

Sex Addiction on the Internet

Mark Griffiths

Nottingham Trent University, UK

The Internet appears to have become an ever-increasing part in many areas of people's day-to-day lives. One area that deserves further examination surrounds sex addiction and its relationship with excessive Internet usage. It has been alleged by some academics that social pathologies are beginning to surface in cyberspace and have been referred to as "technological addictions." This article examines the concept of "Internet addiction" in relation to excessive sexual behavior. It contains discussions of the concept of sexual addiction and whether the whole concept is viable. This is done through the evaluation of the small amount of empirical data available. It is concluded that Internet sex is a new medium of expression that may increase participation because of the perceived anonymity and disinhibition factors. It is also argued that although the amount of empirical data is small, Internet sex addiction exists and that there are many opportunities for future research. These are explicitly outlined.

Excessive sexual behavior

It is probably a fair assumption to make that most academics—particularly working in the addiction field—do not view excessive sex as an addiction. There have been many attacks on the concept of sex addiction from many different standpoints. These have been summarized by Goodman (1992) as including the:

☞ *sociological* – “addiction” is no more than a label for behavior that deviates from social norms (Coleman, 1986; Levine & Troiden, 1988)

☞ *conventional* – addiction is a physiological condition and must therefore be defined physiologically (Coleman, 1986; Levine & Troiden, 1988)

☞ *scientific* – free use of the word “addiction” has rendered the term meaningless (Coleman, 1986)

☞ *moral* – sexual behavior as an addiction undermines individuals' responsibility for their behavior

Despite a somewhat negative academic stance towards the concept of

sex addiction, it has not stopped a growth in this area of research. The concept of excessive sex being pathologised is not new. Excessive sex has been described in many different ways throughout the centuries and such conditions have included the Casanova type, compulsive promiscuity, compulsive sexuality, Don Juan(ita)ism, Don Juan Syndrome, Don Juan Complex, erotomania, hyperaesthesia, hypererotocism, hyperlibido, hypersensuality, idiopathic sexual precocity, libertinism, the Messalina Complex, nymphomania, oversexuality, pansexual promiscuity, pathologic multi-partnerism, pathologic promiscuity, satyriasis, sexual hyperversion and urethromania (Orford, 1985).

Until very recently, far more was written about female forms of excessive sex (e.g., nymphomania) in negative terms than male forms (e.g., satyriasis). This is most probably due to the sexual double standard that exists within society. In fact, an evaluation of the pre-1980's sexuality literature would have us believe there are far more female "sex addicts" than male ones. In reality, female sex addiction is quite rare, and it is males who are far more likely to be addicted to sex.

Is excessive sex really an addiction?

In comparison with other forms of addictive behavior, sex addiction has not traditionally been viewed as a bona fide form of addiction. However, depending upon the definition of addiction used, it is clear that excessive forms of sexual behavior share close links and similarities with other forms of more well known addictions. Like an alcoholic or a pathological gambler, sexual addicts are unable to stop their self-destructive sexual behavior. In fact, sex addicts will often ignore severe emotional, interpersonal, and physical consequences of their behavior. The consequences of excessive sexual behavior are far-reaching and can result in lost relationships, family break-ups, difficulties with work, arrests, financial troubles, a loss of interest in things not sexual, low self-esteem and despair. However, there is still debate over the most appropriate term to use in describing those with excessive sexual behaviors including sexual addiction (Carnes, 1983), sexual compulsion (Coleman, 1986), sexual impulsivity (Barth & Kinder, 1987) and nonparaphilia related disorders (Kafka, 1993).

Carnes (1999) defines sex addiction as any sexually-related, compulsive behavior which interferes with normal living and eventually becomes unmanageable, although he has also described it as a pathological relationship with a mood altering experience (Carnes, 1983). By examining the psychological

motivation for addiction, there appear to be three basic categories: *arousal addictions* that stimulate and thrill; *satiation addictions* that ease tension and discomfort; and *fantasy addictions* that escape mundane reality. Sexual behavior has the capacity to span all three of these types of addiction.

It is hard to establish the extent of sex addiction although estimates range from 3-6% of the population (Carnes, 1999). Further, research indicates a high correlation between childhood abuse and sexual addiction in adulthood, and it is very common for sex addicts to have experienced high levels of emotional, physical and/or sexual abuse. Socio-demographic characteristics are skewed by those who turn up for treatment in specialist clinics or self-help groups such as Sexaholics Anonymous (SA), Sexual Compulsives Anonymous (SCA), and Sex and Love Addicts Anonymous (SLAA). It appears to be mostly male with an increasing number of females. However, sex addictions appear to come from all races, classes and sexual orientations.

Sex addictions appear to have recognizable behavior patterns (Carnes, 1999). This involves acting out a pattern of out-of-control sexual behavior (e.g., compulsive masturbation, persistent indulging in pornography, having constant affairs etc.) in which severe mood changes relate to sexual activity. The sex addict experiences severe consequences due to sexual behavior and an inability to stop despite these adverse consequences. These consequences can include loss of a partner or spouse, severe marital or relationship problems, loss of career opportunities, unwanted pregnancies, abortions, suicidal obsession, suicide attempts, exposure to sexually transmitted diseases, and legal risks from nuisance offenses to rape. Sex addicts gradually increase the amount of sexual activity because the current level of activity is no longer sufficiently satisfying (i.e., they build up tolerance). As tolerance develops, individuals may find themselves seeking out more unusual sexual experiences, more frequent sexual experiences, and more graphic pornography. These behavior patterns are only indicative and do not preclude other signs that may be indicative of sex addiction.

One of the most interesting developments over the last few years is the increasing use of the Internet as a sexual outlet. This fairly new medium of communication has not been outlined in previous typologies of sex addiction. The Internet as a sexual outlet may in fact have many implications for how we view sex addiction and may in itself raise questions about the nature of sex addiction itself. There are also questions as to whether Internet sex addiction exists and, if it does exist, whether it is any different from "traditional" sex addiction. Research in this new area is only just beginning, and

there appear to be far more questions than answers. Nevertheless, a paucity of empirical data does not mean the area should be neglected.

Sexually-related uses of the Internet

The Internet is altering patterns of social communication and interpersonal relationships. This is nowhere more true than in the field of sexuality (Cooper, Delmonico & Burg, 2000). Furthermore, sex is the most frequently searched for topic on the Internet (Freeman-Longo & Blanchard, 1998). Young (2000) claims that the convenience of online pornography and adult chat sites provides an immediately available vehicle to easily fall into compulsive patterns of online use. Pornographers have always been the first to exploit new publishing technologies (e.g., photography, videotape, Internet etc.). It is estimated that the online pornography industry will reach \$366 million by 2001 (Sprenger, 1999) though other estimates suggest it is already worth \$1 billion (The Guardian, 1999). Further, the research company *Datamonitor* reported that over half of all spending on the Internet is related to sexual activity (The Guardian, 1999). This includes the conventional (e.g., Internet versions of widely available pornographic magazines like *Playboy*), the not so conventional (e.g., Internet versions of very hardcore pornographic magazines) and what can only be described as the bizarre (e.g., discussion groups on almost any sexual paraphilia, perversion and deviation). Moreover, there are also pornographic picture libraries (commercial and free-access), videos and video clips, live strip-shows, live sex shows and voyeuristic Web-Cam sites (Griffiths, 2000a).

Before any examination of the “addictiveness potential” of the Internet and its relationship to sex addiction, Griffiths (2000a) has argued that the first step is to examine all the different ways that the Internet can be used for sexually-related purposes. The reason for this approach is this to identify which activities may be done to excess and/or which might be potentially addictive. Griffiths then notes that the Internet can (and has) been used for a number of diverse activities surrounding sexually motivated behavior. These include the use of the Internet for:

- ☞ seeking out sexually-related material for educational use
- ☞ buying or selling sexually-related goods for further use offline
- ☞ visiting and/or purchasing goods in online virtual sex shops
- ☞ seeking out material for entertainment/masturbatory purposes for use online

- ☞ seeking out sex therapists
- ☞ seeking out sexual partners for an enduring relationship
- ☞ seeking out sexual partners for a transitory relationship (i.e., escorts, prostitutes, swingers) via online personal advertisements/"lonely hearts" columns, escort agencies and/or chat rooms
- ☞ seeking out individuals who then become victims of sexually-related Internet crime (online sexual harassment, cyberstalking, paedophilic "grooming" of children)
- ☞ engaging in and maintaining online relationships via e-mail and/or chat rooms
- ☞ exploring gender and identity roles by swapping gender or creating other personas and forming online relationships
- ☞ digitally manipulating images on the Internet for entertainment and/or masturbatory purposes (e.g. celebrity fake photographs where heads of famous people are superimposed onto someone else's naked body).

It is evident from these types of Internet behavior that very few of these are likely to be potentially excessive, addictive, obsessive and/or compulsive. The most likely behaviors include the use of online pornography for masturbatory purposes, engaging in online relationships, and sexually-related Internet crime (e.g., cyberstalking). Before examining the implications of these behaviours, the next section briefly overviews the concept of "Internet addiction" more generally.

Internet addiction : A brief overview

One area where Internet sexuality is beginning to be discussed academically is that of "Internet addiction." As with sex addiction itself, there is opposition to the general concept of behavioral (i.e., non-chemical) addictions such as Internet addiction. However, there is a growing movement (e.g., Orford, 1985; Marks, 1990; Griffiths, 1996a) which views a number of diverse behaviors as potentially addictive including gambling, overeating, sex, exercise, shopping, and computer game playing. Internet addiction is another such area since it has been alleged by some academics that social pathologies (i.e. technological addictions) may be beginning to surface in cyberspace (e.g., Griffiths, 1996b; 1998a; 2000b; 2000c; Brenner, 1997; Cooper, 1998; Scherer, 1997; Young, 1998a; 1998b).

Technological addictions are non-chemical (behavioral) addictions that involve excessive human-machine interaction. They can either be passive (e.g., television) or active (e.g., computer games) and usually contain inducing and reinforcing features which may contribute to the promotion of addictive tendencies (Griffiths, 1995a). They also feature the core components of addiction including salience, mood modification, tolerance, withdrawal, conflict and relapse (Griffiths, 1996a; 1996c). It has been argued by Griffiths (1996c) that any behavior (e.g. Internet use) which fulfils these criteria can be operationally defined as addictions. These core components have been expanded upon by Griffiths (2000a) in relation to Internet sex of whatever type it happens to be (e.g. downloading pornography, cybersex relationships etc.):

Salience – This occurs when Internet sex becomes the most important activity in the person’s life and dominates their thinking (preoccupations and cognitive distortions), feelings (cravings) and behavior (deterioration of socialized behavior). For instance, even if the person is not actually on their computer engaged in Internet sex, they will be thinking about the next time they will be.

Mood modification – This refers to the subjective experiences that people report as a consequence of engaging in Internet sex and can be seen as a coping strategy (i.e., they experience an arousing “buzz” or a “high” or paradoxically tranquilizing feel of “escape” or “numbing”).

Tolerance – This is the process whereby increasing amounts of Internet sex are required to achieve the former mood modifying effects. This basically means that, for someone engaged in Internet sex, they gradually build up the amount of the time they spend in front of the computer engaged in the behavior.

Withdrawal symptoms – These are the unpleasant feeling states and/or physical effects which occur when Internet sex is discontinued or suddenly reduced (e.g., the shakes, moodiness, irritability etc).

Conflict – This refers to the conflicts between the Internet user and those around them (interpersonal conflict), conflicts with other activities (job, social life, hobbies and interests) or from within the individual themselves (intrapsychic conflict and/or subjective feelings of loss of control), which

are concerned with spending too much time engaged in Internet sex.

Relapse – This is the tendency for repeated reversions to earlier patterns of Internet sex to recur and for even the most extreme patterns typical of the height of excessive Internet sex to be quickly restored after many years of abstinence or control.

Young (1999a) claims Internet addiction is a broad term which covers a wide variety of behaviors and impulse control problems. She claims this is further categorized by five specific subtypes:

☞ *Cybersexual addiction*: this typically involves the compulsive use of adult websites for cybersex and cyberporn.

☞ *Cyber-relationship addiction*: this typically involves the over-involvement in online relationships.

☞ *Net compulsions*: this typically involves obsessive/compulsive activities such as online gambling, shopping, day-trading etc.

☞ *Information overload*: this typically involves compulsive web surfing or database searching.

☞ *Computer addiction*: this typically involves obsessive computer game playing on games such as *Doom*, *Myst*, *Solitaire* etc.

Only two of these specifically refer to potential sexually-based addictions (i.e., cybersexual addiction and cyber-relationship addiction). Such distinctions are potentially very useful as it would be helpful if researchers in the area used the same words and had exemplar descriptions of such behaviors so that everyone could be clear as to what exactly they are researching. This would be helpful for both comparative and evaluative purposes. Such definitions are provided in the following section (cybersex and cyber-relationships).

Young's classification also raises the question of what people are actually addicted to. On a primary level, is it the sexually-related behavior or is it the Internet? In reply to Young, Griffiths (1999a; 2000b) has argued that many of these excessive users are not "Internet addicts" but just use the Internet excessively as a medium to fuel other addictions. Griffiths argues that a gambling addict or a computer game addict is not addicted to the Internet. The Internet is just the place where they engage in the behavior. The same argument can be applied to Internet sex addicts. However, there are case

study reports of individuals who appear to be addicted to the Internet itself. These are usually people who use Internet chat rooms or play fantasy role playing games—activities that they would not engage in except on the Internet itself (some of which are sex-related). These individuals to some extent are engaged in text-based virtual realities and take on other personas and social identities as a way of making themselves feel good about themselves.

In these cases, the Internet may provide an alternative reality to the users and allow them feelings of immersion and anonymity (which may lead to an altered state of consciousness). This in itself may be highly psychologically and/or physiologically rewarding. The anonymity of the Internet has been identified as a consistent factor underlying excessive use of the Internet (Young, 1998b; Griffiths, 1995b). This is perhaps particularly relevant to those using Internet pornography. There may be many people who are using the medium of the Internet because (a) it overcomes the embarrassment of going into shops to buy pornography over the shop counter and (b) it is faster than waiting for other non-face-to-face commercial transactions (e.g., mail order). Anonymity may also encourage deviant, deceptive and criminal online acts such as the development of aggressive online personas or the viewing and downloading of illegal images (e.g., pornography) (Young, 1999). On a more general level Internet sex is a new medium of expression which may increase participation because of the perceived anonymity and disinhibition factors. This is something that needs monitoring very carefully.

There have been a few studies of excessive Internet use that have found a small proportion of users who admitted using the Internet for sexual purposes (e.g., Morahan-Martin & Schumacher, 1997; Scherer, 1997; Young, 1998b; Cooper, Putnam, Planchon & Boies, 1999; Cooper, Delmonico & Burg, 2000; Schwartz & Southern, 2000). None of the surveys to date conclusively show that Internet addiction exists or that Internet sex addiction is problematic to anyone but a small minority. At best, they indicate that Internet addiction may be prevalent in a significant minority of individuals but that more research using validated survey instruments and other techniques (e.g., in-depth qualitative interviews) are required. Due to their level of detail, case studies of excessive Internet users may provide the best evidence for the existence of Internet sex addiction. Even if just one case study can be located, it could be argued that Internet sex addiction actually does exist. However, most researchers in the area would require more proof than case studies alone.

Cybersex and cyber-relationships

Probably one of the most unexpected uses surrounding the growth of the Internet concerns the development of online relationships and their potentially addicting nature. Young, Griffin-Shelley, Cooper, O'Mara and Buchanan (2000) define an online relationship (a "cyberaffair") as a romantic and/or sexual relationship that is initiated via online contact and maintained predominantly through electronic conversations that occur through e-mail and in virtual communities such as chat rooms, interactive games, or newsgroups. Young et al. report that what starts off as a simple e-mail exchange or an innocent chat room encounter can escalate into an intense and passionate cyberaffair and eventually into face-to-face sexual encounters. Further, those in online relationships often turn to mutual erotic dialogue (often referred to as "cybersex"). In this instance, cybersex involves online users swapping text-based sexual fantasies with each other. These text-based interactions may be accompanied by masturbation. Online chat rooms provide opportunities for online social gatherings to occur almost at the push of a button without even having to move from your desk. Online group participants can—if they so desire—develop one-to-one conversations at a later point either through the use of continuous e-mails or by instant messages from chat rooms. It could perhaps be argued that electronic communication is the easiest, most disinhibiting and most accessible way to meet potential new partners.

There are a number of factors that make online contacts potentially seductive and/or addictive. Such factors (as mentioned in the previous section) include the disinhibiting and anonymous nature of the Internet. This may be very exciting to those engaged in an online affair. Disinhibition is clearly one of the Internet's key appeals as there is little doubt that the Internet makes people less inhibited (Joinson, 1998). Online users appear to open up more quickly online and reveal themselves emotionally much faster than in the offline world. What might take months or years in an offline relationship may only takes days or weeks online. As Cooper and Sportolari (1997) have pointed out, the perception of trust, intimacy and acceptance has the potential to encourage online users to use these relationships as a primary source of companionship and comfort.

Some researchers have made attempts to explain how and why infidelity occurs online. Cooper (1998a) suggested there are three primary factors which "turbocharge" online sexuality and aid our understanding of the power and attraction of the Internet for sexual pursuits. He terms these factors the

“Triple A Engine.” The three components are:

- ☞ *Accessibility* – in that there are millions of sites available 24 hours a day, seven days a week
- ☞ *Affordability* – in that competition on the Web keeps prices low and there are many ways to access ‘free’ sex
- ☞ *Anonymity* – in that people perceive their communications to be anonymous

Young (1999) also claimed to have developed a variant of the “Triple A Engine” which she called the “ACE model” (Anonymity, Convenience, Escape). Neither of these are strictly models as neither explains the process of how online relationships develop. However, they do provide (in acronym form) the variables involved in the acquisition, development and maintenance of emotional and/or sexual relationships on the Internet (i.e., anonymity, access, convenience, affordability and escape). It would also appear that virtual environments have the potential to provide short-term comfort, excitement and/or distraction. Other “attractive” factors outlined by Schneider (2000) include the fact that cybersex is legal, available in the privacy of one’s home, inexpensive, and does not put the user at risk of a sexually transmitted disease. It is also ideal for hiding the activity from a partner because it does not leave any obvious evidence of any sexual encounter. For those online, Internet sex may provide a sense of safety and ready access to partners. These aspects of Internet sex, moreover, might prove to be an advantage for disenfranchised groups (e.g., homosexuals).

Researchers investigating the addictive potential of the Internet have noted the correlations between time spent online and negative consequences reported by users (e.g. Cooper, Scherer et al, 1999; Young & Rogers, 1998). Cooper (1998a) asserts that the Triple A Engine appears to increase the chances that the Internet will become problematic for those who already have a problem with sexual compulsivity or for those who have psychological vulnerabilities rendering them at risk for developing such compulsivity.

Young (2000) claims the anonymity of electronic transactions provides the user with a greater sense of perceived control over the content, tone, and nature of the online sexual experience. She says that, unlike real life sexual experiences, a woman can quickly change partners if her cyber-lover isn’t very good or a man can log off after his orgasm without any long goodbyes. Young also raises questions that the Internet might help in answering. For

instance, what if a man privately wondered what it would be like to have sex with another man? Within the anonymous context of cyberspace, conventional messages about sex are eliminated, which allows users to play out hidden or repressed sexual fantasies without the fear of being caught. For anyone who has ever been curious about a whole range of sexual behaviors, cybersex offers a private, safe, and anonymous way to explore those fantasies. Young, therefore, claims that individuals are more likely to sexually experiment because online users feel encouraged to engage in their adult fantasies and they feel validated by the acceptance of the cyberspace culture.

The development of cyber-relationships

A number of researchers have forwarded typologies of the different kinds of Internet users based their online sexual and/or relationship activity (Cooper, 1998; Young, 1999; Griffiths, 1999b). In their survey of 9177 Internet users, Cooper, Putnam, Planchon and Boies (1999) found that 8% spent 11 or more hours per week engaged in online sexual pursuits. On the basis of these findings, Cooper and colleagues put forward a continuum model of people who use the Internet for sexual purposes (recreational users, at-risk users, and sexual compulsive users):

☞ *Recreational users* – this group of users access online sexual material more out of curiosity or for entertainment purposes and are not typically seen as having any problems associated with their online sexual behavior.

☞ *Sexual compulsive users* – this group uses the Internet as a forum for their sexual activities because of their propensity for pathological sexual expression.

☞ *At-risk users* – this group of users are those who, if it were not for the availability of the Internet, may never have developed a problem. Cooper claims that, for these people, the interaction between the triple A factors and underlying personality factors leads to patterns of behavior that may develop into online sexually compulsive behaviors.

Although this continuum is of descriptive interest, it tells us little except about frequency and type of use.

Griffiths (1999b) has outlined three basic types of online relationships. The first one is purely virtual and involves two people who never actually meet. They engage in an online relationship that goes further than being pen-

pals because the exchanges are usually very sexually explicit (i.e., cybersex). Neither person wants to meet the other person, and they are engaged in the interaction purely for sexual kicks. It is not uncommon for these individuals to swap gender roles. The “relationships” may be very short lived and the people involved will usually have real-life partners. These people prefer the distance, relative anonymity and control offered by the Internet and will prefer to confine the relationship to cyberspace. As far as these people are concerned, they do not feel they are being unfaithful.

The second type of online relationship involves people meeting online but, after becoming emotionally intimate with each other online, they eventually want the relationship to move from the virtual to the actual. The shared emotional intimacy often leads to cybersex and/or a strong desire to constantly communicate with each other on the Internet. For many, the exchange of photographs leads to secret phone calls, letters and offline meetings. Once they have met up, and if they are geographically near each other, their Internet use will usually decrease considerably as they will spend far more time actually (rather than virtually) with each other.

The third type of relationship involves two people first meeting offline but then maintaining their relationship online for the majority of their relationship. This is usually because they are geographically distant and may even be living in separate countries. These people only meet up a few times a year but may spend vast amounts of time “talking” to their partners on the Internet most nights. As they are geographically distant, the relationship only continues for those who have the time, the budget and the travel opportunity to maintain the nominal physical contact. With regards to “addiction,” it is only the first type outlined here that may be addicted to the Internet. The latter two types are more likely to be addicted to the person rather than the activity— particularly since their Internet usage stops almost completely when they meet up offline with their partner (Griffiths, 2000a).

Internet sex addiction: The claims

As we have seen, Young (2000) claims that cybersexual addiction and cyber-relationship addiction are specific sub-types of Internet Addiction. She estimates that 1 in 5 Internet addicts are engaged in some form of online sexual activity (primarily viewing online pornography and/or engaging in cybersex). Young claims that men are more likely to view online pornography, while women are more likely to engage in erotic chat. Young has also produced a checklist of warning signs for cybersexual addiction.

These are:

1. Routinely spending significant amounts of time in chat rooms and private messaging with the sole purpose of finding cybersex.
2. Feeling preoccupied with using the Internet to find online sexual partners.
3. Frequently using anonymous communication to engage in sexual fantasies not typically carried out in real-life.
4. Anticipating the next on-line session with the expectation of finding sexual arousal or gratification.
5. Frequently moving from cybersex to phone sex (or even real-life meetings).
6. Hiding on-line interactions from a significant other.
7. Feeling guilt or shame about online use.
8. Accidentally being aroused by cybersex at first and then actively seeking it out when logging online.
9. Masturbating while online while engaged in erotic chat.
10. Less investment with a real-life sexual partner and a preference for cybersex as a primary form of sexual gratification.

Young goes on to claim that people who suffer from low self-esteem, a severely distorted body image, untreated sexual dysfunction, or a prior sexual addiction are more at risk to develop cybersexual addictions. In particular, sex addicts often turn to the Internet as a new and safe sexual outlet to fulfill their compulsions without the expense of costly premium rate telephone lines, the fear of being seen at an adult bookstore, or the fear of disease among prostitutes. However, most of these assertions appear to have been made in the absence of rigorous empirical data.

In addition to the work by Young, many screening schools have been designed to help people identify if they might be having a problem with their online sexual behavior (see Figure 1 for some of the most popular screening instruments available on the Internet). Most of the questionnaires available are self-exploration tools that have yet to be researched for their psychometric properties. Embedded within the majority of the questionnaires are questions which relate to a number of psychometric dimensions (e.g., life interference; emotional distress; obsessive-compulsive behavior; tolerance and withdrawal; destructive impairment, etcetera), some of which are not mutually exclusive. The questions are not usually specific and can refer to any sexual activity that one may engage in online. The questions

are meant to be answered in relation to any sexual material or encounters online (including chatrooms, email, bulletin boards, pictures, audio, and video). It will be interesting to see the results of research using these screening instruments since the findings may help us to assess whether Internet sex addiction (if it exists) is fundamentally different from “traditional” forms of sex addiction. There also needs to be an examination of how meeting for a sexual activity on the Internet or examining pornography in its various forms on the Internet are similar or dissimilar to other ways that non-Internet users have met for sex or used pornography. The often repeated claim is that ease of online sex availability may have the potential to promote sexual experimentation among those who normally would not engage in such behavior.

Figure 1: Website addresses for professionally developed screening instruments for sex addiction (adapted from Young et al 2000)

Cybersexual Addiction Test:

www.netaddiction.com/cybersexual_addiction.htm

Online Sexual Addiction Questionnaire:

www.onlinesexaddict.com/osaq.html

Male Sexual Addiction Screening Test:

www.sexhelp.com

Women's Sexual Screening Addiction Test:

www.sexhelp.com

Sexaholics Anonymous Test:

www.sa.org

Sexual Compulsives Anonymous:

www.sca-recovery.org

Sex Addicts Anonymous:

www.saa.org

Sexual Codependency Sexual Coaddiction Questionnaire:

www.azstarnet.com/~jschndr

S-Anon Checklist:

www.sanon.org

COSA : Key Identifying Behaviors:

www.shore.net/~cosa

Young (2000) also claims that gender significantly influences the way men and women view cybersex. She claims women prefer cybersex because it hides their physical appearance, removes the social stigma that women should not enjoy sex, and allows them a safe means to concentrate on their sexuality in new, uninhibited ways. However, men prefer cybersex because it removes performance anxiety that may be the result of underlying problems with premature ejaculation or impotence, and, for men who feel insecure about hair loss, penis size or weight gain, it hides their physical appearance. It is unclear what empirical evidence is available for all these assertions although such claims would form a good basis for further research.

Empirical data (e.g., Schwartz & Southern, 2000; Cooper, Delmonico & Burg, 2000) does seem to substantiate Young's claims that men and women use cybersex differently. However, the differences are not in the way that Young postulates. For instance, Cooper, Delmonico and Burg (2000) found that females preferred chat rooms to other mediums whereas males preferred the Web. No female cybersex compulsives reported using newsgroups for sexual pursuits. Since newsgroups are primarily for the exchange of erotic pictures, this supported the finding that women tend to desire cybersex in the context of a "relationship" rather than simply viewing images or text (Cooper, Scherer et al, 1999; Carnes, 1991). A study by Schwartz and Southern (2000) also claimed that there were gender differences in cybersexual internet use. Male cybersex abusers had characteristics similar to problem Internet users, and were more likely to engage in sexual compulsivity or to be labeled a sex addict. Female cybersex abusers displayed behavior similar to non-problematic Internet users.

Internet sex addiction : Empirical data

Until very recently, empirical data surrounding excessive online sexual behavior was lacking. However, the situation is slowly starting to change. One of the most impressive data sets was collected by Cooper and colleagues and has been used as the basis for a number of empirically-based publications (e.g., Cooper, Putnam, Planchon & Boies, 1999; Cooper, Delmonico & Burg, 2000). Perhaps the most relevant paper is the one by Cooper, Delmonico and Burg (2000) which examined a group of "cybersexually compulsive" internet users. They used the Kalichman Sexual Compulsivity Scale (SCS) (Kalichman, Johnson, Adair, Rompa, Multhauf & Kelly, 1994) combined with time online in order to identify the group of users displaying

cybersex compulsivity.

They presented new data on cybersex users, abusers and compulsives. Following reanalysis of previously collected data, four groups were identified: nonsexually compulsive (n=7738), moderate SCS score (n=1007), sexually compulsive (n=424), and cybersexually compulsive (n=96). Because time is only one dimension with which to identify individuals who may be sexually compulsive, other criteria were looked at. These included increased appetite, desire, or tolerance (contributing to increased time engaged in the activity); harm to self or others; denial or minimization of negative consequences; behavior interfering with social, academic, occupational, or recreational activities; obsession with the activity; and compulsion or loss of freedom in choosing whether to engage in a behavior (Cooper, 1998b; Carnes, 1991; Goodman, 1999; Schneider, 1994).

The cybersex compulsive group consisted of those who met the criteria for both sexual compulsivity on the SCS and who spent more than 11 hours a week online engaged in sexual pursuits. Only 1% of the sample fell into this group (n=96). Cooper and colleagues claim this to be the "purest sample yet" of cybersex compulsives (p.11). This group was 79% male, 63% heterosexual and 38% married (with another 15% in committed relationships). In terms of demographics, over-represented groups included being female, homosexual, bisexual, single, and a student, compared to the other three groups (see Table 1). Cooper and colleagues thus concluded that these over-represented groups were therefore more vulnerable to developing cybersex compulsion. However, an alternative explanation may be that some groups (e.g., men) are more likely to deny that they have a problem. Previous research by Delmonico (1997) suggested that the three main categories of cybersex activities were pornography exchange, real-time discussions, and CD-ROM distribution. The research of Cooper and colleagues demonstrated that cybersex activity included a broader range of online behaviors. Interestingly, only 5% of the entire sample reported having ever changed their gender online.

Unfortunately, very few questions specifically asked about online sexual activity jeopardizing or interfering with their life. Overall, 79% of the sample reported that online sexual activity had no jeopardized any area of their life, and 68% reported they felt online sexual activity had not interfered with any part of their life. Cooper and colleagues concluded that the majority of Internet users engage in sexual pursuits that do not lead to any life difficulty. There are of course limitations to the study by Cooper and colleagues, the

biggest problem being that the participants were self-selected. However, there are no other studies of this size in the literature with which to compare it. This makes their study very important given the dearth of empirical data. For the 1% of the sample who were cybersexual compulsives, online sexual pursuits can have major deleterious effects on their lives. The data suggest that there needs to be increased attention given to the issue of Internet sexuality, although it is clear that the vast majority of people do not (and will not) experience adverse reactions from online sexual activity.

*Table 1 : Demographic variables of Internet users by group
(Adapted from Cooper et al, 2000)*

<i>Variable</i>	<i>Nonsexually Compulsive (n = 7738)</i>	<i>Moderate SCS Score (n = 1007)</i>	<i>Sexually Compulsive (n = 424)</i>	<i>Cybersex Compulsive (n = 96)</i>
<i>Age (meanyears)</i>	35.3	33.4	32.6	33.5
<i>Gender (%)</i>				
Male	86	89	88	79
Female	14	11	12	21
<i>Orientation (%)</i>				
Heterosexual	87	86	85	63
Homosexual	7	5	6	16
Bisexual	6	9	9	21
<i>Relationship (%)</i>				
Married	47	49	49	38
Committed	17	15	16	15
Single/dating	18	17	12	26
Single/not dating	18	19	23	21
<i>Occupation (%)</i>				
Professional	36	35	27	27
Computer field	24	24	21	19
At home	3	3	4	5
Student	12	12	18	21

The only other study that has isolated and examined a group of potential Internet sex addicts is that of Schwartz and Southern (2000). Descriptive data from a clinical population of cybersex abusers (n = 40; 19 males and 21 females) from an outpatient psychiatric clinic were reviewed. All were referred primarily or exclusively for problematic cybersexual activity. These typically involved masturbating or self-touching while communicating with someone over the Internet. Over two-thirds (68%) had a history of sexual abuse, with females being more likely to present sexual abuse history and

PTSD. Most of the male patients (90%) were self-diagnosed as sex addicts or fitted the criteria for compulsive sexual behavior. Only half the females (52%) engaged in compulsive sexual behavior, although their Internet usage and cybersex were considered by the patients and/or their referral sources to be pathological. A quarter of the patients participated in cybersex activities associated with atypical or special sexual interests.

Several generalizations from the descriptive data of patients seeking treatment were noted and were argued by Schwartz and Southern to be useful for ongoing review. Male compulsive users presented cybersex as a manifestation of sexual addiction. Female cybersex abusers may be vulnerable to trauma reenactment as they explored sexual preferences and reached out to anonymous partners. Male and female cybersex abusers experienced increasing negative consequences as they continued to participate in this high-tech form of intimacy dysfunction.

Schwartz and Southern claimed that 70% ($n=28$) of their sample of cybersex abuse patients had a sexual addiction (90% male; 52% female). They also reported that 57.5% had a chemical dependency (74% male; 50% female) and that 47.5% had an eating disorder (26% male; 67% female). Table 2 compares the main demographic variables of Schwartz and Southern's (2000) sample population with that of Cooper, Delmonico and Burg (2000). Although the samples are from different sources many of the variables (e.g., age, sexual orientation, occupation) appear demographically similar although there are a greater percentage of females in Schwartz and Southern's study. This may be because females are more likely to seek treatment than males. Furthermore, any slight differences in the demographic breakdown of the two studies are most probably explained by the gender bias and sampling methods employed.

Schwartz and Southern also constructed four self-explanatory subtypes of cybersex addiction (male cybersex addicts, female cybersex addicts, loner cybersex addicts, paraphiliac cybersex addicts). The first two subgroups were based on gender, while the latter two subgroups reflected lifestyle limitations. The loner and paraphiliac subgroups were not mutually exclusive, but were argued to be clinically meaningful. In general, Schwartz and Southern argued that cybersex abusers are heavy users of the Internet, generally married, college-educated, depressed, and the survivors of sexual abuse. They also claimed that there were gender differences. Male cybersex abusers were likely to be older than females (i.e., middle-aged), have characteristics similar to problem Internet users, and were more likely to engage in sexual compulsivity or to be labeled as sex addicts.

In conclusion, they argued that compulsive cybersex was a survival

Table 2 : A comparison of demographic variables of compulsive cybersex users in two studies

<i>Researchers</i>	<i>Cooper, Delmonico & Burg</i>	<i>Schwartz & Southern</i>
<i>Year</i>	2000	2000
<i>Population</i>	Self-selected internet users	Psychiatric patients in clinic
<i>Number in sample</i>	96	40
<i>Age (meanyears)</i>	33.5	30.4 (f); 38.1 (m)
<i>Gender (%)</i>		
Male	79	47.5
Female	21	52.5
<i>Orientation (%)</i>		
Heterosexual	63	(83.5)
Homosexual	16	10
Bisexual	21	7.5
<i>Relationship (%)</i>		
Married/Committed	53	57.5
Single/dating	26	-
Single/not dating	21	7.5
<i>Occupation (%)</i>		
Professional	27	47.5
Computer field	19	-
At home	5	2.5
Student	21	17.5
Other	28	-

mechanism involving dissociative reenactment and affect regulation. (Dissociation simply means that two or more mental processes are not integrated). Dissociation was present when a person engaged in secretive illicit sex on the computer and then went to bed with the spouse without dissonance or discomfort. Schwartz and Southern also claimed that cybersex had become the new tea room for meeting anonymous partners and engaging in a fantasy world. Anonymous persons engaged in easily accessible ritualized affordable

behavior that led to an impersonal and detached sexual outlet. Furthermore, it provided an immediate and powerful reinforcement afforded by variable schedule hits which made it potentially addictive for many users.

Indirect evidence of Internet sex addiction comes from a number of studies. For instance, Schneider (2000) carried out a brief survey with 91 females and 3 males. All of her participants had experienced serious adverse consequences of their partner's cybersex involvement. Interestingly, 31% of her participants volunteered that the partner's cybersex activities were a continuation of pre-existing compulsive sexual behaviors. Furthermore, sixteen respondents (18%) reported that their partner's cybersex activities progressed to offline encounters with other people. These were people they had met in online chatrooms, through e-mail etc. It was also reported that cybersex was a major contributing factor to separation and divorce. The major problem with this study is that the term 'cybersex addict' was used informally and was not made on the basis of using any screening instrument. The diagnosis was thus made from the perception of the respondents. Schneider claims that most people who engage in online sexual behavior are recreational users analogous to recreational drinkers or gamblers. However, she claims that a significant proportion of online users have pre-existing sexual compulsions or addictions that are now finding a new outlet. For others with no such history, cybersex is the first expression of an addictive disorder, one that lends itself to rapid progression, similar to the effect of crack cocaine on the previously occasional cocaine user.

Other indirect evidence for the existence of Internet sex addiction comes from Orzack and Ross (2000) who described the treatment of two Internet sex addicts who both fitted the criteria for computer addiction, sexual addiction, and cybersexual addiction. They claimed that, of those who are addicted to virtual sex and who present for inpatient and outpatient treatment, the majority have more pervasive sexual or other behavior and/or chemical addictions. The aim of their research was to demonstrate the complexities of treating compulsive Internet sex. They compared cybersex addiction to an eating disorder. They stressed that they were not trying to imply that humans were dependent on computers for life sustenance. Furthermore, unlike human sexuality, computer usage is not an innate human need or drive. However, they argued that like (say) the television and telephone, the computer is an essential feature of modern life. They further claimed that treatment modalities developed from treating other addictions (i.e., food and sex) were applicable in treating cybersex addiction. They

conclude that cybersex addiction (i.e., Internet sex addiction) exists and is an extremely potent addiction that must be treated as such.

The subject of sexual Internet use by children and adolescents is an area of research where there appears to be very little data. According to Freeman-Longo (2000), little is known about sexual addiction in these groups, and even less about children, teens, sex and the Internet. At best, we can only speculate what may occur based upon what we know about adults who develop sexual addiction. What we do know is that children and teenagers can and do develop compulsive sexual behavior, e.g., masturbation (Ryan & Lane, 1987; Barbaree, Marshall & Hudson, 1993), and that sexual addiction may be possible given that compulsivity is often a precursor to addiction. Additionally, there has been an increase in the number of counselors and therapists seeing children and teens in their practice who come in for problems associated with online sexual activities (see Freeman-Longo, 2000).

Finally, some (as yet unpublished) research has also revealed that Internet surfing has many parallels with road traffic, and that this may provide some indirect behavioral evidence of Internet sex addiction. There appear to be identical patterns of congestion and "solid block motion" where everyone is forced to advance at the same speed (Brooks, 1999). One web-traffic researcher, Bernardo Huberman (who works for Xerox Palo Alto Research Center) analyzed more than 500,000 visits to a major web portal and came to the conclusion that the Internet sex sites are the "undisputed kings" in selling advertising space. Huberman noticed that Internet surfers typically click once or twice and then get out of a site. However, Huberman noted that some people were clicking up to 200 times and that nearly all of these instances were people accessing Internet sex sites. Further investigation revealed a sophisticated structure which led surfers deeper and deeper into the site (Brooks, 1999). The "click counts" data collected by Huberman suggests that there is an almost compulsive element in accessing online pornography and that some people are very heavy users of these services. While such research cannot demonstrate that Internet pornography is addictive, the behaviors identified in the research are, at the very least, indicative of repetitive, habitual and/or pathological behavior. Since the Internet offers constant, 24-hour access, in some cases these behaviors may become an addictive and/or compulsive activity.

Conclusions

If Internet sex addiction is to become a viable term, there must be scientific evidence to support it, clarification of the criteria accepted by all, and quantification of its occurrence. This has yet to occur although there are encouraging steps in the right direction. The field is still in conceptual crisis because some researchers amalgamate similar categories of sex addiction, whereas others divide and sub-categorize them. At present the question of whether Internet sex addiction is fundamentally different from other more traditional forms of sex addiction cannot be answered until the existence of more empirical research evidence. However, it does appear to be the case that Internet sex is a new medium of expression which may increase participation because of the perceived anonymity and disinhibition factors outlined in previous sections.

There does appear to be some limited evidence, both directly (e.g., Cooper, Delmonico & Burg, 2000; Schwartz, 2000) and indirectly (e.g. Schneider, 2000; Orzack & Ross, 2000), that Internet sex addiction exists for a small proportion of users, although it must be noted that data collected do have methodological limitations (e.g., the use of self-selected samples, clinical samples of those who come in for treatment, self-reports by the partners of Internet sex addicts, reports by treatment providers etc.). There is certainly enough evidence that online sexual activity can cause major negative consequences to a small minority of users and that, for the majority of these individuals, their behavior resembles an addiction as most people would understand it.

The Internet can easily be the focus of excessive, addictive, obsessive and/or compulsive behaviors. One thing that may intensify this focus is the vast resources on the Internet available to feed or fuel other addictions or compulsions. For example, to a sex addict or a stalker, the Internet could be a very dangerous medium to users and/or recipients. There is also the problem that the Internet consists of many different types of activity (e.g. e-mailing, information browsing, file transferring, socializing, role-game playing etc.). It could be the case that some of these activities (like Internet Relay Chat or role playing games) are potentially more addictive than some other Internet activities. It is also worth noting that there has been no research indicating sexually-related Internet crimes such as cyberstalking are addictive. However, the small number of case studies that have emerged (e.g., Griffiths, Rogers

& Sparrow, 1998) do appear to indicate that, at the very least, cyberstalkers display addictive tendencies (salience, mood modification, conflict etc.), although further research is needed to ascertain whether these excessive behaviors could be classed as bona fide behavioral addictions.

With regard to online relationships and affairs, these behaviors present a new dimension in couple relationships. These sexually-related Internet behaviors appear to range from the healthy and normal to the unhealthy and abnormal (i.e., use, abuse and addiction) (Cooper, Putnam, et al., 1999). The Internet is anonymous, disinhibiting, easily accessible, convenient, affordable, and escape-friendly. These appear to be some of the main reasons for online infidelity. The detection of online affairs may be difficult but that does not mean it should not be given serious consideration in either an academic or practitioner context. These groups of people, as well as those who engage with them or who are otherwise on the receiving end of such behaviors, need to recognize that the Internet adds a new dimension to relationships. This has implications for assessment and treatment of couples who may, knowingly or unknowingly, undergo a relationship breakdown due to the impact of excessive online communication. However, as was noted earlier, text-based relationships can obviously be a positive and rewarding experience for many people. It is also an area in need of future research.

Interestingly, there is no clear evidence about the effects of pornography on users (Barak, Fisher, Belfry & Lashambe, 1999). However, Young and colleagues (2000) assert that future research is needed to more clearly delineate the identification and classification of problematic online sexual activities. There are very few areas of excessive Internet use and its relationship with sexuality that do not need further empirical research (e.g., online sexual addiction, Internet and computer addiction, and online relationship dependency and/or virtual affairs).

Treatment programs for sexual addiction include patient, outpatient, and aftercare support, as well as self-help groups. Treatment programs also offer family counseling programs, support groups, and educational workshops for addicts and their families to help them understand the facets of belief and family life that are part of the addiction. Unlike recovering alcoholics who must abstain from drinking for life, sexual addicts are led back into a normal, healthy sex life much in the way those suffering from eating disorders must relearn healthy eating patterns. However, at present there are very few outlets for the treatment of Internet sex addiction and, like sex itself, total abstinence of computer use is probably not the best

approach in the long term given the prevalence of computers and Internet use in everyday life.

One of the objectives of any future research should be to determine the object of the Internet sex addiction. If some people appear addicted to the Internet, what are they addicted to? Is it the medium of communication (i.e., the Internet itself)? Aspects of its specific style (e.g. anonymity, disinhibition etc.)? The information that can be obtained (e.g. hard-core pornography)? Specific types of activity (gender-swapping, role-playing games, playing sex computer games, cyberstalking)? Talking/fantasizing to others (in chat rooms or on Internet Relay Chat)? Perhaps it could even be a complex interaction between more than one of these. It is most likely that the Internet provides a medium for the “addiction” to flow to its object of unhealthy attachment (i.e., a secondary addiction to more pervasive primary problems). Perhaps the area most in need of research is the identification of risk factors for those who might be susceptible to Internet sex addictions. Such research could include:

- ☞ Longitudinal research that explores the changing nature of risk factors from adolescence and into adulthood. Which people are most at risk? What makes cyberspace activities so problematic for them? There also needs to be longitudinal research examining the developmental pathways of cybersex compulsivity/addiction
- ☞ Research that controls for important socio-demographic variables in the study of the acquisition, development and maintenance of risk factors.
- ☞ Family and twin studies to determine familial risk factors for Internet sex addiction
- ☞ Studies that use adequate and diverse samples (racial or ethnic minorities, females, rural/urban etc.) rather than the self-selected samples that the current literature is based upon
- ☞ Studies of protective risk factors (i.e., those factors that protect people from developing any kind of problem)
- ☞ Further research among individuals and communities that examines the effect of access and availability on Internet sexual behaviors. Has (or will) the Internet create new kinds of sexual compulsives/addicts, or does the Internet just provide a new medium for sexual expression? The findings of such research may also have implications for treatment.

☞ Research is needed to more clearly delineate the identification and classification of problematic online sexual activities. Cooper, Putnam, *et al's* (1999) proposed continuum of Internet sexual activities needs to be replicated and further refined.

☞ Research regarding children and sexual activity on the Internet is needed. There is uncertainty about children's potential to become sexual compulsives/addicts if they engage in online behaviors. In a population of children exposed to online pornography and adult-oriented materials, can we differentiate factors of emotional vulnerability and other personality traits that would predispose some to become sexual compulsives and addicts? Does online sexual behavior/activity predispose some children to act out sexually or engage in sexually abusive behaviors? (Freeman-Longo, 2000)

☞ Studies on co-morbid Internet sex addictions (substance abuse disorders, mood disorders, anti-social personality disorders etc.).

☞ Studies which identify both the similarities and differences between traditional forms of sex addiction and Internet sex addiction. Is there a relationship between online sexual compulsivity/addiction and that which is offline (i.e., more traditional forms of sexual compulsivity/addiction)? We also need to know to what extent online sexual compulsivity/addiction translate to or facilitates potentially damaging behavior offline (e.g., pedophilic behavior).

☞ Research on risk-taking and other dimensions of impulse control among Internet sex addicts – using adequate controls.

☞ Studies to determine whether factors are risk factors or consequences of Internet sex addiction.

☞ Studies which examine people's perceptions of different sex addictions (as these may affect acquisition, development and/or maintenance of the behavior).

☞ Further research to examine which structural characteristics are more likely to affect "addictiveness" potential in particular forms of Internet sexual addiction.

☞ Research that identifies whether certain forms of Internet use may be gateways to subsequent Internet sex problems, just as previous research indicates there are gateway drugs (e.g., marijuana) that precede the use of hard drugs (e.g., heroin).

☞ Research that encompasses multiple techniques obtaining data from the same participant (e.g., face-to-face interviews, genetic/neurobiological testing, ethnographic methods etc.).

☞ Establishment and evaluation of treatment strategies for online compulsivity/addiction.

Cooper, Delmonico and Burg (2000) claim that, as Internet usage continues to increase, more and more clinicians are encountering patients whose presenting problem stems from or is manifestly online sexual compulsivity. Additionally, others report an increase in the number of counselors and therapists seeing people who come in for problems associated with online sexual activities (Freeman-Longo, 2000). Such anecdotal speculations do appear to be grounded in growing empirical evidence that Internet sex addiction does appear to exist for a minority of individuals. The expansion of computer technology into more and more lives and into all parts of our lives means that problems will increase (Orzack & Ross, 2000). The assessment of Internet sex addiction shows that it is not necessarily the frequency or kind of behavior but the loss of control or compulsivity and negative consequences that indicate addiction.

References

American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders (4th Edition)*. Washington D.C.: Author.

Barak, A., Fisher, W.A., Belfry, S. & Lashambe, D.R. (1999). Sex, Guys, and Cyberspace: Effects of Internet pornography and individual differences on men's attitudes toward women. *Journal of Psychology & Human Sexuality*, 11, 63-91.

Barbaree, H.E., Marshall, W.L. & Hudson, S.M. (Eds.) (1993). *The juvenile sex offender*. New York: Guilford Press.

Barth, R.J. & Kinder, B.N. (1987). The mislabeling of sexual impulsivity. *Journal of Sex and Marital Therapy*, 13, 15-23.

Brenner V. (1997). Psychology of computer use: XLVII. Parameters of internet use, abuse and addiction: The first 90 days of the internet usage survey. *Psychological Reports*, 80, 879-882.

Brooks, M. (1999). Sex site surfers teach traffic watchers. *The Guardian (Online)*, September 30, p.3.

Carnes, P.J. (1983). *Out of the shadows: Understanding sexual addiction*. Minneapolis : CompCare.

Carnes, P.J. (1991). *Don't call it love: Recovery from sexual addiction*. New York : Bantam Books.

Carnes, P.J. (1999). Editorial : Cybersex, sexual health, and the transformation of culture. *Sexual Addiction & Compulsivity*, 6, 77-78.

Carnes, P. (1999). Dr. Carnes online resources for sexual addiction recovery. (Located at <http://www.sexhelp.com/>)

Coleman, E. (1986). Sexual compulsion vs. sexual addiction: The debate continues. *SIECUS Report*, 14(6), 7-11.

Cooper, A. (1998a). Sexuality and the Internet: Surfing into the new millennium. *CyberPsychology and Behavior*, 1, 181-187.

Cooper, A. (1998b). Sexually compulsive behavior. *Contemporary Sexuality*, 32(4), 1-3.

Cooper, A., Delmonico, D. & Burg, R. (2000). Cybersex users, abusers, and compulsives: New findings and implications. In A. Cooper (Ed.), *Cybersex : The Dark Side of the Force*, pp. 5-29. Philadelphia : Brunner : Routledge.

Cooper, A., Putnam, D.E., Planchon, L.A. & Boies, S.C. (1999). Online sexual compulsivity: Getting tangled in the net. *Sexual Addiction & Compulsivity: The Journal of Treatment and Prevention*, 6, 79-104.

Cooper, A., Scherer, C., Boies, S.C. & Gordon, B. (1999). Sexuality on the internet: From sexual exploration to pathological expression. *Professional Psychology : Research and Practice*, 30, 154-164.

Cooper, A. & Sportolari, L. (1997). Romance in Cyberspace: Understanding online attraction. *Journal of Sex Education and Therapy*, 22, 7-14.

Delmonico, D.L. (1997). Cybersex : High-tech sex addiction. *Sexual Addiction & Compulsivity*, 4, 159-167.

Freeman-Longo, R.E. (2000). Children, teens, and sex on the Internet. In A. Cooper (Ed.), *Cybersex: The Dark Side of the Force*, pp. 75-90. Philadelphia : Brunner : Routledge.

Freeman-Longo, R.E. & Blanchard, G.T. (1998). *Sexual abuse in America: Epidemic of the 21st century*. Brandon, VT : Safer Society Press.

Goodman, A. (1992). Sexual addiction : Designation and treatment. *Journal of Sex and Marital Therapy*, 18, 303-314.

Griffiths, M.D. (1995a). Technological addictions. *Clinical Psychology Forum*, 76, 14-19.

Griffiths, M.D. (1995b). Netties Anonymous. *Times Higher Educational Supplement*, April 7: p.18.

Griffiths, M.D. (1996a). Behavioural addictions: An issue for everybody? *Employee Counselling Today: The Journal of Workplace Learning*, 8(3), 19-25.

Griffiths, M.D. (1996b). Internet "addiction": An issue for clinical psychology? *Clinical Psychology Forum*, 97, 32-36.

Griffiths, M.D. (1996c). Nicotine, tobacco, and addiction. *Nature*, 384, 18.

Griffiths, M.D. (1998a). Internet addiction: Does it really exist? In J. Gackenbach (Ed.), *Psychology and the Internet : Intrapersonal, Interpersonal and Transpersonal Applications*. Pp.61-75. New York : Academic Press.

Griffiths, M.D. (1998b). Children and the internet: Issues for parents and teachers. *Education and Health*, 16, 9-10.

Griffiths, M.D. (1999a). Internet addiction: Internet fuels other addictions. *Student British Medical Journal*, 7, 428-429.

Griffiths, M.D. (1999b). All but connected (Online relationships). *Psychology Post*, 17, 6-7.

Griffiths, M.D. (2000a). Excessive internet use: Implications for sexual behavior. *CyberPsychology and Behavior*, 3, 537-552.

Griffiths, M.D. (2000b). Internet addiction: Time to be taken seriously? *Addiction Research*,

Griffiths, M.D. (2000c). Does internet and computer "addiction" exist? Some case study evidence. *CyberPsychology and Behavior*, 3, 211-218.

Griffiths, M.D. , Rogers, M.E. & Sparrow, P. (1998). Crime and IT (part II): 'Stalking the Net'. *Probation Journal*, 45, 138-141.

The Guardian (1999). Blue money. *The Guardian (Online)*, May 27: p.5.

Kalichman, S.C., Johnson, R.R., Adair, V., Rompa, D., Multhaupt, K. & Kelly, J.A. (1994). Sexual sensation seeking : Scaled development and predicting AIDS-risk behavior among homosexually active men. *Journal of Personality Assessment*, 62, 385-397.

Johnson, A. (1998). Causes and implications of disinhibited behavior on the Internet. In J. Gackenbach (Ed.), *Psychology and the Internet: Intrapersonal, Interpersonal, and Transpersonal Implications*. Pp.43-60. New York : Academic Press.

Kafka, M.P. (1993). Update on paraphilias and paraphilia-related disorders. *Currents in Affective Illness*, 12, 4-8.

Levine, M.P. & Troiden, R.R. (1988). The myth of sexual compulsivity. *Journal of Sex Research*, 25, 347-363.

Marks I. (1990). Non-chemical (behavioural) addictions. *British Journal of Addiction*, 85, 1389-1394.

Morahan-Martin, J.M. & Schumacher, P. (1997, August). Incidence and correlates of pathological internet use. Paper presented at the 105th Annual Convention of the American Psychological Association, Chicago, Illinois.

Orford, J. (1985). *Excessive Appetites: A Psychological View of the Addictions*. Chichester : Wiley.

Orzack, M.H. & Ross, C.J. (2000). Should virtual sex be treated like other sex addictions? In A. Cooper (Ed.), *Cybersex: The Dark Side of the Force*, pp. 113-125. Philadelphia: Brunner: Routledge.

Putnam, D. (1999). The Online Addiction Questionnaire. (Located at <http://onlinesexaddict.org/>)

Ryan, G. & Lane, S. (Eds) (1997). *Juvenile sexual offending: Causes, consequences, and correction*. San Francisco : Jossey-Bass Publishers.

Scherer K. (1997). College life online: Healthy and unhealthy Internet use. *Journal of College Development*, 38, 655-665.

Schneider, J. P. (1994). Sex addiction: Controversy within mainstream addiction medicine, diagnosis based on the DSM-III-R, and physician case histories. *Sexual Addiction and Compulsivity*, 1, 19-44.

Schneider, J. P. (2000). Effects of cybersex addiction on the family: Results of a survey. In A. Cooper (Ed.), *Cybersex: The Dark Side of the Force*, pp. 31-58. Philadelphia : Brunner: Routledge.

Schwartz, M.F. & Brasted, W.S. (1985). Sexual addiction. *Medical Aspects of Human Sexuality*, 19, 103-107.

Schwartz, M.F. & Southern, S. (2000). Compulsive cybersex: The new tea room.. In A. Cooper (Ed.), *Cybersex : The Dark Side of the Force*, pp. 127-144. Philadelphia: Brunner: Routledge.

Sprenger, P. (1999). The porn pioneers. *The Guardian (Online)*, September 30: p.2-3.

Young, K. (1998a). Internet addiction: The emergence of a new clinical disorder. *CyberPsychology and Behavior*, 1, 237-244.

Young, K. (1998b). *Caught in the Net: How to recognize the signs of Internet addiction and a winning strategy for recovery*. New York : Wiley.

Young, K. (1999a). Internet addiction: Evaluation and treatment. *Student British Medical Journal*, 7, 351-352.

Young K. (1999b, August). Cyber-disorders: The mental illness concern for the millennium. Paper presented at the 108th Annual Meeting of the American Psychological Association, Boston, MA.

Young, K. (2000). (Located at <http://www.netaddiction.com/>).

Young, K.S., Griffin-Shelley, E., Cooper, A., O'Mara, J. & Buchanan, J. (in press). Online Infidelity: A New Dimension in Couple Relationships with Implications for Evaluation and Treatment. In A. Cooper (Ed.), *Cybersex : The Dark Side of the Force*, pp. 59-74. Philadelphia : Brunner : Routledge.

Young, K.S. & Rogers, R.C. (1998). The relationship between depression and Internet addiction. *CyberPsychology and Behavior*, 1, 25-28.

Author's note: Correspondence concerning this article should be addressed to Mark Griffiths, Nottingham Trent University, Psychology Division, Burton Street, Nottingham, UK. NG1 4BU. Telephone: (0115) 848-5528. Fax: (0115) 848-6826. E-mail: mark.griffiths@ntu.ac.uk.