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### What Makes the Internet Addictive: Some Tentative Explanations

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**Abstract**

The purposes of this study are to investigate what makes the Internet addictive and provide some tentative explanations. If we consider that some people are addicted to the Internet, then what exactly are they addicted to? Is it the Internet technology in general or particular applications? Is the medium or the message? In order to review and cite relevant literature, the present researcher proposed three angles for the following discussion: (1) the Internet itself including its content, (2) Internet users themselves, and (3) the user and user interactions on the Internet.

**Introduction**

The purposes of this study are to investigate what makes the Internet addictive and provide some tentative explanations. Many researchers, for example, Griffiths (1998, 2000), Young (1998), Chou & Hsiao (2000), have postulated that maladaptive patterns of network use in general and Internet use in particular are forms of addiction. If we assume that some people are addicted to the Internet, to what, exactly, are they addicted? Are users addicted to the technology itself? Are they addicted to particular applications only? Or perhaps to the degree of control and/or anonymity offered by Internet use? It is the medium or the message? Most relevant studies have tried to answer these questions from different perspectives and using different methods or inquiry. This paper offers three categories of relevant literature in order to organize the following discussion; those categories are (1) the Internet itself including its

content, (2) Internet users themselves, and (3) the user and user interactions on the Internet. Of course, while categorizing the literature in this way is useful for purposes of organization and discussion, such a move is reductive in that these categories in fact overlap and interact in complex ways. Figure 1 shows the analysis structure of this paper.
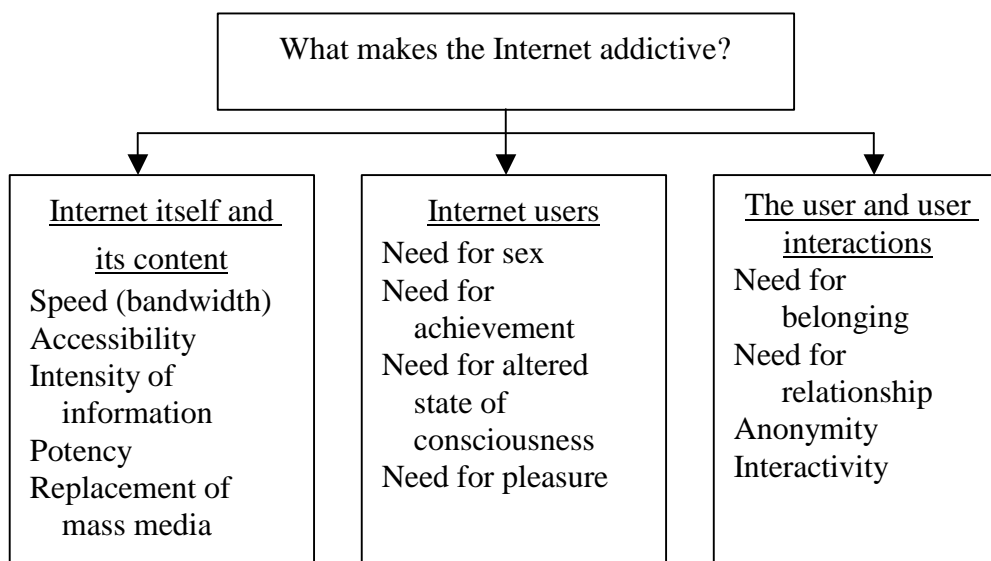


Figure 1: The analysis structure

**The Internet Itself and Its Content**

Greenfield (1999) states that the unique qualities of the Internet contribute to the potential for Internet addiction—specifically its speed, accessibility, intensity of information accessed online, and the potency (stimulation) of its content. In Chou & Chen's study (2000), 83 heavy Internet users were interviewed and reported that the Internet features they most appreciated included interactivity, ease of use, availability, and breadth of information accessed online. Interactivity has two aspects: human-computer and interpersonal. Most Internet applications such as the WWW are very easy to use, and thus enhance human-computer interactions; further, some applications, such as chat rooms and email, are especially good at facilitating interpersonal interactions. Availability means easy, low-cost access for users. Abundant and rapidly updated information is another major feature that attracts users to participate online. The diversity of ideas, subjects, attitudes, and opinions presented on the Internet continuously changes users' perspectives.

Indeed, the popularity of the Internet is definitely in ascendancy. In addition to ease of access and low cost, the Internet's continuously expanding bandwidth continues to deliver multimedia resources in greater amounts and higher quality. The development of friendlier interfaces allows even those with low network literacy to use the Internet more easily and

comfortably.

If we understand the Internet as a kind of mass medium, then the possibility surfaces that the Internet is in the process of replacing or substituting for a part of traditional media (i.e., television, radio, newspapers, magazines, books, and so on) (Chou & Chen, 2000). Grohol (1999) suggests that societal acceptance and promotion of the Internet must also be considered. If most of the information we need in our daily lives (e.g., from mass media) can be easily and cheaply obtained from the Internet, and activities (e.g., writing letters, making phone calls) can also be carried out from the Internet, it is no leap to predict that more and more people will spend more and more time on the Internet.

Young (1998) concludes that the Internet itself is not addictive, but specific applications embedded with interactive features appear to play a significant role in the development of pathological Internet use. Griffiths (1997, 1998) argues that the *structural characteristics* of particular activities are responsible for reinforcement, may satisfy users' needs, and may actually facilitate excessive or pathological use. Structural characteristics, in his words, refer to the features that manufacturers design into their products. For example, the high degree of "interactivity" embedded in chat rooms and games may define alternative realities for their users. The "anonymity" of some Bulletin Board Systems may encourage the verbal disinhibition of many Taiwan high school students (Lin & Tsai, 2000). Similarly, the "undo" button, which allows gamblers to click on the screen and then automatically redo the last bet, may draw more and more gamblers to "virtual casinos" (King & Barak, 1999). Griffith (2000) argues that by examining such structural characteristics, we may gain a better understanding of what users' needs are, how information is presented or misrepresented, and how users' cognition is influenced and distorted.

**Internet Users**
In addition to examining the Internet itself and its contents, it is also important to examine what user's needs are, and how the Internet meets those needs.

Suler (1999) argues that understanding such needs can illuminate how and why some people become pathologically involved with the Internet. The six needs he identifies include (1) sexual needs, (2) the need for an altered state of consciousness, (3) for achievement and mastery, (4) for belonging, (5) for relationships, and (6) the need for self-actualization and the transcendence of self.   In this section, *sexual needs*, *the need for achievement and mastery*, and *the need for pleasure* are discussed. The need for belonging and the need for relationships are discussed in a later section.

Sex is always a popular topic in mass media; sex on the Internet—"cybersex" or "netsex" —
is no exception. Suler (1999) claims that people become preoccupied with online sexual
activities for the same two basic reasons people exhibit obsessive behavior regarding sex in
any context: satisfaction of biological needs, and a variety of purely psychological and social
needs. Sexual pursuits on the Internet can be both social and non-social. Social cybersex can
become addictive because it is an easily accessed, anonymous, and medically safe way to
satisfy one's biological drive and psychological needs. In a non-social sexual situation,
Internet users can easily and anonymously obtain pornographic images and animations and
video clips; the Internet offers an almost infinite supply of such materials. Morahan-Martin &
Schumacher (2000) report that pathological users are more likely than others to use the
Internet's adults-only resources. Young (1997) also suggests that sexual fulfillment is one of
the potential explanations for pathological Internet use. However, Delmonico & Carnes (1999)
argue that the process of becoming sexually addicted is a very complex one, and while the
Internet provides a powerful way for sex addicts to act out their addictions, researchers have
yet to provide conclusive evidence to support a claim that Internet use and sexual addiction
have a causal relationship.

Suler (1999) also discusses the Internet's ability to fulfill users' needs for achievement and
mastery.  For many users who enjoy mastering the various technical features of software
applications, computers and networks offer a motivating and rewarding cycle of challenge,
experimentation, mastery, and success. For users who are less motivated by technological
mastery, the challenges of discovering and becoming familiar with the various cultures and
peoples represented on the Internet can be a never-ending source of fulfillment of curiosity
and self-esteem.  However, problems occur, as Suler notes, when obsessions with Internet
achievement and mastery become a never-ending pursuit, but underlying needs are not fully
met by Internet use. Kandell (1998) also works with the concept of users' desire to exercise
control over the computer and the Internet. This sense of control can be realized in
human-computer contexts by a series of command-actions, as well as in interpersonal
contexts wherein the user decides what, when, where, and with whom to communicate, and
how to proceed with such communication.

Suler's notion of the need for an altered state of consciousness (Suler, 1999) raises similarly
interesting questions as Young's concept of *unlocked personalities* and creating *online
persona* (Young, 1997). Suler argues that people have an inherent need to alter their
consciousness, to experience reality from different perspectives, and cyberspace may be a
new and important arena in which to satisfy that need. For example, one's sense of time,
space, and personal identity can be changed on the Internet. Moreover, online personas,
according to Young, offer individuals an outlet for experimenting with accessing different

parts of their personality, and allowing individuals to expand the range of emotions experienced and expressed toward others. Morahan-Martin (1999) also believes that the ability to change oneself online—an ability enhanced by the Internet—can be liberating. The ability to alter self-presentation, for example, to change the way other people perceive you, allows users to try out different ways of presenting themselves and interacting with others. These experiments are healthy most of the time; however, problems emerge when people have difficulty in "logging off" from their online personas as well as from the Internet.

Four studies in particular have emphasized users' need for pleasure, and their pursuit of fulfillment of that need from the Internet. Indeed, people need fun, relaxation and pleasure to live balanced lives. Scherer (1997) finds that dependent Internet users report more personal or leisure time online (M = 7.8 hours) than nondependent users (M=3.7 hours). In other words, Internet-dependent students spend twice as much time online for leisure activities than do other students. Chou, Chou & Tyan's study (1999) found that Taiwan college students' Internet addiction scores were positively correlated with their total communication pleasure scores, in particular the "escape pleasure" scores and "interpersonal relationship pleasure" scores. Internet addicts seem to agree that they experience more pleasure in escaping from real life worries and responsibility through the pleasures of communicating with others online.

Chou & Hsiao's study (2000) also found that the addicted group's pleasure experience scores were significantly higher than those of the non-addicted group. Morahan-Martin & Schumacher (2000) report similar findings: the Internet provides a place to relax, escape pressures, and seek excitement. In their study, those with Internet-related problems were more likely than others to use the Internet for recreation and relaxation, wasting time, and gambling. Before the Internet gained its present popularity (when computers were mostly standalone), Griffith (1991) had already observed that some people used computer games for arousal or excitement while others used them as a form of escape. Problems arose when people gave up almost all other leisure time and activities to pursue online pleasures, exhibiting an intense preoccupation with the Internet.

**The User and User Interactions on the Internet**

The Internet, in many ways, is not only an information superhighway, it is a powerful social domain that connects its users around the world. As mentioned above, Suler (1999) argues that whether Internet use is healthy, pathologically addictive, or somewhere in between is determined by users' multiple needs and how the Internet meets those needs. In particular, he addresses two interpersonal needs: *the need to belong* and *the need for relationships*. Everyone needs interpersonal contacts, social recognition, and a sense of belonging to live

healthy and balanced lives. Young (1997) also provides an explanation of online "social support" for Internet addiction. Social support is formed by groups of people who engage in regular computer-mediated communication with one another over extended periods of time. With routine or frequent visits to a particular newsgroup, chat room, or Bulletin Board System, in Taiwan's case, familiarity and a sense of belonging can be established. As Morahan-Martin (1999) observe, the more time users spend online, the more likely they are to use the Internet for emotional support, meeting new people, and interacting with others. Young (1997) argues that a group dynamic of social support answers a deep and compelling need in people, especially those whose real lives lack social supports.

Qualitative as well as quantitative analysis indicates that two of the leading factors underlying pathological use of the Internet are the "anonymity" and the "interactivity" of online interpersonal communications. Young, Pistner, O'Mara, and Buchanan (1999) suggest that anonymity is associated with four general areas of dysfunction. Among them, two are interpersonal, the first being that the Internet provides a virtual context in which overly shy or self-conscious individuals are allowed to interact in a socially safe and secure environment. However, over-dependence on online relationships may result in significant problems with real life interpersonal and occupational functioning. The second dysfunction involving the anonymity of the Internet is cyber-affairs or extramarital relationships formed online which negatively impact marital or family stability. Scherer (1997) also argues that the anonymous nature of some Internet services and the elimination of visual cues may decrease social anxieties in online relationships for college students.

As mentioned above, "interactivity" has two aspects of particular importance for this discussion: human-computer interactions and human-human interactions. The Internet not only provides its users with the opportunity to encounter new people, it also provides additional—if not primary—communication tools for coping with existing relationships. This is frequently observed on college campuses. Scherer (1997) has found that 97.7% of college-student subjects have weekly access to the Internet in order to maintain relationships with family and friends. Chou & Hsiao (2000) provide similar findings: one student subject noted that, "You know somebody is always out there, you are not alone." The authors observed that this "accompaniment" function is more desirable for many users than that of a television set or a radio, because the interactive feature of the Internet enables college students to connect with others reciprocally at any time; they do not just passively receive broadcast information from outside.

Since a large portion of Internet users—and abusers—may be found on college campuses, Kandell (1998) discusses the unique vulnerability of college students to Internet addiction.

He argues that late adolescents and young adults contend with strong psychological and developmental dynamics. College-age students and non-students face two tasks: developing a sense of identity, and developing meaningful and intimate relationships. In some cases, addictive behavior serves as a coping mechanism for adolescents having trouble negotiating these developmental challenges. Kandell notes that college students frequently overuse the Internet's two-way communication applications such as chat rooms, email, and Multi-User Dimension games. The danger for college students lies in the possibility that their Internet may become the central focus of their campus lives—particularly since most students are already negotiating the difficult terrain of identity and relationships.

**Concluding Remarks**

As Rudall (1996) remarks, most psychologists have told us that we should not be surprised at the evolution of new behavioral conditions when technological advances are changing our society so rapidly and in such revolutionary ways. Indeed, we should not be surprised, but we must be prepared to face the notion that the Internet is changing the way we live, and not always for the better. Young (1999b) notes that the study of Internet addiction is often complicated by the perceived value of technological growth, by the societal promotion of Internet use, and by the positive image of the Internet. However, as Kendall's analogy (1998) suggests, while exercise is good and people require it, over-exercise may have a destructively negative impact on human health. Internet use may be similar in the disparity of its impact, determined almost exclusively by amount and type of use.

The above review of studies on reasons of Internet addiction has progressed along with the growth of the Internet itself. From one perspective, the findings in this paper suggest that over-use or abuse of technology can have significant negative impacts on our lives. From another perspective, existing findings lead to reflection on how to appropriately and safely use technology. As Stern (1999) states, technologies, by definition, increase our capacities and abilities. However, at the same time, they may also enhance our ability to produce maladaptive behavior, and expose both frailties and inabilities. It is crucial for us to recognize that technologies are bound to impact on us in both positive and negative ways. Research on Internet addiction is one step toward understanding and evaluating the effects of these impacts.

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