



November 2009

The Impact of the Internet on Deviant Behavior and Deviant Communities

Abstract

Online deviant behavior refers to a range of activities, some considered illegal, some considered amoral, many considered both. The Internet has transformed the accessibility of information and enabled individuals with common beliefs to find each other and reinforce behaviors considered unacceptable. Pathological individuals, once limited by time, space, and societal constraints, use virtual communities to communicate and organize. Less clear is the extent to which the Internet has increased or modified the prevalence of certain deviant behaviors. This literature review summarizes current research on three commonly researched types of Internet deviance (i.e., sexual deviance, self-harm groups, and hate groups) with the goal of highlighting common findings that will enhance our understanding of the role(s) that the Internet plays in supporting or encouraging deviant behaviors. Theories and methods used to study these behaviors are briefly reviewed and policy implications are considered.

Overview

Researchers are only beginning to understand how the Internet influences people's behavior and how people use new communication technology to form and maintain relationships, pursue interests, and otherwise engage in a virtual world. What is understood is that the Internet efficiently connects individuals who would previously have been isolated from one another. These individuals can now find and communicate easily with each other, even given large geographical dispersion, often forming social groups that validate and support their identities and behaviors. Importantly, this activity is done in relative anonymity, which contributes to close relationship formation because of reduced risks of self-disclosure (Amichai-Hamburger, 2005; Bargh & McKenna, 2004).

There is a growing sense that the Internet presents some unique opportunities for deviant behavior (Rogers, Smoak, & Liu, 2006, p. 246). First, it confers new opportunities for deviance, such as the development of virusware, cyber terrorism, computer hacking, online harassment, and certain self-harm behaviors (Giles, 2006; Joinson, 2005). Second, with its ease of use and ready, unbridled access to information, the Internet has facilitated and perpetuated existing crimes (e.g., fraud, identity theft, and money laundering). As Joinson (2005, p. 5) notes, “people have always lied, cheated, and stolen, but the Internet enables some of them to do it more easily, quickly, and cheaply.”

By its very nature, the Internet affords individuals the ability to click and choose whatever information-seeking behavior appeals to them, from passively reading Web site text to participating in active bulletin boards and group discussions, or downloading audio clips or videos (Adler & Adler, 2008). Thus, some contend that the Internet provides a fertile breeding ground for groups interested in extreme or negatively viewed behaviors (Deshotels & Forsyth, 2007; Durkin, Forsyth, & Quinn, 2006) to the extent that some have wondered whether loner deviants in cyberspace can exist (Adler & Adler, 2008). Individuals can easily find others in cyberspace who share their deviant proclivities—from pedophiles (Durkin & Bryant, 1999; Jenkins, 2001), to people who actively seek sexually transmitted diseases (i.e., “bug chasers”) (Groves, 2004), to self-injurers (Adler & Adler, 2008)—and these communities bestow reinforcing and validating benefits to users. Jenkins (2001) describes the safety and freedom pedophiles experience in the virtual world that runs counter to their deviant loner status in the real world. Having validation from others, for example, that one is not “crazy” or “alone” confers a substantial incentive for increased participation in such forums. In short, the Internet is well situated and well suited to host a continuum of deviant behaviors.

Across the landscape of scientific studies examining deviant Internet behaviors, three general categories emerge: (1) sexual deviance (e.g., pornography use, online pedophilia); (2) social support groups that promote negative behaviors (e.g., self-harm Web sites, such as self-injury and pro-anorexia Web sites); and, (3) hate groups (e.g., white supremacy groups). The popular media have generally raised alarm about each of these types of online deviance as well, resulting in general agreement that the Internet is a powerful instrument for influencing certain behaviors at a minimum or is directly responsible for deviant behaviors altogether (e.g., Anderson, 2001; Ash, 2002; BBC News, 2004; Bennett, 2008; Brooke, 2001; Columbus Dispatch, 2006; Depowski & Hart, 2006; Eichenwald, 2006; Reed, 2007; Scott, 2000; Tanner, 2006; Uhlenhuth, 2006; Van Der Leun, 2001; Wolf, 2009). However, within the scientific community, there is less conviction about the extent to which the Internet has served as an important tool for influencing initiation into any of these behaviors.

Each of these categories is described below, with the goal of highlighting the key findings about these groups in particular that might advance our understanding of the role(s) that the Internet plays in supporting or encouraging deviant behaviors. Proposed theories are discussed where applicable.

Sexual Deviance

A recent literature review of the Internet's impact on sexuality in general concluded that "sexually related online activities have become routine in recent years for large segments of the population in the Western world" (Dohring, 2009, p. 1089). The impact of the Internet on the pornography industry alone is staggering. Quinn and Forsyth (2005, p. 192) cite that in a given year, Internet pornography is a \$3 billion industry, with about 4.5 million Web sites containing pornographic content, encompassing 25% of total search engine requests, and with more than 75 million people accessing pornographic sites. A recent experiment yielded the conclusion that many casual Web surfers are easily tempted by hardcore pornography. Specifically, Demetriou and Silke (2003) developed a dummy Web site which was advertised on other sites as having free software downloads. The goal was to see how many visitors tried to access the illegal or deviant materials linked on the Web site (which did not work). In an 88-day period, more than half of the Web site's visitors (457 of the 803) tried to access the hardcore pornographic images, although they originally entered the Web site for other reasons.

Other studies have attempted to understand the correlates of online consumers of pornography in general. For example, some sociological research suggests associations of online pornography with unhappy marriages and weak ties to religion among adults (Stack, Wasserman, & Kern, 2004) and poor social ties to family, school, and society among adolescents (Mesch, 2009). A psychologically based study found that adolescent participants scoring high in psychoticism used the Internet in deviant and defiant ways, including viewing pornography (Amiel & Sargent, 2004).

For those on the far end of the sexual deviance spectrum, the versatility, speed, and visual medium offered by the Internet are well suited for consumers who reach new extremes quickly (Durkin, Forsyth, & Quinn, 2006; Quinn & Forsyth, 2005). One of the most provocative and well-researched areas within the online sexual deviance literature is pedophilia. Typologies of online pedophiles (e.g., Beech, Elliott, Birgden, & Findlater, 2008; Krone, 2004; Lanning, 2001) and theories to explain the etiology of online pedophilia (Elliott & Beech, 2009) have been proposed, while others have examined how the Internet domain is used among communities of pedophiles (e.g., Durkin, 1997). It is generally agreed that the Internet connects pedophiles such that they can rapidly exchange images, locate and groom victims, and maintain and develop networks (Beech, Elliott, Birgden, & Findlater, 2008; Durkin, Forsyth, & Quinn, 2006). Durkin and colleagues (2006, p. 599) note the prominent role the Internet plays in affirming and validating identities of pedophiles, and in serving as a platform to recruit those who have a proclivity toward pedophilia. The vast proliferation of online child pornography indicates a fairly substantial group of consumers who are increasingly becoming more extreme in their tastes (Beech, Elliott, Birgden, & Findlater, 2008).

Self-Harm Cyber Communities

Prior to the advent of the Internet, individuals engaging in self-harm behaviors (e.g., anorexics/bulimics and self-cutters) were more or less a group of loners (Adler & Adler, 2005;

Giles, 2006; Whitlock, Powers, & Eckenrode, 2006). In particular, pro-anorexia (pro-ana) and pro-bulimia (pro-mia) Web sites have received substantial attention from health professionals, public health officials, and researchers (see the literature reviews in Brotsky & Giles, 2007; Shade, 2003). The controversies surrounding these Web sites center on whether these forums reinforce destructive behaviors by providing encouragement and tips on purging, starving, and hiding certain behaviors from friends and family. Early studies of these Web sites reported that visitors are warned in the form of “dares” about these practices on the homepages; visitors already engaged in such behaviors are reinforced by propaganda praising the virtues of self-starvation, and the Web site names are often ironic: Operation Enduring Thinness, I Love You to the Bones, and Fat Like Me (Shade, 2003).

Recent research has found that group identity and membership has become more salient among these online groups given the negative publicity of their Web sites (Giles, 2006). Thus, issues surrounding whether anorexia/bulimia represents an illness, lifestyle, or disease have been explored, and whether the group should use the terms “ana” or “mia” given the negative attention these words elicit (Giles, 2006). Recent work suggests that the central function of these sites is to support members, whether that means maintaining the disorder or choosing treatment (Brotsky & Giles, 2007).

The Internet has also been blamed for increasing the number of individuals involved with self-harm, ranging from sites that espouse the virtues of physical harm (e.g., cutting, burning) to psychological harm (pro-suicide sites). This is particularly troubling because some evidence shows that people who are lonely or distressed are more likely to surf the Internet (Sher, 2000). Within this literature, more work has focused on the physical self-injury sites among adolescents and adults.

Self-injury research has illuminated some disturbing correlates to self-injury behaviors among adolescents. Youth reporting deliberate self-harm have been found to be more likely to report risky online behavior (e.g., having a sexual screen name, talking about sex with someone they met online, and submitting personal information to someone they met online) (Mitchell & Ybarra, 2007). Another study of adolescents (aged 12 to 20 years) demonstrated that online interactions provided social support while at the same time normalizing and encouraging self-injurious behaviors (Whitlock, Powers, & Eckenrode, 2006).

Similarly, Adler and Adler (2008) found that their adult subjects used the Internet to support and reinforce their practices and beliefs. This study showed that subjects visited Web sites based on their differing levels of communication and support needs, the amount of Web site traffic (e.g., active chat rooms), and the Web site’s demographic composition (Adler & Adler, 2008). Moreover, many of these self-injury Web sites are marketed to specific groups (e.g., teen-oriented Web sites) (Adler & Adler, 2008) and, as in other studies (Whitlock, Powers, & Eckenrode, 2006), Adler and Adler’s subjects reported how the Internet facilitates information sharing with respect to best self-injury techniques. Memberships in multiple online communities also allow self-injurers to express different identities. For example, although one

of the subjects was the webmaster of a self-injury recovery site (on which he claimed to be self-injury-free for 2 years), he was also an active cutter who participated as an active self-injurer on another Web site (Adler & Adler, 2008, p. 38).

Although anecdotal evidence suggests that the Internet can facilitate successful suicide pacts among strangers (Mehlum, 2000), there is no hard evidence suggesting that Internet sites alone can “convert” sympathetic visitors into active participants in the communities of anorexics, bulimics, or self-injurers. However, there is general agreement that in the absence of the Internet, these individuals could not have found each other nor supported each other so easily. Brotsky and Giles (2007, p. 93) concluded, “Prior to the late 1990s, an individual with an eating disorder had very few opportunities to discuss his or her condition other than medical or mental health consultations, and emotionally charged encounters with friends and family.”

Hate Groups

Hate groups continue to attract the attention of researchers who are intent on understanding how the Internet influences aggressive or violent behaviors and beliefs. Although the efficacy of hate group Web sites remains unclear (Gerstenfeld, Grant, & Chiang, 2003), content analyses of American hate group Web sites show that the majority of these sites sell merchandise, contain links to other related sites, and include interactive media content (e.g., games) and racist symbols (e.g., swastikas). Although very few of them openly espouse hatred or advocate for violence even if they are violent groups (Blazak, 2001; Douglas, McGarty, Bliuc, & Lala, 2005; Gerstenfeld, Grant, & Chiang, 2003; Glaser, Dixit, & Green, 2002), their persuasion is keen. Lee and Leets (2002) showed that adolescents were easily persuaded by the implicit story-telling style often used by hate groups to advance their cause.

Hate groups often target vulnerable “lone wolves” who seek companionship, reinforcement, and protection. In fact, recruitment is a key component of most hate group Web sites because members either age out of the group or drop out for other reasons (Blazak, 2001). Supremacist Web sites use sophisticated methods of persuasion to target more “strained” groups who experience threats to their economic status crisis (e.g., factory layoffs), threats to racial or ethnic status (e.g., growth in a minority population), threats to gender status (e.g., conflict over female participation in male-dominated activities), or threats to heterosexual status (e.g., gay pride events) (Blazak, 2001). Youth, who are the most avid users of the Internet, are frequently targeted (Blazak, 2001; Chau & Xu, 2007; Gerstenfeld, Grant, & Chiang, 2003) and are perhaps the most vulnerable to hate group messages (Lee & Leets, 2002).

The Internet provides several advantages for hate groups, including the following: (1) it is an efficient, effective method to recruit cheaply; (2) it allows for careful control over the group image, which is something that cannot be maintained in the mainstream media; (3) it can lend credibility and respectability to hate groups’ causes, with Web sites containing carefully crafted interactive games, detailed stories, and histories; (4) it provides members some anonymity;

and (5) it might be a particularly fruitful avenue for recruitment because those who spend substantial amounts of time on it are lonely (Sher, 2000). Blazak's (2001) findings suggest that young, lonely individuals fit the profile of those who are targeted by supremacist groups.

Future Directions in Research

Researchers face numerous theoretical and methodological challenges in trying to assess the influence of the Internet on deviant behavior. A common denominator across many of these studies is the fear that the Internet will generate a critical mass of deviants, which would foster justification for socially unacceptable forms of behavior, strengthen the development of pathological disorders, or encourage criminal behaviors. This could include some causal relationship between online activity and deviant behavior among persons who had not engaged in these behaviors before. The challenges and gaps identified in previous studies suggest several possible directions for future research within this topic area.

First, longitudinal research is needed to explore the potential causal relationships between passive online behaviors leading to engaging in criminal acts. This issue is of critical importance in the context of pedophilia, for example, but other types of violent behavior also deserve attention (e.g., "virtual" rape or snuff sites, hate behaviors, etc.).

Second, identifying potential risk factors (i.e., individual, environmental, social, and psychological characteristics) associated with online offenders "crossing over" to more egregious offline offenses is needed to buttress this research.

Third, ethical concerns surround researching vulnerable populations (e.g., children) and emotionally fragile populations (e.g., cutters). Ethical standards are particularly salient in light of the deception used by many studies in this field and because so many of them lack an informed consent process, the ability to verify mental competency, and a debriefing session.

Fourth, more theoretical work is needed across each of the areas summarized above to situate these deviant behaviors in a larger context and to guide more rigorous empirical research. Durkin and colleagues (2006, p. 600) have called forth Goffman's (1963) work on stigma to draw parallels between the Internet and what he described as "back places," or places where people are open about their peculiar inclinations and depend on one another for support. Other work has questioned the extent to which the Internet is different when it comes to influencing sexuality, or whether the Internet is merely one of a long line of technologies representing cyclical shifts in sexual media (Stern & Handel, 2001). Stern and Handel (2001) concluded that although the Internet is relatively new, the concerns about its power and ability to influence social mores and behaviors have been applied to nearly all of its technological precursors.

Lastly, as stated earlier, most of the work in these areas is located in the province of qualitative methods so many of the studies described above are not generalizable. Future work in these areas will profit from advances in Internet methods in general, which may address the issues concerning representative populations, response rates, and identity issues.

Implications for Radicalization

The Internet is well suited to support deviant lifestyles and behaviors because it is unregulated, information is privately posted and can be obtained freely and anonymously, and it connects individuals with others who practice the same deviant behavior. What is less known is the extent to which any of these types of Web sites serve as gateways or catalysts into more active participation of a particular deviant impulse or tendency. To date, little is known about the short- and long-term effects of deviant Web sites on individuals.

The research summarized in this brief suggests that some micro- and macro-level factors should be considered in the context of online deviance. The self-harm and sexual deviance literature shows how individual characteristics (e.g., loneliness, psychoticism, low self-control, poor social ties) are risk factors for online deviance, ranging from viewing softcore pornography to engaging in self-injury. Characteristics such as these may serve as efficient markers for law enforcement officials who are attempting to winnow a panel of suspects.

The online hate group literature suggests that macro-level contexts that make groups of individuals vulnerable socially, economically, and psychologically could provide a breeding ground for recruiting individuals into potentially violent movements, particularly for young people. This would be especially salient in areas where there is abject, widespread poverty, war, or some catastrophic event with long-lasting devastating effects (e.g., Hurricane Katrina's impact on New Orleans). As fringe groups gain more traction in terms of numbers of Web sites and contacts made through these Web sites, individuals who would otherwise be disinhibited by their proclivities (e.g., cutters, white supremacists) may begin to feel even more empowered to act on their impulses and beliefs.

Insofar as the Internet serves as a forum for groups to discuss goals, disagreements, and compromises, the open format of the Internet also permits law enforcement to monitor key changes and divergences within groups that are suspected of illegal or violent behaviors (Weimann, 2006). Certainly, the growth and exposure of the online pro-ana/mia communities gradually alerted public health officials to this trend so that appropriate health education countermeasures could be researched, employed, and monitored (e.g., Mitchell & Ybarra, 2007).

Although the Internet is a powerful tool for connecting people and rapidly spreading information, it is doubtful that most groups would rely solely on the Internet for communication and organization efforts. This may be particularly true for those groups that are convened for violent ends, given the risks for outside monitoring and sabotage. It is probable that groups are increasingly embracing other technologies, such as text messaging through cellular phones and Twitter. As a result, monitoring these emerging networks in real time—in addition to Internet monitoring—may be the most effective means for preventing extreme deviant (i.e., criminal) acts.

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References

Adler, P. A., & Adler, P. (2005). Self-injurers as loners: The social organization of solitary deviance. *Deviant Behavior*, 26(4), 345–378.

Adler, P. A., & Adler, P. (2008). The cyber worlds of self-injurers: Deviant communities, relationships, and selves. *Symbolic Interaction*, 31(1), 33–56.

Amichai-Hamburger, Y. (Ed.) (2005). *The social net: Understanding human behavior in cyberspace*. Oxford University Press.

Amiel, T., & Sargent, S. L. (2004). Individual differences in Internet usage motives. *Computers in Human Behavior*, 20, 711–726.

Anderson, K. (2001, August 30). Battling online hate. *BBC News Online-World, Americas*. Retrieved August 26, 2009 from <http://news.bbc.co.uk/2/low/americas/1516271.stm>

Ash, S. (2002, May 16). Hate groups use Internet to recruit. *The Record—Kitchener, Ontario*, p. B-3.

Bargh, J. A., & McKenna, K. Y. A. (2004). The internet and social life. *Annual Review of Psychology*, 55(1), 573–590.

BBC News. (2004, April 20). Internet driving hate site surge. *BBC News*. Retrieved August 26, 2009 from <http://news.bbc.co.uk/go/pr/fr/-/2/hi/technology/3641895.stm>

Beech, A. R., Elliott, I. A., Birgden, A., & Findlater, D. (2008). The Internet and child sexual offending: A criminological review. *Aggression and Violent Behavior*, 13, 216–228.

Bennett, J. (2008, December 29). Why she cuts. *Newsweek*. Retrieved August 26, 2009 from <http://www.newsweek.com/id/177135>

Blazak, R. (2001). White boys to terrorist men: Target recruitment of Nazi skinheads. *American Behavioral Scientist*, 44(6), 982–1000.

Brooke, J. (2001, December 23). Sex web spun worldwide traps children. *The New York Times*. Retrieved August 26, 2009 from <http://www.nytimes.com/2001/12/23/world/sex-web-spun-worldwide-traps-children.html>

Brotsky, S. R., & Giles, D. (2007). Inside the “pro-ana” community: A covert online participant observation. *Eating Disorders*, 15, 93–107.

Chau, M., & Xu, J. (2007). Mining communities and their relationships in blogs: A study of online hate groups. *International Journal of Human-Computer Studies*, 65, 57–70.

Columbus Dispatch. (2006, May 13). Two-edged sword: Web sites of hate groups, terrorists can give authorities the knowledge to stop them. *The Columbus Dispatch* (Columbus, OH), editorial.

Demetriou, C., & Silke, A. (2003). A criminological internet “sting.” Experimental evidence of illegal and deviant visits to a website trap. *British Journal of Criminology*, 43, 213–222.

Depowski, K., & Hart, K. (2006). “Pro-ana” web sites glorify eating disorders. *ABC News*. Retrieved August 26, 2009 from <http://abcnews.go.com/Health/story?id=2068728&page=1>

Deshotels, T. H., & Forsyth, C. J. (2007). Postmodern masculinities and the eunuch. *Deviant Behavior*, 28, 201–218.

Dohring, N. M. (2009). The Internet’s impact on sexuality: A critical review of 15 years of research. *Computers in Human Behavior*, 25, 1089–1101.

Douglas, K. M., McGarty, C., Bliuc, A.-M., & Lala, G. (2005). Understanding cyberhate: Social competition and social creativity in online white supremacist groups. *Social Science Computer Review*, 23, 68–76.

Durkin, K. F. (1997). Misuse of the internet by pedophiles: Implications for law enforcement and probation practice. *Federal Probation*, 61(3), 14-19.

Durkin, K. F., & Bryant, C. D. (1999). Propagandizing pederasty: A thematic analysis of on-line exculpatory accounts of unrepentant pedophiles. *Deviant Behavior*, 20, 103–127.

Durkin, K., Forsyth, C. J., & Quinn, J. F. (2006). Pathological Internet communities: A new direction for sexual deviance research in a post modern era. *Sociological Spectrum*, 26(6), 595–606.

Eichenwald, K. (2006, August 21). From their own online world, pedophiles extend their reach. *The New York Times*. Retrieved August 26, 2009 from <http://query.nytimes.com/gst/fullpage.html?res=9C02E3DF123EF932A1575BC0A9609C8B63>

Elliott, I. A., & Beech, A. R. (2009). Understanding online child pornography use: Applying sexual offense theory to internet offenders. *Aggression and Violent Behavior*, 14, 180–193.

Gerstenfeld, P. B., Grant, D. R., & Chiang, C.-P. (2003). Hate online: A content analysis of extremist websites. *Analyses of Social Issues and Public Policy*, 3(1), 29–44.

Giles, D. C. (2006). Constructing identities in cyberspace: The case of eating disorders. *British Journal of Social Psychology*, 45, 463–477.

Glaser, J., Dixit, J., & Green, D. P. (2002). Studying hate crime with the Internet: What makes racists advocate racial violence? *Journal of Social Issues*, 58(1), 177–193.

- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice Hall.
- Grov, C. (2004). "Make me your death slave": Men who have sex with men and use the internet to intentionally spread HIV. *Deviant Behavior*, 25(4), 329.
- Jenkins, P. (2001). *Beyond tolerance: Child pornography on the Internet*. New York: New York University Press.
- Joinson, A. N. (2005). Deviance and the internet: New challenges for social science. *Social Science Computer Review*, 23(1), 5–7.
- Krone, T. (2004). A typology of online child pornography offending. *Trends and Issues in Crime and Criminal Justice*, 279, 1–6.
- Lanning, K. V. (2001). *Child molesters: A behavioral analysis, fourth edition*. Arlington, VA: National Center for Missing and Exploited Children. Retrieved August 27, 2009 from http://www.missingkids.com/en_US/publications/NC70.pdf
- Lee, E., & Leets, L. (2002). Persuasive storytelling by hate groups online: Examining its effects on adolescents. *American Behavioral Scientist*, 45(6), 927–957.
- Mehlum, L. (2000). The internet, suicide, and suicide prevention. *Crisis*, 21(4), 186–188.
- Mesch, G. S. (2009). Social bonds and Internet pornographic exposure among adolescents. *Journal of Adolescence*, 32, 601–618.
- Mitchell, K. J., & Ybarra, M. L. (2007). Online behavior of youth who engage in self-harm provides clues for preventive intervention. *Preventive Medicine*, 45, 392–396.
- Quinn, J. F. & Forsyth, C. J. (2005). Describing sexual behavior in the era of the internet: A typology for empirical research. *Deviant Behavior*, 26, 191–207.
- Reed, B. (2007, January 15). Cutting on increase in teens, say experts. *The MetroWest Daily News*, Framingham, MA. Retrieved August 26, 2009 from <http://www.metrowestdailynews.com/homepage/8999002596093984767>
- Rogers, M., Smoak, N., & Liu, J. (2006). Self-reported deviant computer behavior. *Deviant Behavior*, 27(3), 245–268.
- Scott, K. (2000, February 7). Voluntary amputee ran disability site. *The Guardian, UK News*. Retrieved August 26, 2009 from <http://www.guardian.co.uk/uk/2000/feb/07/kirstyscott2>
- Shade, L. R. (2003, June). Weborexics: The ethical issues surrounding pro-ana websites. *Proceedings of the Fifth International Conference on Computer Ethics—Philosophical Enquiry*. Boston College, Chestnut Hills, MA, pp. 107–116. Retrieved August 25, 2009 from <http://artsandscience1.concordia.ca/comm/shade/word/Weborexics.pdf>
- Sher, L. (2000). The internet, suicide, and human mental functions. *Canadian Journal of Psychiatry*, 45, 297.

Stack, S., Wasserman, I., & Kern, R. (2004). Adult social bonds and use of internet pornography. *Social Science Quarterly*, 85(1), 75–88.

Stern, S. E., & Handel, A. D. (2001). Sexuality and mass media: The historical context of psychology's reaction to sexuality on the internet. *The Journal of Sex Research*, 38(4), 283–291.

Tanner, L. (2006, June 5). Deliberate self-injury emerges as problem among the young. *The Associated Press, St. Louis Post-Dispatch* (MO), p. A5.

Uhlenhuth, K. (2006, May 1). Internet sites encourage self-injuring. *The Kansas City Star*, (MO), p. A1.

Van Der Leun, G. (2001, June 24). Twilight zone of the id. *Time Magazine*. Retrieved August 26, 2009 from http://www.time.com/time/magazine/article/0,9171,133825,00.html?iid=digg_share

Weimann, G. (2006). Virtual disputes: The use of the internet for terrorist debates. *Studies in Conflict & Terrorism*, 29(7), 623–639.

Whitlock, J. L., Powers, J. L., & Eckenrode, J. (2006). The virtual cutting edge: The internet and adolescent self-injury. *Development Psychology*, 42(3), 407–417.

Wolf, C. (2009, June 17). *The hatemongers' new tool: The Internet*. Retrieved August 25, 2009 from <http://www.cbsnews.com/stories/2009/06/16/opinion/main5092743.shtml>
