasal decongestants, sprays and inhalants
- Antacids, stomach remedies

6. DSM-III criteria for pathological gambling (APA 1980: 293):
  - (1) arrest for forgery, fraud, embezzlement, or income tax evasion due to attempts to obtain money for gambling
  - (2) default on debts or other financial responsibilities
  - (3) disrupted family or spouse relationship due to gambling
  - (4) borrowing of money from illegal sources (loan sharks)
  - (5) inability to account for loss of money or to produce evidence of winning money, if this is claimed
  - (6) loss of work due to absenteeism in order to pursue gambling activity
  - (7) necessity for another person to provide money to relieve a desperate financial situation
7. DSM-III-R criteria for pathological gambling (National Research Council 1999: 277)
  - (1) frequent preoccupation with gambling or with obtaining money to gamble
  - (2) frequent gambling of larger amounts of money or over a longer period of time than intended
  - (3) a need to increase the size or frequency of bets to achieve the desired excitement
  - (4) restlessness or irritability if unable to gamble
  - (5) repeated loss of money by gambling and returning another day to win back losses ("chasing")
  - (6) repeated efforts to reduce or stop gambling
  - (7) frequent gambling when expected to meet social or occupational obligations
  - (8) sacrifice of some important social, occupational, or recreational activity in order to gamble
8. The headline is a tribute to Hans Christian Andersen's fairy tale 'Det er ganske vist' ('It's quite true').

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