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Governing (through) the Internet

The discourse on pathological computer use as mobilized knowledge

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ABSTRACT This article examines how definitions of 'healthy' and 'unhealthy', 'appropriate' and 'inappropriate' computer use are produced and mobilized by and through very specific American cultural ideals and interests. Following Foucault (1978) and Rose (1990, 1998), this article explores how the discourse on pathological computer use functions as a normalizing discourse – and as an apparatus of governance – by mapping correlations 'between fields of knowledge, types of normativity, and forms of subjectivity' in a particular context (Rose, 1998: 11). The article describes the historical management of computer fear and addiction, and the formation of the 'computerphobe' and 'computer addict' as products of a specific historical milieu. For example, the convergence of American (sub)cultures such as the drug counterculture, cyberpunk technoculture, and the 'culture of addiction' functioned as the conditions of possibility for the cultural intelligibility of 'computer addiction'. At the same time, the article illustrates how computer use pathologies have been produced and mobilized toward the production and management of people's developing relationships with this new media technology, even while it defines and produces – or governs – related definitions of 'appropriate' and 'inappropriate', or 'normal' and 'abnormal', social practice such as commercial property and labor efficiency.

KEYWORDS *addiction, computers, culture, media, technology*

The emergence of a new disorder

Drugs, alcohol, sex. As we enter the 21st century we're getting a little better at recognizing and treating addictions that have haunted humanity for centuries. But with this new age also comes a strange new kind of addiction. It can cause people to abandon their work, their spouses, their children, while they sit alone for hours on end talking to strangers [via the computer]. (*Dateline NBC*, 18 February 1997: 8)

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> Internet addiction is real. Like alcoholism, drug addiction, or compulsive gambling, it has devastating effects on the lives of addicts and their families: divorce, job loss, falling productivity at work, failure in school, and in extreme cases, criminal behavior. The problem has already reached epidemic proportions in the United States, and the number of 'netaholics' continues to grow rapidly as more households and businesses go on-line. (Young, 1998, book jacket)

> The Internet just might be emerging as the addiction of the millennium, surpassing even TV with its pervasive grip on our minds and souls. (Young, 1998: 13)

Throughout the late 1990s, news media reported that an emergent epidemic of psychological disorder threatened to overtake the minds of people across the US and, potentially, across the entire globe. Newspaper headlines read: 'Study Says Some Can Be Addicted to the Net' (*Los Angeles Times*, 5 May 1996); 'Online Junkies Are as Dependent as Other Abusers' (*Los Angeles Times*, 13 August 1996); 'Internet May Be Addiction for Some Users' (Belluck, 1996). Reports about the disorder have also appeared on television shows such as the *NBC Nightly News* (1997), *Dateline NBC* (1997) and *The Maury Povich Show* (1998). Many of these reports based their information on controversial research conducted by psychologists and psychiatrists who assert that such extreme computer addictions are legitimate clinical conditions and that they are a growing danger (Griffiths, 1995a,b, 1997; Young, 1996a,b, 1998). Symptoms of Internet Addiction Disorder (IAD) include: a need for more time online to achieve satisfaction; obsessive thinking about being online; neglect of work; disruption of familial relationships; financial hardship due to Internet activity, among other indications (Belluck, 1996; Young, 1998). Professionals and users have formed support groups and clinics for the treatment of pathological computer use.

This article addresses the phenomenon of Pathological Computer Use (PCU) as a case study into the cultural dimensions of science and technology. The historical emergence of psychological, medical and popular discourses surrounding people's 'pathological' relationships with computers is a useful one for understanding the complex ways that scientific discourses and technological practices are produced – socially, culturally and politically. Most research on pathological computer use originates from within clinical psychology, psychiatry and the human sciences, and works to discover computer pathologies, to locate their origins, to identify particular personality types most 'at risk', and to manage the pathologies (Brenner, 1997; Greenfield, 1999; Griffiths, 1995a; Young, 1996a,b, 1998). By contrast, the approach taken here is conceptualized through historical, social and cultural studies of media,

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science and technology. From this view, computer technologies, scientific 'truths' and the effects of such 'truths' are highly implicated in economic, cultural and political practices. The Internet and IAD, then, can be approached as disciplinary technologies that are organized by, even as they also organize, social practices (Umiker-Sebeok, 1997). Woolgar (1991: 89) demonstrates that 'configuring users [to new technologies] relies on established routes of transmitting information: instruction manuals, help lines, books, and other networks set up to keep users in line with intended applications'. Following Woolgar, Rose (1990, 1998) and Blackman and Walkerdine (2001), I argue that 'computer fear' and 'computer addiction' (as knowledge produced by and through the 'psy' disciplines toward the 'configuring of users') function contextually toward the production, negotiation and management of people's developing relationships with this new media technology even while they define and produce – or govern – related definitions of 'appropriate' and 'inappropriate' or 'normal' and 'abnormal' social practice such as property, consumerism and labor efficiency. In other words, this article explores how the discourse on 'healthy' computer use functions as a normalizing discourse – and as an apparatus of governance – by mapping 'correlations between fields of knowledge, types of normativity, and forms of subjectivity' in a particular context (Rose, 1998: 11). If the psychological sciences can be said to play a prominent role in the regulation of the population (Blackman and Walkerdine, 2001), this article demonstrates how the knowledge practices surrounding 'computer addiction' are implicated in ways in which human beings negotiate the 'conduct of conduct' – how people regulate and govern others (and regulate and govern themselves) through the production of truth (Rose, 1998).

While this most recent public spectacle surrounding Internet addiction may be a largely American phenomenon, it is precisely for this reason that it is rich for cultural analysis. At the same time, American culture and American psychology do circulate and have effects transnationally. Indeed, computer addiction is not contained within the US. In 1997, for instance, Reuters commissioned an international study on information addiction (a purportedly related disorder) in which researchers queried 1000 executives across the UK, US, Germany, Ireland, Singapore and Hong Kong. The report, 'Glued to the Screen: An Investigation into Information Addiction Worldwide', revealed that 'over three quarters of respondents agreed that PCs, the Internet and information could be addictive in the future . . . . Managers in Singapore are particularly concerned about this (83 percent) as are those in Ireland (88 percent)' (1997: 36). In 2000, the First World Conference on Internet Addiction (2000) gathered representatives from Germany, USA and Switzerland. To be sure, the proliferation of computer technologies and questions and debates about 'healthy' and 'unhealthy', 'normal' and 'abnormal' computer use productively link to key issues at the

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intersections of technology and culture, micro and macro politics, theory and practice. And, in this way, 'computer addiction' functions as a locus point from which to address some of the most pressing issues regarding the emergence of computer technologies and computer culture: the production of information commodities, labor efficiency, and changing definitions of 'ethical' computer use (Trigaux, 1998). The focus here is not on whether 'computer addiction' is *real* or not but, rather, how it is historically produced as an object of knowledge and how it functions as an apparatus of social regulation (Blackman and Walkerdine, 2001). Thus, while predictions of a global 'epidemic' of computer addiction may or may not actually materialize, the particular sites of its formation and mobilization provide fruitful ground for investigating the cultural aspects of science and technology as they connect to broader theories and practices of governance.

Toward this end, it is significant to map where the discourse emerged, how and where it gained legitimacy, and how and where it has been deployed and to what effects. Scientific articles which describe, assess and offer advice about 'computerphobia' and 'computer addiction' have been published in journals such as *The American Academy of Child and Adolescent Psychiatry* (Keepers, 1990), *Clinical Psychology Forum* (Griffiths, 1995b), *The Journal of the American Medical Association* (Ross et al., 1982), *The Canadian Medical Association Journal* (O'Reilly, 1996), *Journal of Organizational Behavior Management* (Davidson and Walley, 1985) and *School Counselor* (Soper and Miller, 1983). The surface level of the discourse indicates that 'computer addiction' gains significance in relationship to particular institutional arrangements and assemblages: the discourse forms within and connects knowledge practices from psychology, business, education, communications, social work, criminology and others. These studies have produced and legitimized various definitions of 'normal' and 'abnormal', 'healthy' and 'unhealthy' computer use and they also prescribe interventions to control 'pathological' reactions to computers. At the same time, these prescriptions are linked to particular codes of conduct in other areas of the lived social realm. In 'private' life, for example, such prescriptions lay out notions of desirable family and sexual relations (Young, 1998); legal action has mandated supervised computer use for some hackers (Sterling, 1995); businesses draw on it as a rationale for surreptitious monitoring of computer use (Young, 1998); organizational management regulates computer addiction toward workplace efficiency (Davidson and Walley, 1985; Young, 1998).

The advent of pathological computer use: managing computer fear and addiction

 Throughout the short history of computing the notion of the 'crazy'

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computer 'addict' has circulated in American culture as ubiquitous urban legend. Anecdotal reports of (usually) young men who spend hours – even days – at their computer terminals while they neglect their hygiene, nutrition and social relationships, have circulated for years. At least since the 1970s, avid computer programmers and hackers have been called 'addicts' by psychologists, researchers and lay observers of computer users. Weizenbaum (1976) described computer programmers sitting 'transfixed' at their terminals, working 'until they nearly drop, twenty, thirty hours at a time . . . . The extreme phenomenon of the compulsive programmer teaches us that computers have the power to sustain megalomaniac fantasies' (1976: 124–30). Yet, while such computerphiles were considered to be eccentric and obsessive, the computer 'addict' was often hailed as being *useful* to science, to industry and to culture, toward producing technological innovation, and in establishing a widespread cultural techno-enthusiasm (Campbell-Kelly and Aspray, 1996: 237; Levy, 1984; Shotton, 1989: 260).

Although the concept of 'computer addiction' circulated from the 1960s–1980s, a more pressing concern, particularly in the US workplace, was computer fear or 'cyberphobia'. At first, computers were known to be large military war machines that required complicated technical knowledge. As the technology changed, and as computers became potential consumer items and increasingly important to corporate efficiency, there formed increased concern with the identification and management of computer fear. Economic efficiency demanded a large population of willing and efficient computer users. In 1983, for example, Weinberg tested computer users by wiring them to galvanic-skin-response measuring devices while they used computers. Weinberg found that one third of subjects were 'cyberphobic' and five percent exhibited symptoms of phobia: nausea, dizziness, sweating and high blood pressure. To cure people of cyberphobia, Weinberg gradually exposed them to electronic calculators, then electronic games, and eventually simple computer programs (Rice, 1983). In another attempt to cultivate widespread responsible computer use, Davidson and Walley warned that 'pathological reactions of employees to computers' were on the increase, and suggested that 'the behavioral extremes warrant the concern and action of employers as well as therapists' (1985: 49, 41). They urged corporations and health professionals to collaborate in managing computer anxieties, and to produce computerphilic and efficient employees. Indeed, it was during this time that 'computer anxiety' and 'computerphobia' entered the popular and medico-psychological lexicon. *The Encyclopedia of Phobias, Fears and Anxieties* included 'computerphobia' in its 1986 edition. Books such as *Overcoming Computer Fear* (Berner, 1984) and *Silicon Shock* (Simons, 1985) instructed (potential) computer users on how to become comfortable with the new machine. Guides for purchasing and using computers

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were published in magazines like *Business Week* ('How to Conquer Fear of Computers', 1982), *Personal Computing* ('Teaching CEOs to Use Personal Computers', Meyer, 1985) and *Time* ('Dealing with Terminal Fear', Taylor, 1982). These articles advised people how to manage technological change and transform computerphobics into confident computer users.

Computer fear, once viewed as relatively insignificant and 'normal', became a 'pathology' when such fear became a barrier to the mainstreaming of computers. In response, marketers and spokespersons encouraged people to overcome their fear and learn to love the computer. Art Salsberg, editor of *Computers and Electronics*, proclaimed that 'we are rapidly moving into an awesome information age where hardly anyone will be untouched by computer technology. This being the case, the smart move is to embrace computers as early as you can' (1983: 6). Technology psychologists were hired by some businesses to offer practical skills to overcome computer fear. One business card read: 'Combat negative thoughts, eliminate self-doubts, reduce anxiety – increase your confidence around computers' (cited in Greenly, 1988). In one seminar, success arrived when a student could print out their own 'graduation certificate' via computer: 'Congratulations! You are now computer confident!' (Greenly, 1988).

At the same time, computers began to be perceived as a potential addiction even for non-hackers or non-programmers (Hiltz and Turoff, 1993; Kerr and Hiltz, 1982). Kleiner (1980: 534) declared that 'people can use networks without being addicted, but there isn't a network without some addicts'. He offered that 'perhaps regulating measures are necessary to keep people from ruining (enhancing?) their lives'. *Omni* magazine (see Fjermedal, 1987: 22) warned of a new group of 'online junkies' who were falling victim to 'a silent and growing addiction' to computers. Starker (1983) described the unusually avid computer use he observed as 'microcomputer mania'. Much of the emergent discourse on computer 'addiction' referred to computer games, which garnered particular fear and criticism (Nilles, 1982; Ross et al., 1982; Soper and Miller, 1983). Keepers (1990), for example, described a boy who stole money, forged checks and skipped school to play video games. Nilles (1982: 87) described 'computer catatonia', a condition in which game 'addicts' were 'afflicted with the rapture of the beep'. Similarly, Ross et al. (1982) reported a psychiatric condition they named 'Space Invaders Obsession'. They described three men who each 'reported a sharp [obsessive] increase in time, energy and money devoted to playing Space Invaders in the immediate weeks before their respective marriages' (1982: 1177).

By the late 1980s, the rearticulation of computers from feared war machines to useful business tools and home appliances proved largely successful (Campbell-Kelly and Aspray, 1996; Lubar, 1992; Reed, 2000).

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The vehemence of drug and addiction metaphors as applied to computers also became particularly pervasive, accepted and effective. While debates grew as to how people should use computers, the notion of 'computer addiction' was made possible – or culturally intelligible – in part through the specific historical convergence of American ideals from 1960s drug counterculture, 1980s cyberpunk technoculture, and the contemporaneous formation of self-help culture and the 'culture of addiction'.

Leary's claim that 'the PC is the LSD of the 1980s' (in Elmer-DeWitt, 1993: 63) represents this particular cultural nexus, as does Rushkoff's term 'cyberdelia', which emphasizes the embodiment of this confluence in figures such as Leary and John Perry Barlow (Grateful Dead member and founder of the Electronic Frontier Foundation) (see Dery, 1996). Kandall (1994) suggests that it was the drug-related 'excesses' of 1970s US culture that incited the formation of the 1980s 'culture of addiction'. Rapping (1996) similarly describes this cultural formation and highlights a shift from the 1950s in which addictions were 'allergies' that randomly affected bodies, to the 1980s in which 'addictive personalities' and 'behavioral addictions' formed intelligible frameworks through which 'obsessive' behavior could be understood. In response to this psychologization of addiction, individually mobilized coping strategies have been put forth toward the production of the self-responsible subject.

In Foucault's terms (1980: 105; 1988: 18–19; cf. King, 2001), the *usefulness* and economy of the addiction discourse (minimum expenditure for maximum return) as a power strategy and an apparatus of governance is that it does not function repressively to achieve its ends. On the contrary, the transformation of the addicted self draws on, utilizes and mobilizes the subject's ability to act autonomously, to make use of rehabilitative discourses to care for and work on themselves. More specifically, the psychologization of 'addictive behavior' and the translation of computer use through the discourses on addiction connect individual 'healthy' computer use to the commercial need for productive labor, marketable products and active consumers. For example, the practice of translating computer use into a matter of health and dividing computer use into the 'healthy' and 'unhealthy' has been enacted toward the management of intellectual property and computer hacking. Sterling (1995) argues that it was precisely because hackers gained unpaid access to information *commodities* that there emerged a widespread 'hacker crackdown'. Both John Perry Barlow and Timothy Leary were ardent supporters of using computers for liberatory purposes in the 1980s. Similarly, Levy (1984) describes early computer hacking as motivated by political purpose as much as technical ones. Many hackers lived by the 'hacker ethic' and the proclamation that 'information wants to be free', and computer hacking has been mobilized against the centralization of power and the commodification of information. Computer addiction as a dividing practice and mechanism of regulation functioned during the

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crackdown on 'addicted' hackers during the 1980s–1990s, and is acutely exemplified in the regulation and (self-)transformation of the hacker Kevin Mitnick.

From 'heroes' to 'electronic terrorists': hackers can't 'just say "no" ' to computers

In the 1980s–1990s, with burgeoning use of computer networks, computer security became increasingly important to industry and the state. Issues of intellectual property received particular attention as corporate profits relied on control over production and distribution of information commodities. As such, computer hackers, who readily gained unpaid access to these commodities, and who had previously been perceived as curious, benign, yet scientifically and economically useful 'eccentrics' – even 'heroes' (Levy, 1984) – became transformed into feared 'electronic terrorists' (Johnson, 1989) who threatened personal privacy, national security and intellectual property. Thus, there developed an increased urgency regarding how to deal with computer hackers:

> [H]ow should society, and the law, best define their actions? Were they just *browsers*, harmless intellectual explorers? Were they *voyeurs*? . . . Should they be sternly treated as potential *agents of espionage*, or perhaps as *industrial spies*? Or were they best defined as *trespassers*, a very common teenage misdemeanor? Was hacking *theft of service*? Was hacking *fraud*? Maybe it was best described as *impersonation*. . . . Perhaps a medical metaphor was better – hackers should be defined as 'sick', as *computer addicts* unable to control their irresponsible, compulsive behavior. (Sterling, 1995: 58)

How should industry and the state deal with computer hackers? How should their activities be defined? What are the social and legal consequences of such treatment? Sterling explains that increased political and commercial import of the Internet meant that 'society was now forced to tackle the intangible nature of cyberspace-as-property . . . . In the new, severe, responsible, high-stakes context of the "Information Society" of the 1990s, hacking was called into question' (1995: 17). Similarly, Allman (1990: 25) described that a string of legal cases meant that 'computer hacking itself was on trial'. The 'frontier' of cyberculture must adapt to societal demands, as 'in the waning of the old Wild West, the time may have come for hackers to hang up their guns' (1990: 25). As a co-product of such struggles, Sterling suggests that the notion of hackers as 'computer addicts' gained cultural and legal validity. This designation played a key role in the legal cases of hackers such as Mitnick and others, as it functioned to justify legal and cultural demands for regulated computer use.

In the US, designations of 'computer addiction' have generally resulted in increased jail-time, rehabilitative therapy, and/or intensive

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supervised computer use (Danks, 1998). Interestingly, Danks explains that 'outside of the US, hackers with "computer addiction" are rarely incarcerated' (1998: 1). Indeed, Akdeniz (1996: 1) suggests that some hackers have been praised for revealing inadequate security in computer systems. US Senator Leahy suggested a similar 'usefulness' for 'addicts' by declaring that restrictive computer use could prohibit technological innovation:

> We cannot unduly inhibit the inquisitive 13-year-old who, if left to experiment today, may tomorrow develop the telecommunications or computer technology to lead the United States into the 21st century. He [sic] represents our future and our best hope to remain a technologically competitive nation. (Sterling, 1995: 281)

This tension between the beneficial 'usefulness' and dangerous 'threat' of 'computer addicts' continued into the 1990s and became significant as intellectual property and public computer use grew. What formed was an ongoing and dual need for the commercial sector to encourage and cultivate computer use *and* to limit and direct that use toward profitable ends.

By situating 'computer addiction' in relationship to what Sterling (1995) calls 'the hacker crackdown', we can connect definitions of psychological disorder and the crisis surrounding control of computer networks – or electronic 'law and disorder' – that Sterling describes. In Mitnick's case and that of others, the notion of 'computer addiction' became a key factor in sentencing: rehabilitative therapy, probation and/or supervised computer use. For example, in the case of the Atlanta Three, hackers were 'specifically forbidden to use computers, except for work or under supervision' (Sterling, 1995: 283). The issue of supervised computer use for convicted hackers is a controversial one that has recently received much attention. The Electronic Frontier Foundation (1991) criticized this use of 'computer addiction' and argued that it denied hackers their basic US constitutional rights of free association and right to employment. They argued that the notion of 'hackers-as-addicts' is mobilized in the service of state and corporate desires to strictly control and regulate computer networks at the expense of individuals (1991: 2). Out-of-control 'addicts' are viewed as dangerous and threatening, and therefore seen to require complete abstinence from computer use (Bloombecker, 1998).

It was this notion from the addiction discourse – that one can never be cured of addiction – that allowed for the 1990s sentencing mandates of supervised computer use, as exemplified in Mitnick's case. Variously described as 'America's Most Celebrated Cybercriminal' (Quinn and Evenson, 1995), the 'Darkside Hacker' (Hafner and Markoff, 1991) and an 'electronic terrorist' (Johnson, 1989: 29), Mitnick was released from prison in 2000 after being denied bail and incarcerated for over four

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years for illegal computer use. Since 1982, Mitnick has been arrested several times. In his 1989 case, after much negotiation, Mitnick's lawyer argued that Mitnick was a 'computer addict'. The resulting sentence was one year in prison plus six months in a 12-step addiction rehabilitation program, and was the harshest ever in a computer fraud case ('Drop the Phone', 1989: 49). Mitnick was released in 1990, only to be arrested again in 1995 for violating probation by using computers. Throughout his cases, headlines warned that Mitnick's computer use was a strange and threatening 'obsession' (Johnson, 1989: 1): 'Kevin Mitnick's Digital Obsession' (Quitner, 1994); 'Computer an "Umbilical Cord to His Soul": "Darkside" Hacker Seen as "Electronic Terrorist" ' (Johnson, 1989). Media and courtroom representations portrayed Mitnick as a 'darkside hacker' (Hafner and Markoff, 1991; Johnson, 1989), a 'computer wizard' (Murphy, 1989: 3), an 'extreme threat who could wreak electronic chaos if he got near so much as a telephone without supervision' (Klein, 1989: N1). Rumors of Mitnick's technical skills included that he could 'launch nuclear missiles by whistling into a telephone', and that he could 'turn a Sony Walkman into a transmitter that could be used to bug the warden's office' (Penenberg, 1999: 51). As mentioned previously, Mitnick was denied bail when it was ruled that 'armed with a keyboard, [Mitnick] posed a danger to the community . . . and he needs to be detained and kept away from a computer' (Murphy, 1988b: 1).

Significantly, Mitnick was deemed particularly threatening because he was 'unstable' and had a 'compulsive' personality disorder. Hafner and Markoff (1991: 72) describe Mitnick in 1988: '[H]is compulsive side had won out over his fear of the consequences and now here he sat, handcuffed to a bench. It was a conflict that would play itself out for years to come as Kevin's obsession intensified.' Hafner and Markoff emphasized Mitnick's 'addiction' by describing that 'something seemed to be beyond his control: he would say he wanted to stop the breaking as soon as they finished the project they were working on, but once they had finished one project, Kevin always wanted to start another . . . Kevin was obsessed' (1991: 127). Johnson (1989: 29) interviewed investigators who described Mitnick's unusual condition: 'Mitnick had such a special feeling for the computer that when an investigator . . . accused him of harming a computer . . . he got tears in his eyes.' One investigator explained that 'the computer to him was more of an animate thing . . . . There was an umbilical cord from it to his soul' (1989: 29). Mitnick's lawyer described that Mitnick's 'behavior had all the hallmarks of an addiction, where he'd spend hours and hours in front of the computer and he didn't have the standard motives – like greed – for what he was doing' (Klein, 1989: N1). Rosetto, Mitnick's counselor, described hacking as 'the only thing [Mitnick] knew that could give him a high' (Klein, 1989: N1). Later, Shimomura and Markoff drew on psychological experts to link Mitnick's computer crime with more violent repetitive crimes:

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> The FBI experts argue that the same compulsive behavior, and the same craving for power drives both kinds of criminals. These behavioral scientists theorise that in each of the cases the criminals have a need for a fix, which becomes increasingly frequent. (Shimomura and Markoff, 1996: 152)

In this context, it is difficult *not* to perceive Mitnick as uncontrollably 'addicted' to computers, and the comparison to serial killers emphasizes both extreme danger and clinical pathology.

Thus, in 1989, while it was novel that Judge Pfaelzer sentenced Mitnick to addiction treatment, it was not an unintelligible action. Prosecutors drew on Mitnick's status as a compulsive personality and 'computer addict' to argue for restricted computer use, and stated that any computer access could tempt Mitnick into criminal behavior. As a result, Mitnick was denied access to computers, even computers without network access, even after his release from prison in 2000. While eventually repealed, these probationary restrictions were the most limiting conditions ever imposed on a hacker in the US (Poulsen, 1999). Mitnick's case is significant in that the seemingly minor, momentary and even residual defense strategy from 1989 has continued to emerge and be mobilized toward corporate control of the networks. In this sense, the effects of 'computer addiction' in Mitnick's individual case affect much broader cultural, economic and legal regulations of computer networks. Some authors have drawn on Mitnick's case as a rationale for tighter security for all computer networks (see 'Superhighway Robbery', 1995). At the same time, a 'souring public mood toward hacking' was said to be working against Mitnick as he became the symbol for computer obsession gone awry and in need of reigning in. Halbert (1997: 170) explains that the pathologization of traits of computer hackers can imply that 'anyone who dares to invade the intellectual property of the government or corporations is engaged in un-American activities'. Such pathologizations 'signify that people are out of control, outside of the normal boundaries of ethical conduct. They are no longer responsible to themselves and others, and are unable to maintain the requirements of citizenship' (Blackman and Walkerdine, 2001: 127). The spectacle of Mitnick's 'irresponsible', 'unethical' and 'pathological' behavior, then, is one way that the 'normal', 'healthy' computer-using self is defined. Also, by labeling hackers 'abnormal' and 'criminal', and using law enforcement to affect particular behaviors, may legitimize and naturalize arbitrary classifications even while they obscure powerful economic relationships in the computer industry (Halbert, 1997). For example, early in the history of computing, Hanson (1978) astutely observed that industry became nervous about public use of computer networks but was less concerned about its own practice of accessing information about consumers. Mitnick's successful computer addiction defense, the extensive media coverage of him as a dangerous, out-of-control addict,

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and his recent and subsequent (self-)transformation into an 'ethical hacker' (Trigaux, 1998) who helps the commercial sector secure its information commodities, provide an exemplary (and productively destabilized) model for the 'successfully rehabilitated' pathological computer user. In this way, the introduction of psychological and medical diagnoses of computer addiction into the clinic and courtroom legitimate, specify and formalize the designation of 'computer addict' to produce particular social-technological regulating effects.

A working diagnosis: corporate engagements and the sponsorship of health and illness

> Employers must realize that they also need a clear set of rules and policies governing Internet usage to ensure that everyone will approach the Internet with a common understanding. (Young, 1998: 212)

By the late 1980s, Shotton (1989) responded to anecdotal accounts of computer addiction in the UK, including accounts of 'addicted' computer hackers, by conducting her own study of computer use. Shotton concluded that computer dependency existed but that it was not a clinical pathology. Nor did it particularly threaten computer users themselves. In the US, the drive to 'officialize' computer use disorders did not gain significant momentum until the mid-1990s with the advent of 'Internet Addiction Disorder' (IAD) by Goldberg in 1995 and its subsequent adoption by Young (1996a) and others (Brenner, 1997; Griffiths, 1995a,b, 1997). Beginning in 1994, psychologist Kimberly Young began to work toward professional, clinical and public support for the recognition of IAD (and Pathological Computer Use [PCU]) as a legitimate mental disorder. More specifically, Young's goal was to have IAD included in the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*) as a category of mental pathology. However, the IAD designation proved to be a controversial one, and Young's efforts to gain acceptance by the American Psychiatric Association encountered significant debate. Young established the Center for On-Line Addiction (COLA) in 1995. At this same time public use of computer networks grew rapidly and there emerged much public concern about what were the most appropriate and efficient ways to engage with this new technology.

In 1996 Young published the results of a two-year study of Internet behavior and (mis)use. Young's study (and Internet addiction) gained wide public attention through a barrage of media reports, and the popular and professional debate surrounding IAD grew. Since then, many researchers, psychologists and journalists have written about IAD, and the debate about the 'reality' of the disorder continues (Belluck, 1996; Brenner, 1997; Griffiths, 1997; Grohol, 1995, 1997; Young, 1996a,b,

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1998). Young has gained credibility by connecting IAD and PCU to the *DSM* through building analogies first to Substance Dependence, and then to Pathological Gambling and disorders of impulse control. This association has been usefully put into clinical practice and has given form to IAD, allowed it to materialize and function as a clinical disorder. In the US, and increasingly across the globe, within clinical psychiatry and psychology, an officialized site for the achievement of, and an authoritative anchor-point for, the production and acceptance of a 'fact' of mental disorder is its inclusion in *DSM*, a clinicians' resource for the identification and treatment of mental disorders. As Hacking (1996) describes, the *DSM* is an internationally utilized and standardized reference manual for the American Psychiatric Association's criteria for the identification, classification and treatment of mental illness. Respected psychiatric journals require research results to be presented to conform to the standards of the *DSM*, and insurance companies and health plans reimburse hospitals according to the *DSM* code system (1996: 10). According to Rogler (1997: 9): 'In the US, the *DSM* is central to the vast system of mental health care, and, directly or indirectly, it has influenced judicial deliberations, third-party payments, budgetary allocations by private and governmental bodies, and many other key institutional functions.'

One significant effect of the *DSM* for Internet addiction is that it mobilized psychologists, clinicians and researchers to quantify and empirically document the existence of the disorder, to locate causes and to identify populations most 'at risk'. This resulted in the advent of detailed surveys to collect data about people's computer use, the application of diagnostic criteria to their behavior, and an authoritative assessment of their 'appropriate' or 'inappropriate' use of computers. In addition to Young's (1996a,b) Internet Addiction Survey/Diagnostic Questionnaire, modeled on the *DSM* criteria for Substance Dependence/Pathological Gambling, there are other measuring instruments oriented toward computer use, including Brenner's Internet Addiction Questionnaire, Maclean Hospital's self-diagnosis scale, questionnaires by researchers and journalists, and others. Hacking explains that 'an illness becomes an object of knowledge when it is identified, as its causes are discovered, and as methods of prevention, treatment, or cure are developed. Measurement is a second route to knowledge, and the two routes cross' (1996: 96). 'Objective' systems of measurement, like questionnaires, can function toward the validation and legitimation of a 'fact' such as IAD. And it is here that it becomes clear that the problematic under consideration is not only one of epistemology, but it is, as Rose (1990: 8) describes, that of 'identification, classification, and normativity, and to a generalised form of regulating conduct, "governing" people' and the 'making of people amenable to having things done to them'. That is, the psychological

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examination functions, as Nadeson (1997: 201) describes, as a form of bio-power, as:

> a discourse and set of techniques that participate in [a] system of government. [Historically] it was the increased significance attached to the normal that ensured the emergence and growth of the discourse and practices of psychology. Diverse social institutions (e.g. the workplace, family, school, medicine) drew on psychology to govern their populations and, in so doing, produced subjectivities that were more sensitized to and receptive to the power of the norm. Psychological assessments (such as the examination, the interview, the questionnaire) were developed that allowed individuals to be compared to normative standards and eventually, to better 'know' themselves.

Foucault (1978) argues that historically exams functioned as a technique of power by making individuals visible to the gaze of authorities within an objectifying framework (e.g. based on normative IQ, work output), but that they also introduced individuality into the documentation of subject populations. Individual responses could be coded so that they could be located, captured and fixed within a comparative system. Regarding the workforce, for example,

> the discipline of psychology allowed for the identification of deviant workers and the scientific allocation of workers to job positions . . . [and] the exam functioned as the arbitrator of the truth of the individual by formalizing and inscribing individual differences within a calculable framework. (Nadeson, 1997: 202)

With computer pathologies, the implication is that the discourse on computer use functions to inscribe difference and normativity in line with institutional interests, to redefine or reinvent power relations through and surrounding computer networks. For example, the regulation of addictive computer use has been used as justification for increased fees for network access, legal constraints on computer use, and to legitimize employer surveillance of employee computer use.

In her self-help book on IAD, *Caught in the Net: How to Recognize the Signs of Internet Addiction and a Winning Strategy for Recovery*, Young (1998) offers guidelines to identify and treat Internet addiction. Toward this end, she divides 'everyday life' into four discrete (if arbitrary) categories: family, relationships, school and work. Immediately, the identification and diagnosis of IAD functions within and toward particular institutional arrangements. The 'problem' of IAD is defined in terms of the breakdown of the nuclear family, misrepresentation of 'true' and 'appropriate' gender, the disruption of monogamous couplings, poor educational performance and diminished labor productivity. Successful recovery entails the reordering of these idealized arrangements: the reassemblage of the nuclear family, restoration of 'true' gender,

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successful academic performance and increased work productivity. Young offers guidelines for how to recognize Internet addiction and how to recover (or help someone recover) from the disorder in accordance with these 'major categories of everyday life' (1998: 16). For example, Young recommends that schools limit the number of allowable hours online and eliminate 24-hour computer labs. She rationalizes that colleges do not provide 24-hour alcohol access for students and, because computers are similarly addictive, access to them should also be restricted (1998: 177–93).

In the workplace, Internet addiction is increasingly used synonymously with 'Internet Misuse' and the Center for Online Addiction (COLA) asserts that Internet addiction can result in low profit margins, reduced efficiency and potential disability and unemployment lawsuits ('Corporate Seminars', 2001). Earlier in the history of computing, Davidson and Walley (1985) similarly warned that 'pathological reactions of employees to computers were found to be on the increase'. They suggested that such 'behavioral extremes warrant the concern and action of employers as well as therapists' (1985: 49, 41). In 'Dataholics: Scourge of the Modern Workplace?', McWilliams (1996) emphasized the danger that employees may 'crave' information and that information can be 'habit-forming'. As a response to similar concerns, Young (1998: 10) offers advice for employers to 'limit or monitor their worker's online usage to ensure that the Internet is used properly on the job and does not become a source of diminished productivity or distrust'. To prohibit employees from wasting or stealing time, or otherwise poaching from employers, Young hails the 'growing availability of monitoring software as a tool for employers . . . . And it's all completely non-obtrusive so that employees will never know who is snooping' (1998: 197). Like Young, Greenfield (1999: 157) is a proponent of web-monitoring software for health and productivity. Indeed, increased use of cybersurveillance software is used to determine which employees are wasting company time (Blitzer, 2000). The translation of Internet 'misuse' into a discourse of 'health' and 'illness' allows for such employer interventions by transforming the act of computer monitoring from one of surveillance and discipline into one of health promotion and self-improvement (self-regulation) toward a better, happier, more virtuous subject (Umiker-Sebeok, 1997).

To aid in such 'health promotion', Young (1998) recommends businesses adopt an Internet Code of Conduct that employees agree to and sign: 'By adopting this code or developing one like it, employers demonstrate a responsible and aware attitude toward the Internet and encourage a responsible approach by their workers' (1998: 214). Greenfield similarly proposes that employers develop an explicit Internet policy (1999: 157). Young's suggested Code includes a list of acceptable and unacceptable Internet behaviors. Acceptable behaviors include:

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communications for professional purposes; 'effective', 'ethical' and 'lawful' use of the Internet; chat and email for official business only. Unacceptable behaviors include: use for personal gain or advancement of personal views; use that disrupts company operations; use that interferes with employee productivity. Other advised regulations include: all messages are the property of the company and are public information; the company has the right to access and monitor all information; restricted Internet access to functions necessary to the job: 'An administrative assistant or clerical worker could only access email. A middle manager could use email, newsgroups, and the Web but could not enter chat channels. Only executives could access all Internet functions' (Young, 1998: 210).

For individual addicts to regulate their own Internet use, Young (1998) provides a self-assessment examination to determine if one is an addict: How often do you find that you stay online longer than intended? How often does your job performance or productivity suffer because of the Internet? How often do you become defensive or secretive about your Internet use? How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet? (1998: 31–3). To approach the examination as a 'confessional' technology, it can be said that 'the individual is provided with a system of statements, a vocabulary, for knowing themselves. However, this process of self-identification is simultaneously a practice of subjectification: the individual is identified by norms of identity used for self-recognition' (Nadeson, 1997: 206). Thus, in therapy, the individual 'voluntarily' commits 'to his or her self-development, and manifests the willingness to accept the responsibility of a contract for freedom . . . . [I]t is through the promotion of lifestyle by the mass media and by experts that the modern self is governed' (Rose, 1990: 257). Through this process of 'willful' self-actualization, 'dissatisfied selves can, through therapy, refurbish and reshape themselves in directions they desire. Therapy is a technology of individuality for the production and regulation of the individual who is "free to choose" ' (Rose, 1990: 228). As one Internet addict explained her desire for recovery: 'All I want is the freedom to continue to use my time in quality, creative, inspiring, educational and helpful ways that are Internet related without knowing that doing so is truly at the expense of physical survival' (from IASG discussion, 31 May 1998).

Once (self-)identified as a pathological computer user, Young offers practical skills and techniques to help addicts regain control of their lives, to remake themselves and to 'free' them from compulsive online behavior (e.g. carry positive reminder cards, listen to the voices of denial; Young, 1998: 80, 84). Computer users are encouraged to care for and 'free' themselves according to these guidelines, to self-regulate computer use. For example, Young suggested to one addict that he produce a strict schedule of online sessions and 'advised that he fill out and carry

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reminder cards listing the five harmful effects of using the Net and the five benefits [to him] of moderated usage' (1998: 203). Greenfield similarly prescribes what he terms 'cyberbalance', an approach to daily living that includes 'controlled' online usage as one part of a 'complete life' that also includes activities such as socializing and cultivating individual interests (1999: 162). The skills for living produced through therapeutic discourse illustrate the use of expert knowledge toward shaping human experience, and illustrate points of intersection among practices for the governing of others and techniques for the government of oneself through practices of 'freedom' and 'choice' (Rose, 1998: 3–4). Thus, the self-making practices of the 'computer addict' are acts of self-regulation of individual conduct in relationship to much broader apparatuses of governance.

Conclusion: the uses of computer pathology

> You are in the best position to learn how to use the Internet and not abuse it. (Young, 1998: 11, addressing people who have yet to use the Internet)

Hacking (1996) explains that a culture cannot support a clinical condition without a collaborative social setting, and the participation of individuals afflicted with the disorder. In other words, there can not be 'computer addiction' without the cultural intelligibility of the concept, *and* the self-actualizing 'computer addict'. In its particularity, 'addiction' is a cultural concept that draws on and utilizes American ideals of the autonomous, self-actualizing and self-responsible individual. In that context, the *usefulness* of the computer addiction discourse is precisely that it encourages individuals to work on themselves, to make and remake themselves – to (self-)configure users – in line with expert knowledge and institutional interests. As described here, the psychologization and individualization of 'addictive behavior', and the translation of computer use through the discourses on addiction, connect individual healthy computer use to the commercial need for productive labor and marketable products. Rehabilitative therapy, then, is an economical and 'voluntary' practice with the goal of 'bettering' oneself ultimately toward a much broader and collective 'self-actualization' and self-regulation of the population. In this way, Internet addiction may be mobilized toward the creation of responsible computer use (ethical hacking, productive workers) even while it legitimates institutional apparatuses of control that, in circumstances unrelated to health promotion, may be rejected as inappropriate corporate behavior (submitting oneself to online surveillance; submitting to examinations regarding 'personal' habits). At the same time, prescriptions on computer use spoken through discourses on 'health' position employers as benevolent institutions that work collaboratively *with* employees to cultivate a self-

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actualized population (see King, 2001 for analysis of a similar dynamic). The therapeutic literature on computer addiction constitutes a significant source of knowledge toward 'configuring users' by providing practical instruction to new users about how to use computers (Woolgar, 1991). Not inconsequentially, the specific production of 'healthy' computer use is also the production and regulation of information commodities, labor productivity and capitalist efficiency.

This article investigates the cultural formation of 'healthy' and 'unhealthy' computer use as a product of social and commercial needs. As a social technology, and as an apparatus of governance, 'computer addiction' functions to sort out answers to newly forming and transforming questions about where and how computer technologies *should* be assembled into existing – if contested – social organizations: Who should use computers? When? For what purpose? If definitions of 'pathological' computer use are not a scientific inevitability, it is important to interrogate how they are articulated to broader macro-political processes such as, in this case, capitalist interests in the regulation of computer networks and the formation of commercial intellectual property and productive labor. In her study of how television was introduced into American culture, Spigel (1992) demonstrated that, in volatile situations, particular social forces must draw on various mechanisms of control to invent and reinvent their positions of authority. They must also encourage and cultivate subjects to act in line with these interests. This article describes how the discourse on pathological relationships with computers functions toward the production and regulation of the individual body and individual conduct in the service of a broader, particular and material governing of the social body.

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1. For a related discussion with different emphasis, see Umiker-Sebeok (1997).

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