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Repercussions of Internet Addiction

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Abstract

Digital technology has existed in the consumer world for only a relatively short period of time, but in that time it has revolutionised everything it's touched from the working world to education and recreational activity. The Internet is now the driving force behind this revolution, passing around larger files to multiple types of devices in quicker times and surrounding us, wherever we go, in a rich tapestry of content where anything is accessed or anyone is contacted in seconds. But what happens when this ceases to remain just a tool, and when it starts to govern our behaviour?

This dissertation presents two worlds; the real world, with real people and that we were all born into, and the digital, online world. Though created as a tool to aid us, more and more of us are surrendering to the online world, obeying its laws and allowing it to control and change us. It could be on a more long term basis, for those who compliment their real social lives with social networking activity, unaware of how it gradually reduces and trvialises their messages and meanings, and converts their complex humanity into a generic user profile. Or in the short term, where the changes could be disastrous, as online games and gambling completely consume lives, leading in the most serious cases, to death. Though the Internet is filled with an alternate world of limitless possibilities, too many of them at once are reducing our ability to concentrate on a single task, and when a user chooses to stay within the online domain, they begin to conform to a cruel and sterilised landscape, devoid of traditional human connections and emotions. An understanding of these changes and the risks of being addicted to a never ending loop of instant information is required in order to break free from it. Only then can it be controlled by the user as the tool it was intended to be, instead of the other way around.

Introduction

Far from just a humble portal into the world from the comfort of a desktop, in the last decade the Internet has become completely ubiquitous, and for the most, an essential component in modern life. Download speeds have sky rocketed, allowing large files to be exchanged and audio and video entertainment to be streamed as efficiently and in as high quality as most traditional television and radio solutions. Websites have grown more complex, with new companies making billions from clever ideas to simplify as many aspects of our lives as possible, such as those who engross users in social networking sites, so popular that they are changing the way in which we interact with each other. We need never be too far away from it with web access on smart phones, integration into video game consoles and increasingly more and more types of gadgets, all surrounding us in a rich world where anything can be accessed in seconds and anyone can be contacted.

The idea is comparable in concept to that of Cybernetics, founded by Norbert Weiner through research into improving the accuracy of anti-aircraft guns during the Second World War. Basing principles on the gunner being able to understand his own influence on the aircraft's flight path and then adjust to that reaction, Weiner developed the idea of an information loop. A system that has an effect in an environment is capable of measuring and understanding the impact of that effect, which then influences its subsequent actions accordingly (Harkin 2009: 29-30). It explains, for example, how humans are constantly able to maintain balance while walking by adjusting their body according to the feedback they are receiving from their legs when they tread on the ground. It also gives birth to the expression "in the loop" - a circuit of information between subscribers whose actions are

influenced by this information, and a simplification of human networks. Society is addicted to the loop through its technologies - a continuous feed of content gradually building who we are, what we enjoy, who we know and what we think, and no type of technology is more immediate, more fast-paced, exciting and addicting than the Internet, and the virtually limitless possibilities that are offered within it. To get any closer to immediate connection with this global loop, the ultimate Cybernetic idea, would require a biological link.

But these modern luxuries have dangerous consequences alongside their obvious benefits, and its the sheer ubiquity, affordability, immediacy, amazing extent of content and fast pace of development that can hook users in and keep them hooked. The Internet may be relatively new but it's completely changed businesses, social interactions and recreational activities to the point where they are ingrained in the modern world, well beyond the initial novelty phase and more of a lifeline that we cannot function properly without. This in turn changes us - how we interact with others when there are so many new ways of being in touch, and how capable we are of focusing on one task when there are so many addictive distractions.

In a 2009 study of 267 British pupils, researchers at Cranfield School of Management, Northampton Business School and academic consultancy AJM Associates found that 63 per cent admitted to some degree of addiction to the Internet, and 53 per cent to their mobile phones. Over 30 per cent typically spent one to two hours per day online, while 26 per cent admitted to six or more hours per day. The study concluded low concentration and motivation for work, concerns for plagiarism using the Internet and even confusion between conventional writing and abbreviations spawned from text messaging and online

chat.[1]

While children, for their open minds and intensive peer pressure, are among the most easily enticed by modern technology, the workplace does not escape its allure either. In India, the Associated Chambers of Commerce and Industry sought responses from nearly 4000 corporate employees for a survey about their use of online social networking sites such as Facebook. They calculated a near 12.5 per cent loss of productivity from employees spending, on average, an hour per day on these sites during working hours.[2]

This dissertation aims to explore the negative consequences of lives spent online and exactly how this increasingly dangerous addiction is changing us, firstly through one of the most popular and news-worthy online pastimes; social networking. While a bold step toward revolutionising the possibilities for staying in touch with friends, the likes of Facebook and MySpace are also degrading, simplifying and reducing the significance of communication, and even homogenising the individuality of its users in favour of a machine-readable database of human activity.

In Chapter 2, the biological and psychological concerns for technology addiction will be addressed, including how a multitude of different windows onto the World Wide Web, each with a constantly impending update that must be seen and acknowledged, may be improving our multi-tasking abilities but at the same time having a disastrous effect on our ability to focus on a single task without being easily distracted. This chapter also reveals how heavy web users become absorbed by a world that fails to empathise with real

1 BBC News: http://news.bbc.co.uk/1/hi/education/8256490.stm (Accessed: 23rd December 2009)

2 BBC News: http://news.bbc.co.uk/1/hi/world/south_asia/8423888.stm (Accessed 22nd December 2009)

human emotion, making it easy to steal a copyrighted file or cause great offence to another innocent web user.

The final chapter explores the extremes of internet addiction in the technologically advanced countries of South Korea and China, where unrestrained use of online games can result in all loss of reality, to the point where some users cannot keep themselves, or vulnerable dependants, alive. It also investigates the possibilities for treatment and the options open to those who recognise that they have serious behavioural issues with technology, and ultimately determine what the personal solutions may be to manage its addictive qualities, but still ensure that it can be a useful part of life.

Chapter 1

The Social Age of the Web

Origins of the World Wide Web and the Shift into Web 2.0

Though the founding infrastructure of the Internet and the beginnings of a network between computers has origins in the 1960s, it is only with the popularisation of the World Wide Web, a technology that uses the Internet to pass data in an easily accessible, user-friendly manner, in the 1990s that it has really become the incredibly powerful, global and popular medium for communication that it is today. The 2010 BBC documentary series *The Virtual Revolution* details in its first episode how in 1989, Tim Berners-Lee proposed and began to develop a system for universally formatted documents (HTML) to be placed on the internet, accessible through a URL system in which each one had a specific address; a short string of text. Using hyper linking, a creator of a document could place a link directly to another page just by including its URL in the code, creating an easy way to browse between associated documents. This would be the required breakthrough for the Internet to become mainstream, as it was no longer a user requirement to know the exact address of a particular file or avenue for communication - one could theoretically reach any web page just by starting out from any other and following a trail of links ('The Great Levelling?', *The Virtual Revolution*, 2010).

Jaron Lanier's manifesto, *You Are not a Gadget*, summarises the early ideologies of the web as:

> ...a rare instance when we learned new, positive information about human potential. Who would have guessed (at least at first) that millions of people would put so much effort into a project without the presence of advertising, commercial motive, threat of punishment, charismatic figures, identity politics, exploitation of the fear of death, or any other motivators of mankind. In vast number, people did something cooperatively, solely because it was a good idea, and it was beautiful (2010:14).

Clearly, its design of equal access for all, as well as the lack of permission required to create pages and add to the content of it excited and enticed many - it was a global, universal interface for the sharing of information. It speaks well of the human reflection of this service that so many people wanted to collaborate and provide their knowledge freely to the system with no obvious gain for themselves, other than to help establish it so that they would be able to access more and more works from other web authors in the future. Gradually, this optimism and spirit of sharing brought the Internet out of the confines of military and academic use, and by the mid to late nineties, well within the public domain. As the web became more and more popular and widespread, it was transforming into a key tool for communication and the sharing of information - used as a primary source for such necessities by all manner of companies and individuals alike.

A gradual shift began to happen from around 2004 onwards - a movement away from, some would say, originality and personality in each web page and more towards sophistication and richer, slightly more uniform concepts and visual styles that would transform the idea of a website's content and the way in which a user would interact with it. This was coined "Web 2.0" and among many things, it meant the end of unnecessary hassle in setting up a personalised website and attracting visitors to it just to add content to the Internet - there were now specialised websites with javascript-enhanced forms to fill in, allowing a user to get their information noticed without even having to know a line of

HTML code. From public diaries in the form of individual blogs to vast encyclopaedias of all areas of human knowledge and culture, such as Wikipedia, users could now collaborate and construct the web as they saw fit, applying their own opinions or information more easily than ever before to create the richest global information source the world has ever seen.

Other services meanwhile focused on smaller scale communities to mirror the segmented pack-like nature of human societies, assembling in smaller social groups, as opposed to a large, anonymous stream of data from unknown users across the world. Sites such as Bebo, MySpace and the current most popular choice, Facebook, encourage direct, personal communication between its users within small social groups, typically made up of those who already know each other in real life. The early tendencies of the web in software such as forums and chat rooms to bring complete strangers together by uniting them with common interests takes somewhat less priority in most social networking services, in favour of enhancing local connections already pre-formed. Each user has a page that can be customised to some extent, which another user can access in full by becoming online friends. Through this system of many dynamically created pages, they can exchange messages, upload photos, send invitations to events and share in a range of user-generated games and activities.

In the ten to fifteen years since those early days, the web has exploded in popularity and the manner in which it is used, thanks to increasingly faster broadband connections, allowing many possibilities for different types of large files to be accessed such as video, downloaded or streamed with little difficulty and in high quality. Ubiquity across multiple types of devices other than a traditional computer mean that we never need to be away

from the web for very long and we can use its advantages in many more aspects of our lives from travel to leisure activities. From an intriguing new luxury, web access seems to have become as commonplace as television or radio, but its engrossing, interactive nature, particularly through these popular social networking sites, is having a dramatic effect on the way in which we communicate with each other and how we now prefer to process information. Could it be that increasing the avenues of communication in such a vast, unbounded manner actually provides us with a preference to avoid communicating face to face?

How Social Networking Reshapes the Medium for Communication

Episode 4 of *The Virtual Revolution* examines the role of social networking services and modern web resources in the effects of digital technologies changing the communication and thought patterns of those addicted to them. Facebook, which has enough users such that they would form the third largest population if they were a country, began life as an online social companion to students of Harvard University, developed by Mark Zuckerberg. Each student could have a home page to which they could post open messages or those directed at others. The now infamous news feed/status update service was developed as a solution to the problem of users missing crucial updates on their friends pages if they were to neglect checking them manually. Whenever a user commits to a particular activity or changes their status (for example whether or not they were in a relationship), all of their subscribing friends would be alerted to it in a useful box, alongside the developments of other friends. This was met with universal anger from users, not accustomed to such an uncomfortable invasion of privacy - nothing could be done discreetly anymore. The system

remained however, and now, 350 million users simply accept it as a mechanism within a completely open system of social interaction ('Homo Interneticus?', *The Virtual Revolution*, 2010).

These short bursts of information, along with those of Twitter - a micro-blogging website allowing the posting of messages no longer than 140 characters, arguably inspired by Facebook's similar status updates - are only the most obvious and potent form of the modern way in which we commonly communicate with each other using technology, alongside slightly older mediums of emails, instant messaging clients and mobile phone text messaging. A parallel can be identified between the constant stream of short messages flooding throughout the web, public or private, and Weiner's model of Cybernetics, introduced earlier. Social networking sites have become the hosts of large feedback loops in which users are continually responding to the information that others have provided, passing on links and data, modifying their behaviour while bearing in mind that the most minute details of it may automatically be expressed publicly on the news feeds to their tens and hundreds of "friends". It's clear to see how many can become entranced by such busy activity, as the services constantly demand small bursts of interaction.

In the accompanying website to *The Virtual Revolution*, an extended interview with Sherry Turkle, professor of the Social Studies of Science and Technology at MIT highlights some key concerns of how these sorts of communication patterns can influence those that have grown up in this environment within the last decade:

> They are now a generation in retreat. They'll text but they won't talk ... Philosophers tell us that we become human when we're confronted with another face, with the inflection of the voice, but these kids don't want to see a face and

> they don't want to see a voice, they want to text. So in a way, we're no longer nourished but consumed in some way by what we've created.[1]

It's not difficult to see that a generation growing up who often have the option and preference to communicate without the need of face-to-face or even just voice-to-voice contact, especially with close friends, may have difficulties in developing communication skills later on - essential for working life and forming new relationships. Interestingly, Turkle also suggests a parallel concept regarding email or other messaging and management systems introduced into an office in the hope of adding efficiency and clarity, but simply result in employees spending less and less time communicating in person, as it becomes much easier to do it through written messages. It seems to be a perfect example of how technology has the ability to mould us and the way in which we operate, purely because of its convenience. Its unusual, novelty appeal cannot for very long remain as a side utility to support our unchanging lives, but quickly replaces old patterns of behaviour to accommodate it, again in a Cybernetic loop whereby machines and mankind are constantly manipulating each other.

The Loss of the Individual Within Social Networking

It is not only the number of hours that users can spend on sites such as Facebook, but the restrictions and conformity that such an experience may bring that should be a concern for many. First is the idea that Facebook is redefining the very meaning of the word "friend". Rather than the accumulated number of friends in a given user's list being nothing more

1 BBC - The Virtual Revolution: http://www.bbc.co.uk/virtualrevolution/interviews.shtml (Accessed: 25th February 2010)

than part of a useful system of keeping track of them, held semi-privately, they could easily be thought of as a measure of that person's popularity, expressed clearly for all to see. In Facebook, a friend can merely be an acquaintance and to confirm friendship is a way of expanding that number for both parties concerned, suggesting that the system has something of a school playground popularity contest about it. It's this constant acquisition of friends and the subtle need to at least appear popular that generates part of the site's addictive qualities, much like a continuous role-playing computer game. A 2007 study of eighteen thousand young people aged between fourteen and twenty four suggested an average collection of fifty-three friends each, only six of which were close friends in real life (Harkin, 2009:245).

This could be considered part of what some authors identify as a pattern of reductionism encouraged by the modern habits of, essentially, converting the details of a person's life into an entry in a database. Lanier suggests that the profile page defines a person in terms of how computers can analyse them, without fully expressing their individuality and specific circumstances:

> You fill in the data: profession, marital status, and residence. But in this case digital reduction becomes a casual element, mediating contact between new friends. That is new. It used to be that government was famous for being impersonal, but in a postpersonal world, that will no longer be a distinction (2010: 69).

There is an element of providing this data as "fuel" for potential advertisers, seeking to target their products at very specific demographics, using a vast, easily aggregated database of customers.

How does this affect the users themselves? Compare the rigid structures of the Facebook profile page with the traditional personal webpage that many early web users adopted in the 1990's. Certainly there was a sense of amateurism compared to today's sleek, streamlined designs, having had less time to determine preferable styles and practices, but also much more individuality and creativity. Webmasters could display as much or as little information about themselves, in the form of text or images, as they wished. Colour and graphics could be used to demonstrate an element of that person's creativity, and there was no need to express any information such that it could easily be interpreted by software for the benefit of another organisation. A person could present themselves in their own way, as far as language and visual aids would allow. This of course is still technically possible on any social networking profile page to some extent, however ready-made fields such as favourite TV shows, movies and music, previous schools, jobs and of course the all-important relationship status field encourage, even demand that the author fill them in so as to conform with the crowd and provide all information in an easily browsed database of human activity. Other services such as MySpace are slightly more accepting in how the individual may style and personalise their page, but nonetheless there is a common need for people to reduce themselves to a series of neatly expressed statements in order to be accepted.

In *Digimodernism*, Alan Kirby adds:

> Increasingly, perhaps, people will feel that the gulf separating their "real" and their "textual" lives has disappeared; the thoughts, moods and impulses of our everyday existence will translate so immediately into the electronic, textual digimodernist realm that we will no longer be conscious of transference. It won't be a question then of oscillating between offline and online, but of hovering permanently between those extremes. This conceivable development, which Facebook foreshadows, would culminate in the emergence of a new kind of human, one constituted in large part ... by digimodernist textuality itself. In this dispensation, *you are the text*; the text is superseded (2009: 123).

When we live so much of our lives on a social network, we become that person represented on the network, and we will see others as their social networking equivalents also. The less of our personal time we spend with an individual, interacting with them in a real environment in which we use our mouths and body languages, the less of an individual that person becomes, and more of an easily defined character within the virtual world whose traits can be expressed neatly through a uniform profile page. The emphasis is no longer on making genuine friends that one connects with directly and communicating with them in deep, meaningful ways but by collecting them as assets in a large scale popularity game. Communication takes place more superficially through constant micro-comments that are also broadcast to everyone in your circle, in a giant, impersonal loop that never seems to sleep.

Chapter 2

Repercussions of Addiction to the Web and Technology

Biological Repercussions

The growth and variety of online services and other applications that technology provides us with may constantly be giving us a larger range of activities with which to occupy our time. Each service competes for this time and attention, and the result is a new tendency found in many Internet users to take in multiple feeds of information simultaneously, constantly alternating their focus.

A hypothetical teenager may be sat at his computer desk in his room, attempting to complete an essay for his homework. At the same time he might have the television on in the background, or perhaps more likely a playlist on iTunes or other music software, either of which provides ambient background wallpaper for his environment. He might have an instant messenger service such as Windows Messenger on, with several of his friends online, two or three of which he is holding a conversation with, each in a separate window. Each friend has different experiences and level of familiarity with the teenager and as such, he communicates with them in a different tone, swapping his attention between them one or two messages at a time. They too are communicating in a similarly segmented and disjointed pattern with more of their friends, and none of these slowly progressing, stuttering conversations quite have the undivided attention of either

participant. At the same time, the teenager is browsing Facebook, commenting on photos and messages left by other friends, refreshing his Twitter page to browse the messages that have arrived within the last few minutes, or perhaps occasionally checking an RSS feed linked to an email account. He might also have another tab in his web browser currently devoted to an item on eBay, which is about to end within minutes and on which he hopes to stay ahead of the other bidders. The progress of a few downloads may also get a passing glance every few minutes and finally, there are two or three windows into Wikipedia open at the very beginning of his line of tabs, intended for his essay, the very reason he's on the computer at this moment but has ironically received the least attention!

It may not necessarily always be this hectic, but this kind of multi-tasking is commonplace for those who have grown up surrounded by the comforts and opportunities of the web. There's an impending sense of crisis with each open application or website that demands that it be checked for updates on a very regular basis, over and over. When a minimised instant messenger window receives a new message from the other participant, it alerts audibly and then flashes on and off continuously, like an emergency alarm or telephone, demanding action as soon as possible. If an email inbox or Twitter feed hasn't been refreshed within the last few minutes, there could be a new message, highlighted alluringly in bold or in a different colour, just waiting to be read. These are elements that can easily distract us from our work, and the fact that we have built up a tendency to rely on them so heavily may lead us to become so used to being distracted that we actively seek it out, in order to break up a single task into smaller pieces.

In *Cyburbia*, James Harkin highlights a 2004 study by the University of California, in which researchers shadowed fourteen office workers over the course of seven months, and

found that workers got around three minutes of work done before being interrupted by colleagues for another purpose. They also found that just as often, the workers would actually interrupt themselves, which, as researcher Gloria Mark concludes, may suggest that: 'people have become so conditioned to being interrupted that interrupting themselves might be a way of claiming back some control of their lives' (2009:175-176).

The biological theory that this may be damaging to the way in which the brain processes information and the focus applied to a single task relates, according to Harkin, to the capabilities of the prefrontal cortex. This is the area of the brain responsible for exercising executive control over the organisation of short-term decision making. It accepts all information that we receive and organises it by its urgency so that we focus only on that which is most important at that time - it helps to prevent us from responding to every ordinary visual stimulus as if it were extraordinary. Having many different digital windows open, each constantly being renewed with new information that demands our attention, regularly creates many minor crises that the prefrontal cortex must manage and react to. Attention is drawn away from the most important task at hand (the teenager's essay, or an employee's project), breaking the concentration that had been built up, and leaving the individual prone to mistakes and generally performing the task more slowly. Development of this area of the brain is gradual, but essential for preparing children for juggling multiple tasks in later life. A study by Oxford University's Institute for the Future of the Mind found that subjects aged between eighteen and twenty-one had compromised their abilities to complete an intelligence test when distracted by a phone call, text or instant message. They could perform better than a group aged thirty-five to thirty-nine without distractions but both groups performed equally well with them, suggesting that the expertise to maintain multiple tasks simultaneously comes with age (Harkin,

2009:171-173).

Adam Cox, a clinical psychologist working to understand how children use communications devices explains that though the brain's short-term working memory may be stimulated by a variety of messages that help develop its capabilities, there is a limit:

> Beyond a certain point the productivity bonus that we get from responding to many different streams of information on an electronic information loop at the same time levels off then begins to slow us down. All this matters because managing multiple activities, tasks and information streams is now considered to be a basic characteristic of working life (Harkin, 2009: 174-175).

This part of the brain can become strained when too many demands are placed onto it through constant distractions, leaving it less able to memorise necessary details in the short term.

Psychological Repercussions

The biggest psychological concerns regarding addiction to the web and the digital life in general focus on the young people that embrace it, particularly those who are too young to even recall a time in which they weren't online. A feeling is emerging from some sceptics that a world in which children grow up and learn about morals, responsibilities and how to connect with their environment from too many digital sources will leave them, ironically, disconnected. It's easy for an adult, having grown up in a particular way to hold that up as the way in which their children should live, as opposed to one that celebrates modern protocols. As Marshall McLuhan puts it; 'Every society always looks at the

preceding age while living in a new, current one, never seize the age it's living in.' ('Homo Interneticus?', *The Virtual Revolution*, 2010). However, when there is potential for anti-social behaviour to manifest more and more readily from a generation of intense, hyperactive technology-addicts so used to getting exactly what they want in seconds, and who don't fully understand the consequences of their actions in the real world, the need to reassess the situation, even from a more objective view, may become more urgent.

Baroness Professor Susan Greenfield, professor of neuroscience at Oxford University puts forward such views very strongly. In an interview with the Australian Broadcasting Corporation in March 2009, she highlighted her key concerns for children in exploring the digital patchwork of web and social network addiction and computer games. She discusses:

> ..an environment that is very much in the here and now, that has very strong audio and visual sensations, where at the press of a button you get instant feedback from whatever you're doing. But at the same time, you're perhaps removed from some of the aspects that we take for granted. Those of us who are older or those of us who are born in the 20th century, that we take for granted. Things like metaphor, abstract concepts, logical narrative, conceptual frame works, long attention spans, imagination. The kind of areas we can explore in more detail, if you like.[1]

Greenfield argues that children of the 'screen culture' as she calls it are experiencing life in frozen moments through their various screen-based entertainment. Rather than learning the nature of actions and consequences and how to properly interact with others, they exist in virtual worlds in which any action can be undone, and in which they can't see the emotional responses that another person may have from human interaction:

1 ABC, The 7.30 Report: http://www.abc.net.au/7.30/content/2009/s2521139.htm (Accessed: 9th March 2010)

> If you hadn't had the experience of someone saying something to you directly, to you as a person, and it upsetting you, or you haven't had experience of actually saying something to someone's face and seeing them burst into tears, or go red and be upset, clearly, palpably upset, and that changing your relationship - if you haven't had those experiences, you'll live in a world, a rather sanitised world where no-one is hurt, where everything is just a game.[1]

Humans need to live within a narrative of context and consequence, in which all events have a meaningful effect, and in which emotional and physical pain is felt and understood. Lanier provides several online examples of particularly merciless and unnecessary behaviour from internet users who have succumbed to the anonymity and lack of sympathy for others that the web provides. The term "troll" is used commonly on the Internet to describe such individuals, who according to Lanier have used audio and video creations to mock the parents of a boy who committed suicide, posted gruesome photoshopped images of a blogger in the hope that her children would see them, and even created flashing web designs to target people with epilepsy. He concludes; 'Trolling is not a string of isolated incidents, but the status quo in the online world' (2010: 61).

In his book, *The Cult of the Amateur*, Andrew Keen highlights several questions of morality that have become part of the sanitised, sterilised lifestyle that online addicts have found themselves in:

> Anyone, with the click of a mouse, can cut and paste content and make it their own. Web 2.0 technology is confusing the very concept of ownership, creating a generation of plagiarists and copyright thieves with little respect for intellectual property. In addition to stealing music or movies, they are stealing articles, photographs, letters, research, videos, jingles, characters and just about anything else that can be digitised and copied electronically (2007: 143).

1 ABC, The 7.30 Report: http://www.abc.net.au/7.30/content/2009/s2521139.htm (Accessed: 9th March 2010)

The nature of various types of illegal downloads provides further evidence, not to mention the vast amounts of money lost on the part of the relevant industries and content creators, that a numb, screen-based world without meaningful consequence reduces users to perform acts that they would deem unimaginable in real social interaction. They exist in a world that will not punish them for harming others.

Chapter 3

Treatments for Extreme Internet Addiction

Extremes of Internet Addiction

Activity through email, text messaging and social networking sites are no doubt changing the way many of us live our lives and process information, but most still successfully juggle social and working lives alongside these with few notable problems, even if they are being transformed in a more gradual way. The most extreme cases of online addiction are few but are becoming more apparent, particularly relating to obsessions with gambling, pornography and online games. In 2008, Jerald J. Block, M.D put forward the case for Internet Addiction to be added to the DSM-V (the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders) as a recognised disorder. The basic symptoms of the disorder are summarised into four key components:

> 1) *excessive use*, often associated with a loss of sense of time or a neglect of basic drives, 2) *withdrawal*, including feelings of anger, tension, and/or depression when the computer is inaccessible, 3) *tolerance*, including the need for better computer equipment, more software, or more hours of use, and 4) *negative repercussions*, including arguments, lying, poor achievement, social isolation, and fatigue'[1]

Internet addiction has become a public health crisis in South Korea. The country's government has invested heavily in a vast, fibre-optic infrastructure, resulting from policies

1 Psychology Online - Issues for DSM-V: Internet Addiction: http://ajp.psychiatryonline.org/cgi/content/full/165/3/306 (Accessed: 22nd March 2010)

that began as early as 1994. As a result, super fast connection speeds are accessible to 97 per cent of South Korean households, as opposed to 67 per cent in the United States. (http://www.rjkoehler.com/2010/02/22/pbs-and-internet-addiction-in-south-korea/). Block provides evidence for his claims by listing some statistics for this major issue in South Korea, also referencing ten cardiopulmonary-related deaths in Internet cafés and a game-related murder:

> Using data from 2006, the South Korean government estimates that approximately 210,000 South Korean children (2.1%; ages 6–19) are afflicted and require treatment. About 80% of those needing treatment may need psychotropic medications, and perhaps 20% to 24% require hospitalization. Since the average South Korean high school student spends about 23 hours each week gaming, another 1.2 million are believed to be at risk for addiction and to require basic counselling.[1]

Mark Tran of The Guardian reports on a particularly disturbing case in March 2010 in which parents allowed their 3 month old daughter to starve to death because they were addicted to an online game in which the user must raise a virtual young girl. The unemployed parents left their real daughter unattended while they spent hours in an Internet cafe with a virtual one, feeding her powdered milk only occasionally.[2]

The problem is echoed in China, where in 2008, a panel of medical experts approved the first diagnostic description of what they named Internet Addiction Disorder. Symptoms for sufferers include anxiety when not online, fear of social contact and difficulty in concentrating or sleeping. China has the world's largest online population, with 253 million people.[3] With a large number of sufferers of the proposed disorder, China was among the

1 Psychology Online - Issues for DSM-V: Internet Addiction: http://ajp.psychiatryonline.org/cgi/content/full/165/3/306 (Accessed: 22nd March 2010)

2 Guardian.co.uk: http://www.guardian.co.uk/world/2010/mar/05/korean-girl-starved-online-game (Accessed 22nd March 2010)

3 The Wall Street Journal, China Realtime Report: http://blogs.wsj.com/chinarealtime/2008/11/10/china-sets-internet-addiction-standard/tab/article/ (Accessed: 23rd March 2010)

earliest to set up clinics to help patients and study their behaviour. Reaching conclusions from 3000 patients studied over the course of four years, Dr Tao Ran found a typical addict spent 6.13 hours online each day - a figure that coincides with US assessments of 6.14 hours. Further research by an Internet media company demonstrated that 42 per cent of children in China felt addicted to the internet, compared with only 18 per cent in the US. Block adds that 13.7 per cent of Chinese adolescent Internet users meet the requirements for Internet Addiction, which is around 10 million users.[1]

The proposal indicates that the prevalence of the disorder is harder to accurately assess in the United States. Whereas Internet cafes are used frequently in Asia, this is less true in the US, where most users access the Internet from home:

> Attempts to measure the phenomenon are clouded by shame, denial, and minimization. The issue is further complicated by comorbidity. About 86% of Internet addiction cases have some other DSM-IV diagnosis present. In one study, the average patient had 1.5 other diagnoses. In the United States, patients generally present only for the comorbid condition(s). Thus, unless the therapist is specifically looking for Internet addiction, it is unlikely to be detected. In Asia, however, therapists are taught to screen for it.[2]

When internet addicts can be diagnosed with other disorders, it could be argued that their compulsion toward using the Internet is more of a manifestation of another addiction. For example an addict of gambling websites may be diagnosed with a gambling addiction rather than one specifically just for gambling websites. In this case the Internet acts as a tool by which the gambling addiction can flourish. It is for this reason that many argue against the official recognition of Internet Addiction as a diagnosable illness. If the Internet, a tool, is considered the problem then there would surely be a similar case for

1 TimesOnline: http://www.timesonline.co.uk/tol/news/world/asia/article5125324.ece (Accessed: 22nd March 2010)

2 Psychology Online - Issues for DSM-V: Internet Addiction: http://ajp.psychiatryonline.org/cgi/content/full/165/3/306 (Accessed: 22nd March 2010)

officially recognising television addiction, telephone addiction or in the case of gambling, slot machine or black jack addiction. Nevertheless, the web - and broadly speaking, computer hardware in general - could be considered a particularly dangerous set of tools that perhaps may not deserve diagnostic recognition in the conventional sense, but clearly should still be a particular concern in countries such as South Korea and China. The anonymity of logging on with few restrictions, the ease of loading up websites or games in the comfort of a home computer or handheld device, the cheap costs and general acceptance of these technologies as part of every day life, plus the privacy that they afford to each user - these things all make it much easier to enhance addictive behaviour that already exists in an individual.

Treatments

Given the growing concern for extreme Internet addiction in South Korea and China, governments are taking measures to prevent users from spending too much time online at the expense of study time or work. South Korean children are now being prevented from accessing online games in a curfew between midnight and 8am, and connection speeds will intentionally be reduced when users have remained logged on to particular games or services for a large amount of time.[1]

However, they also seek to reform Internet addicts in dedicated treatment centres, much like drug addicts or alcoholics, in hopes to change their behaviours and gradually wean

1 BBC News: http://news.bbc.co.uk/1/hi/technology/8617372.stm (Accessed: 13th April 2010)

them off of their schedule of heavy computer use. The PBS Documentary and accompanying website, *digital_nation: Life on the Virtual Frontier* in the US offers insight into one of the two hundred South Korean centres for young addicts of online games, which acts as a camp and encourages outdoor, collaborative activities such as scavenger hunts and tent building. Maintaining regular physical contact is heavily emphasised by the 1000 trained counsellors in these centres across the country, reintroducing children to traditional childhood activities and games. Patients are asked to reflect on their experiences and examine their own behaviours in the hopes that they will be able to regulate their computer use after leaving the two week course, understanding and admitting to their problems.[1]

There are other unfortunate aspects to this solution, however. In China, fatal problems with such camps have created media storms when young patients have died or been seriously injured from unnecessarily extreme methods of treatment in more military-inspired institutions. Deng Senshan, a patient of Guangxi Qihuang Survival Training Camp in southern China was beaten to death by trainers simply for not jogging fast enough, only ten hours after his parents had left him at the centre for a month of treatment in August 2009. Only days later, a similar case occurred in which a teenager was attacked and taken to hospital with water in the lungs and kidney failure. In response, the Chinese Ministry of Health banned the use of physical punishment for Internet addicts later in the year, having already banned the use of controversial electro-shock therapy.[2]

Due to disagreements in the severity of the problem in Europe and the US, through

1 PBS – Frontline – digital_nation – Life on the Virtual Frontier: http://www.pbs.org/wgbh/pages/frontline/digitalnation/virtual-worlds/internet-addiction/ (Accessed: 22nd March 2010)

2 Reuters India: http://in.reuters.com/article/worldNews/idINIndia-43701020091105?pageNumber=1&virtualBrandChannel=0 (Accessed: 14th April 2010)

unmatched criteria in studies and fewer cases of severe consequences from addiction, such treatment centres are far less common outside of Asia. A Newsweek.com article by Winston Ross, however, offers insight into a new Washington-based centre called the *ReSTART Internet Addiction Recovery Program* that attempts to offer a similar service to the US, albeit for a costly $14,000 for a 45 day stay. The article adds personal insight into the struggle of an Internet addict by chronicling the day-to-day life of Ross' homeless brother, so desperately addicted to online video games and even pages of RSS feeds that he continues to make use of free University computer labs and wifi hot-spots alongside his dangerous homeless life.

When asked what makes these Internet services so addictive, David Greenfield, founder of the Centre for Internet and Technology Addiction explains that the rewards achieved work on a variable ratio reinforcement schedule, which means the user doesn't know whether or not a reward (simple things such as a fresh news story in a feed or a new email) is coming, therefore making it more exciting by introducing an element of randomness. Users search for that sudden high amongst the mundane or old information:

> The Internet also activates the same pleasure pathways in the brain as drugs and alcohol. As you continue to be rewarded, for completing the next level of a video game or finding out a new piece of information, the connectors to the limbic system of the brain are stimulated, releasing euphoria-causing dopamine into the body. The brain remembers that happy feeling, encouraging you to keep going back for it.[1]

It's the understanding of this need for instant gratification that the ReSTART Centre uses to its advantage. Patients are placed on a 12-step model of recovery, and are encouraged to participate in activities designed to deliver a gradual sense of satisfaction over a longer period of time, in an attempt to break out of the cycle of repeated and frequent euphoric

1 Newsweek: http://www.newsweek.com/id/216911/ (Accessed: 22nd March 2010)

boosts that they normally get from their online habits:

> The best way to break from virtual reality, believe the centre's directors, is a healthy dose of actual reality. By checking back in to how normal people live their lives, clients... can in theory wean themselves off the constant rush they once got from the Web. Otherwise, it's daily psychotherapy sessions, to help them understand their addictions and the addictions' underlying causes.[1]

The article adds that a personal program is developed and agreed upon with each individual regarding how they would then use the Internet upon leaving the centre. Unlike alcohol or drug addiction, it's become difficult in modern society to go about life without using the Internet at all, so the potential for slipping back into old habits will still very much be present. Recovering Internet addicts will be limited to a number of hours online per day or week and will be able to maintain contact with counsellors to assist them.

The unfortunate reality however is that without an agreed set of symptoms and methods for recovery to establish it as a recognised addiction, treatment for Internet addiction will remain costly, placing it out of reach of those whose jobs and careers are being devastated by their problem and cannot supply the necessary funds. Furthermore, the umbrella term of "Internet Addiction" would appear to have multiple facets, depending on the actual content that the user is addicted to. Virtual gambling and pornography obsessions clearly denote a more serious underlying addiction that is only enhanced by the Internet because it makes that content so accessible. Perhaps addiction to online games is more representative of a desire to escape mundane or even painful events of real life, meanwhile for some, social networking may be a necessary tool in which to relentlessly promote an active and socially-engaging image, spawned from insecurities and peer

1 Newsweek: http://www.newsweek.com/id/216911/ (Accessed: 22nd March 2010)

pressure. The specifics will vary on a case-by-case basis, and in general, the Internet seems to be more of a tool to artificially free a person from psychological issues by providing them with an alternative lifestyle that meets their individual needs, but potentially at a dangerous cost.

Conclusion

It's clear that cases of Internet Addiction can of course be as varied as the Internet itself. Addiction to social networking sites is perhaps among the most socially acceptable of them, if only because of its veil of maintaining actual social contact as opposed to total isolation from others, in personal obsessions with online gambling or pornography, etc. But this doesn't make them harmless. As the popularity of Facebook or its likely successors continues to increase and become a standard and accepted method of communication, it in turn isolates, devalues and trivialises human interaction. The never ending quest for more friends as acquisitions, almost in competitive value, becomes favoured over the actual benefits of true friendship. Because it's so convenient, the medium for interacting with friends is limited further still to small, bite-sized messages, preferred over traditional face-to-face interaction with tone, expression, gestures and meaning. The profile page and status update tells anyone anything they needed to know about anyone else, fitting them neatly into categories so that a computer may advertise to them directly and sustain the whole digital social environment. The individual is willingly reduced so that he or she may remain involved in the never-ending loop, which constantly turns and makes every minor update a must-see.

The hunger for constant feeds of information doesn't stop at a friend's news feed, it stretches into every interest the user may have, with each exciting new online service being added to the subscription list. A young teenager, quick to mentally adapt and juggle multiple tasks is in his element, capable of switching between browser windows and programs to maintain focus on all at the same time. But is a life of waiting for the next

instant message, text, or email affecting abilities to focus on a set task without being easily distracted by all of the modern conveniences of online life? Technology addicts may be impairing their judgement for what matters and what doesn't, in a world where virtually everything demands immediate attention.

It's not just the quantity but the quality of life on the web that is also an issue. Encapsulated in screens and windows, human emotion and morality is restricted and sanitised into text and imagery. It's all too easy to download a copyrighted file, free of both cost and guilt, and so-called 'trolls' prove the simplicity of attacking other web users with words that may seem harmless when typed, but the emotional distress that they cause to the recipient beyond the binary code and computer monitor is not particularly empathised with. Unrestrained and uncontrolled, the web is like the "Wild West", where anything goes.

At the extremes of Internet Addiction, China and South Korea have seen deaths and complete loss of self control in users that completely succumb to their lives in the digital domain, as the most deadly online games completely grip them. Even dedicated treatment centres have added further casualties, and because of lack of agreement on the psychological state and specifics of the condition, costly treatments may fail to match up the experts with those who really need them most.

In looking at some of the stories behind this investigation, it doesn't seem like too much of an exaggeration to say that society now exists in two worlds; the real world, where people meet in person to work, play, enjoy and argue as they always have done, and the online world. What began as an exciting project to complement the real world and provide

answers and connections has evolved into a vast, elaborate, varied, complex and powerful alternate reality. Some maintain active lives in both worlds, while some would clearly prefer to leave their physical bodies behind. The argument over whether Internet Addiction is as legitimate as drug or alcohol addiction, or it merely represents a tool in which other addictions can manifest is one that still requires further research, but regardless, the easy access and freedom provided by the web still makes it dangerous for those who are vulnerable to it.

As a whole, it is still a new problem, constantly mutating and transforming, developing new aspects as the whole industry moves forward at an incredible pace. As such, it is still being understood, but what may help on an individual, case by case basis is simply an understanding of the modern division between the real world and the online world. An understanding of, for all its useful benefits, the Internet's emotionally numbing, overly-stimulating nature and what effects these have on a person's social development and the repercussions for future relationships and career progression. If a user is in danger of putting these things at risk, some understanding of exactly what their addiction is robbing them of may begin a gradual process of withdrawal and self improvement. In some cases, seeking professional help may not even be necessary, and in others, the realisation that the computer is merely acting as an amplifier to more serious addiction can also begin some manner of healing process. The Internet is a revolution and will only continue to grow and reinvent itself in many new forms simultaneously. But on an individual scale, structure, control and even humanity can always be maintained by treating it as a tool to aid life, rather than as a portal into a new life.

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