

The Media and Aggression: From TV to the Internet

Ed Donnerstein

University of Arizona

Recently the American Academy of Pediatrics (AAP) issued a Policy Statement on media violence (Council on Communications and Media, 2009). The statement was clear in terms of its findings, position, and recommendations. In rather straightforward terms the AAP noted:

Exposure to violence in media, including television, movies, music, and video games, represents a significant risk to the health of children and adolescents. Extensive research evidence indicates that media violence can contribute to aggressive behavior, desensitization to violence, nightmares, and fear of being harmed. Pediatricians should assess their patients' level of media exposure and intervene on media related health risks (p.1495).

The recommendations for parents, practitioners, and the industry were equally frank and suggested some of the following:

- Remove televisions, Internet connections, and video games from children's bedrooms.
- Avoid screen media for infants or toddlers younger than 2 years.
- Avoid the glamorization of weapon- carrying and the normalization of violence as an acceptable means of resolving conflict.

- Eliminate the use of violence in a comic or sexual context or in any other situation in which the violence is amusing, titillating, or trivialized.
- Eliminate gratuitous portrayals of interpersonal.
- If violence is used, it should be used thoughtfully as serious drama, always showing the pain and loss suffered by victims and perpetrators.
- Video games should not use human or other living targets or award points for killing, because this teaches children to associate pleasure and success with their ability to cause pain and suffering to others.

I would expect that the AAP's statement and recommendations would probably be accepted by a substantial majority of researchers in the area of media violence, and aggression in general, including those participating in this Symposium (i.e., Huesmann, 2007; Anderson, Gentile, & Buckley, 2008; Strasburger, Jordan, & Donnerstein, 2010). And as a public health organization the AAP is not alone in their recommendation, as groups like the American Medical Association, the American Academy of Child and Adolescent Psychiatry, and the American Psychological Association have all issued statements over the years pertaining to the "harmful" impact of media violence on children.

In this chapter we will overview this and other research related to these harmful effects, but with an additional focus upon how violence is disseminated through the lens of newer media technology. Much of the research on media violence has traditionally been the media of television, and of course video games. Not that this media form is obsolete, but rather for many children and adolescents the medium for

this viewing might not be the time-honored television screen, but rather the Internet, which offers an array of new issues to consider. In the next section we will examine the role of the Internet as it relates to the concerns we have about the influence of media violence.

The Internet as a Medium for Media Violence

Unlike traditional media such as TV, there are relatively few studies on the impact of Internet violence. While we will review these later, it is interesting to note the recent commentary of researchers about the potential, and far-reaching influences of this “newer” technology:

With increased use of the Internet among young people, little is known about how exposure to violence online fits into our understanding of the effect of violent media. The Internet is fast becoming the telephone of the 21st century, with an estimated 97% of young people between the ages of 12 and 18 years using online communication. Almost all youths now have online access, and this access may increase opportunities for children and youths to be exposed to violence (Ybarra et. al., 2008)

The Internet holds tremendous potential for our nation’s youth; however, the misuse of the Internet to prey on them is a serious problem requiring action by legislators, families, communities, and law enforcement (CACRC 2006).

For many youth it has become the major source of information and entertainment. It is perhaps the one medium where children may come across non-intentionally content that is less available in traditional media such as severe violence, violent

pornography, child pornography, hate groups. In addition, due to its anonymity other risks such as bullying are also increased (Feilitzen, 2009).

The Internet becomes the medium in which traditional media like TV, film, and video games can be downloaded, viewed and processed. It is also a vehicle, however, for the creation of aggressive images and the acting out of aggressive behavior. It is both passive and active. It incorporates our conception of how children and adolescents process conventional media violence (like the multitude of studies conducted on this issue) but adds a new dimension actually being aggressive. We can see in the figure below (which is adapted from comments by von Feilitzen, 2009) how this might be conceptualized.

The Internet and Mass Media Violence



The Internet, or in my case an iPhone, allows the individual to view traditional TV/film and video games through live streaming or downloads. For the child or

adolescent, access to what might be considered restricted materials (adult rated) is much easier via both legal and “illegal” outlets. Websites offer another dimension for both the viewing of violence but also the creation and uploading of violent materials. Web sites offer not only the prospect of viewing more severe violence (e.g., real decapitations and executions) but access to hate and terrorist groups. The viewer, however, can now become the creator of violent images in an almost formulaic manner and place that material across the globe instantaneously. Finally, websites and in particular social networking sites, blogs, chat rooms, and e-mail allow not only for the creation of aggression, but the ability to actually aggress against another (i.e., cyber-bullying). One phenomenon, which brings this to a “strange” confluence, is “happy slapping” where a victim is assaulted and the depiction is uploaded to the internet. As Calvete et. al, (2008) note adolescents who use their mobile phones with this aim are characterized by several types of aggressiveness, justification of violence beliefs and high exposure to violence in the family and media.

As we can see, unlike traditional media such as TV, the Internet gives children and adolescents access to just about any form of content they can find (e.g., Livingstone & Haddon, 2009). For the first time, these individuals will be able (often with little effort) to have the ability to view almost any form of sexual behavior, violent content, or other risk related content (Strasburger, Jordan, & Donnerstein, 2010; Donnerstein, 2009). Unlike years past, this can be done in the privacy of their own room with little knowledge of their parents. The interactive nature of the Internet, which can lead to more arousal and more cognitive activity, would suggest

that influences such as those found from media violence would be facilitated (see Huesman, 2007).

In thinking about the Internet, the notion of “violence” is much broader than in traditional media. Feilitzen (2009) prefers the term *mediated violence*, which is, “every mediated act intended to hurt or the consequences of such an act” (p.55). This would include visual, audio and printed representations of all forms of violence in mass media, digital games, websites, net communities, as well as acts of aggression through interpersonal and social media.

Media Use and the Child Audience

It is well known that children and adolescents spend more time with screen media than they do in any other activity except for sleeping (Strasburger, Jordan, & Donnerstein, 2010). In their national survey of media use, Kaiser (2010) found that children and adolescents were spending on average more time in front of a screen than in reading or outdoor activities. More interesting was the finding that those under the age of three, an age which many would suggest is more vulnerable to effects, over two-thirds use some screen media a day and a third are already using a computer. A child’s bedroom is no longer a place of isolation in that media technology is part of the furniture. Two thirds had a television set, one half had a VCR or DVD player or video-game console, and nearly one third had Internet access or a computer.

While it took decades for TV to become part of the family household, Internet use has achieved this in a short time frame. Recent research by the Pew Internet and American Life Project (2009) revealed that 93% of youth aged 12 to 17 are on-line

sometime during the day, and 71% have a cell phone. Whether it's watching videos (57%), using social networking sites (65%), or playing video games (97%), children and adolescents have incorporated new technology into their daily lives. These frequencies are also observed across 21 different countries within Europe. The EU Kids Online Project found that in 2005, on average 70% of 6-17 year olds used the Internet. By 2008, it was at 75% with the largest increase occurring among younger children (6-10) in which 60% were now online (Livingstone & Haddon, 2009).

In thinking about this use of the mass media, we need to remember that very often those who are the most vulnerable to negative impacts (e.g., aggression, deceptive advertising) are children, and their processing of the media is different than those of adults. In the first place, younger children interpret media messages differently. They pay more attention to perceptual features and those contextual features that are more salient, rather than plot. The understanding of consequences and motives are less cognizant. Children also have difficulty with fantasy and reality distinctions. This is extremely important in that when we examine the effects from exposure to media violence one critical contextual variable is the perceived reality of the aggression. What might be fantasy for an adult is not necessarily the case for a young child. Finally, children have difficulties and are less capable of linking scenes together. You and I recognize that the perpetrator of aggression was caught, punished, or reprimanded for their behavior in the final scene. A young child does not always perceive this relationship.

Context of Violent Portrayals: Is all Violence the Same?

While the research, as we will see later, is quite clear on the effects of exposure to media violence in both TV/Film and video games, we need to realize that not all violent portrayals pose the same risk of harm to viewers. Research indicates that some depictions of violence increase the risk of anti-social effects whereas others decrease such a risk (see Starsburger, Wilson & Jordan 2009). Simply put, the context or way in which violence is presented influences its impact on the audience. Based on an extensive review of studies in this area, researchers (i.e., Wilson, Smith, Potter, Kunkel, Linz, Colvin, & Donnerstein, 2002; Smith & Donnerstein, 2003) have identified a range of contextual features that influence how audiences will respond to televised violence (including advertisements, Tajima et al., 2008), and also video game violence (Horiuchi et. al., 2008). Those considered most important are:

Attractive Perpetrator: Studies show that viewers of all ages are more likely to emulate and learn from characters who are perceived as attractive. Thus, heroes and “good guys” who act violently pose more risk to the audience than do villains. As research has strongly suggested, one of the critical predictors of both short and long term effects from exposure to media violence is identification with the aggressor (Huesmann, 2007).

Attractive Victim: Just as the perpetrator is an important contextual feature of violence, so is the victim. The nature of the victim is most likely to influence audience fear rather than learning. Studies show that viewers empathize with good

characters more so than with bad ones, so violence against victims who are perceived as attractive can heighten audience fear.

Justified Violence: Viewers interpret an act of violence differently depending on a character's motives for engaging in such behavior. Certain motives like self-defense or protecting a loved one can make physical aggression seem justified. Studies show that justified violence increases the chance that viewers will learn aggression; such portrayals legitimize such behavior. In contrast, violence that is undeserved or purely malicious decreases the risk of imitation or learning of aggression.

Presence of Weapons: Characters can use their own physical strength to enact violence against a victim or they can use some type of weapon. Conventional weapons like guns and knives can increase viewer aggression because such devices often trigger the memory of past violent events and behaviors.

Extensive/graphic Violence: A violent incident between a perpetrator and a victim can last only a few seconds and be shot from a distance or it can persist for several minutes and involve many close-up views of the action. Research indicates that extensive or repeated violence can increase desensitization, learning, and fear in viewers.

Realistic Violence: Portrayals of violence that seem realistic are more likely to encourage aggression in viewers than are unrealistic scenes. Realistic depictions of brutality also can increase viewers' fear. However, this does not mean that cartoon or fantasy violence on television is harmless. Research shows that children under the age of 7 have difficulty distinguishing reality from fantasy on television. In other words,

what seems unrealistic to a mature viewer may appear to be quite real to a younger child. This helps to explain why younger children will readily imitate violent cartoon characters.

Rewards and Punishments: Violence that is glamorized or rewarded poses a risk for viewers, but so does violence that simply goes unpunished. Studies show that rewarded violence or violence that is not overtly punished encourages the learning of aggressive attitudes and behaviors. In contrast, portrayals of punished violence can decrease the chances that viewers will learn aggression.

Pain/harm Cues: Another important contextual feature involves the harmful consequences of violence. Studies indicate that showing the serious harm and pain that occurs from violence can discourage viewers from imitating or learning aggression.

Humor: Viewers interpret violence that is cast in a humorous light as less devastating and less harmful. Humor also may seem like a reward for violence. For these reasons, the presence of humor in a violent scene can increase the chances that viewers will imitate or learn aggression from such a portrayal. Humor can also desensitize viewers to the seriousness of violence.

It has been suggested that the average adolescent will have seen an estimated 200,000 acts of violence on television alone (Strassburger 2007). Much of this violence is presented in a sanitized and glamorized fashion, and in children's programming it often is presented as humorous (Strasburger, Wilson, & Jordan, 2009). The factors we listed above are important in determining the "risk" of

exposure primarily to young children. Portrayals with an attractive perpetrator, that are realistic, justified, go unpunished, and show no harm are the most problematic for young children. These types of media depictions occur most often in the types of shows viewed by children (e.g., Wilson et al, 2002).

Interactive media seems to be no different than traditional television when it comes to depictions of concern for children and adolescents. A recent analysis of video games revealed that more than half of all games contain violence, including 90% rated as appropriate for children aged 10 years and older (Anderson, Gentile, & Buckley, 2007). Contextual characteristics that are considered more of a risk for subsequent aggressive behavior have also been found in video games. In a recent analysis justified violence was found in 60% of the games, violence with weapons was found in 65%, and reward for violence in 89%. Those factors that we might consider as inhibiting aggression such as punishments for violence were found in only 26% of the games. (Horiuchi et al., 2008).

By definition the Internet encompasses all the types of violence depicted in traditional media and video games. While there is no major content analysis like those for traditional media, researchers acknowledge that more real world violence; hate groups; violent pornography and other forms of violence are more prevalent (Ybarra et al., 2008). There is currently a lack of data on how many children or adolescent are intentionally viewing these sites and whether the Internet's increased ease of access to these types of depictions has resulted in high rates of exposure among young viewers (Hamburger et al., 2009).

Media Violence Effects: Television, Video Games, and the Internet

In this section we will briefly examine the known effects of media violence on aggressive behavior. Even though the review is separated into three categories (TV, video games, Internet) the interrelationships are evident. Since one major goal of this chapter was to examine the unique aspects of newer technologies, in particular the Internet, this classification seemed more functional.

Television

In a report on youth violence, the Surgeon General of the United States (Surgeon General of the United States, 2001) identified a series of Risk Factors that were considered to (1) increase the probability that a young person will become violent, and (2) predict the onset, continuity, or escalation of violence. In considering these varying factors, the Surgeon General's report noted that more important than any individual risk factor is the accumulation of factors. When considering those factors most important in youth violence being a male had the highest effect size. Among other major factors and their effect sizes were the following:

Substance Abuse	.30
Antisocial Parents	.23
Weak Social Ties	.15
Media Violence	.13
Low IQ	.12

Broken Home	.09
Abuse parents	.07
Antisocial Peers	.04

While not being the major contributor, media violence is considered, especially when other factors are present, a significant force in the development and onset of aggressive behavior in youth. As researchers have strongly suggested, exposure to violent media needs to be part of the measures taken when risk factors for aggressive behavior are considered (Boxer, Huesmann, Bushman, O'Brien, & Mocerri, 2009; Bushman, Huesmann, & Whitaker, J. 2009).

Any critical examination of the literature would indicate that exposure to media violence can contribute to a range of anti-social effects on viewers. (Huesmann & Kirwil, 2007). The conclusion that violence on television contributes to negative effects on viewers is hardly novel. The effects that seem to be most pronounced are the learning of aggressive attitudes and behaviors, desensitization to violence, and increase fear of being victimized by violence (see Huesmann, 2007; Huesmann, & Taylor, L. 2006).

Over the last 40 years, several governmental and professional organizations have conducted exhaustive reviews of the scientific literature to ascertain the relationship between exposure to media violence and aggressive. These investigations have documented consistently that exposure to media violence contributes to aggressive behaviors in viewers and may influence their perceptions and attitudes about violence in the real-world. Heavy viewing of media violence is correlated with aggressive

behavior and increased aggressive attitudes (see Anderson, Berkowitz, Donnerstein, Huesmann, Johnson, Linz, Malamuth, & Wartella, 2003 for an extensive review). The correlation between viewing violence in the media and exhibiting aggressive behavior is fairly stable over time, place, and demographics (e.g, Huesmann, Moise, Podolski & Eron, L. D. 2003). Experimental and longitudinal studies also support the position that viewing televised violence is related causally to aggressive behavior. Even more important, naturalistic field studies and cross-national investigations reveal that viewing televised aggression leads to increases in subsequent real-life aggression and that such behavior can become part of a lasting behavioral pattern (Bushman et al, 2008; Huesmann, Boxer, & Bushman, 2009). These studies have been consistent in research conducted in a number of different countries (see Huesmann, 2007; Bushman & Huesmann, 2006).

It was also concluded that exposure to television violence may alter individuals' attitudes and behaviors towards violence in two particular ways. First, prolonged viewing of media violence may emotionally desensitize viewers toward real-world violence. As a result, individuals may develop calloused attitudes towards aggression directed at others and a decreased likelihood to take action on behalf of a victim when violence occurs. Second, exposure to media violence can contribute to increased fear in viewers about becoming a victim of real-world violence. As a result, individuals may become increasingly untrusting or suspicious of others and engage in a variety of self-protective behaviors. Research on the effects of cumulative exposure to television reveals that heavy viewers may develop attitudes and beliefs about the world that “match” or are very similar to the world presented on television. Because

television is filled with stories about crime and violence, heavy viewing can contribute to developing exaggerated perceptions of how much violence occurs in this world or unrealistic fears and beliefs about becoming a victim of violence e.g., Anderson et. al., 2003).

From a theoretical perspective, Huesmann (2007) and others (e.g., Anderson and Bushman 2002) would agree that the short-term effects of exposure to media violence are mostly due to (1) priming processes, (2) arousal processes, and (3) immediate modeling of specific behaviors (observational learning). Long-term effects seem to be due to (1) longer term learning of cognitions and behavioral scripts, and (2) the activation and desensitization of emotional processes.

Video Games

In terms of demonstrating increased aggressive behavior from exposure, the research on video games is as consistent as that with television violence (see Anderson, Gentile & Buckley, 2007; Anderson et. al., 2010 for an extensive review). Meta-analysis (i.e., Anderson 2004; Anderson & Bushman 2001; Anderson et.al, 2010) have been consistent in their findings. Effects from playing violent video games have been shown for:

- (1) increased aggressive behavior (Anderson et. al., 2007)
- (2) hostile affect (Carnagey & Anderson, 2005)
- (3) physiological arousal (Anderson & Bushman, 2001)

(4) aggressive cognitions (Anderson and Huesmann, 2003; Bluemke, Friedrich, & Zumbach, 2010)

(5) reductions in prosocial behavior from desensitization (e.g., Bushman & Anderson, 2009).

These results have been observed both in short term and longitudinal studies as well as cross-culturally (e.g., Anderson et. al, 2008; Anderson et. al., 2010).

Anderson (2000; 2007) has noted that that there are strong compelling reasons to expect that violent video games, due to their interactive nature, would have stronger effects on aggression than more traditional forms of media violence such as TV. As Anderson et. al., (2010) note:

It is true that as a player you are “not just moving your hand on a joystick” but are indeed interacting “with the game psychologically and emotionally.” It is not surprising that when the game involves rehearsing aggressive and violent thoughts and actions, such deep game involvement results in antisocial effects on the player (p. 21).

In video games the process of identification with the aggressor, active participation, repetitive actions, a hostile virtual reality, and reinforcement for aggressive actions, are all strong mechanisms for the learning and retention of aggressive behaviors and attitudes (Gentile & Anderson, 2003).

The Internet

There are a number of areas that need consideration when discussing the effects of the Internet as a potentially unique contributor to aggressive behavior. As we noted earlier, the Internet not only acts as a platform for the viewing of media violence, but is also a vehicle for the acting out of aggression. It is this later function that for many health professionals has been of prime concern. For that reason we will examine first the concerns about cyberbullying, and sexual exploitation. Following these reviews we will look at the content of violent media that might be considered unique, or certainly more accessible, on the Internet.

Cyberbullying. The one area that seems to be of prime importance is cyberbullying. It has become a significant social issue primarily among health care and other professionals (American Academy of Pediatrics, 2009). Olweus (1993) has defined bullying as follows:

A person is bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons, and he or she has difficulty defending himself or herself.

This definition includes three important components in that it is (1) aggressive behavior that involves unwanted, negative actions, (2) involves a pattern of behavior repeated over time, and (3) involves an imbalance of power or strength. Many would agree that cyberbullying, often referred to as Internet Harassment, incorporates these components and in many ways is similar to other forms of bullying (e.g., Heirman & Walrave, 2008; Williams & Guerra, 2007) but that it takes place over the Internet in

order to repeatedly harass, threaten, or maliciously embarrass. Research also suggests that Internet bullying shares common predictors with verbal and, to some extent, physical bullying (see Williams, & Guerra, 2007). It involves behaviors such as (e.g., National Crime Prevention Council, 2009):

- Sending unsolicited and/or threatening e-mail.
- Encouraging others to send the victim unsolicited and/or threatening e-mail.
- Sending viruses by e-mail (electronic sabotage).
- Spreading rumors.
- Making defamatory comments about the victim in public discussion areas.
- Sending negative messages directly to the victim.
- Impersonating the victim online by sending an inflammatory, message that causes others to respond negatively to the victim.
- Harassing the victim during a live chat.
- Leaving abusive messages on Web site guest books.
- Sending the victim pornography or other knowingly offensive graphic material.
- Creating a Web page that depicts the victim in negative ways.

Those conducting research in this area would acknowledge that victims of cyberbullying may experience many of the same effects as children who are bullied in person, such as a drop in grades, lowered self-esteem, a change in interests, or depression (see *Journal of Adolescents Health*, 2007, Volume 41; National Crime

Prevention Council 2009). However cyberbullying can seem more extreme to its victims because of several factors:

- It occurs in the child's home. The place the child or adolescent often sees as secure is now a place of being a victim.
- It can be harsher because of the anonymity of the aggressor and inability to see the victim's reactions.
- It can be far reaching in that once posted on a website it is "forever" in cyberspace.
- It may seem inescapable since not going online takes away one of the major places children and adolescents socialize.

The recent US Department of Justice National Survey of Children's Exposure to Violence (2009) found that Internet harassment was less common than other forms of bullying. It was found that 6% percent reported Internet harassment within the past year and 8% percent during their lifetimes. While this may appear at first glance a small percentage, we need to remember that this was a national survey within the United States and these percentages certainly represented a significant "number" of youth who are impacted.

Other surveys reported by Pew and others (Pew Internet Project 2007; Hinduja & Patchin, 2009) indicate that while cyberbullying is less common than school bullying, youth report anywhere between 15-35% of them have been victims of cyberbullying. The data also indicate that 10-20% of students admit to cyberbullying others, and girls are just as likely, if not more likely, to be involved in this type of behavior as

boys (e.g., Kowalski & Limber, 2007). These effects seem to be consistent both within the United States and Europe (e.g. Brandtzaeg, Staksrud, Hagen, & Wold, 2009). Most of these surveys indicate that involvement in cyberbullying seems to peak in the middle school years (grades 6-8). There is also recent research to suggest overlap among victims of school bullying and online harassment both within the United States and Germany (e.g., Wolak, Mitchell, & Finkelhor, 2007; Katzer, Fetchenhauer, & Belschak, 2009).

A number of researchers are beginning to examine the platform for cyberbullying. While this research is just emerging there is some evidence to suggest that at least within the United States, chat rooms and IM are more frequently employed, while e-mail is the preferred technology in Europe (Brandzaeg, et. al, 2009).

Sexual Exploitation. Another major concern is the sexual exploitation of children and adolescents. Sending of sexual information over e-mail or postings on bulletin boards by those targeting children has been a long-term issue. One of the most comprehensive series studies on these issues has come from the Crimes Against Children Research Center at the University of New Hampshire (<http://www.unh.edu/ccrc>).

This excellent series of studies by the Crimes Against Children Research Center (see Wolak, Finkelhor, Mitchell, & Ybarra, 2008) involved a random national sample of 1500 children ages 10-17 interviewed in 2000 and then an additional sample of 1500 interviewed in 2005. This procedure allowed the researchers to look at the

changes in youth's experiences with the Internet. The major findings from this study can be summarized as follows:

1. There was an increase over the 5-year period from 25% to 34% of the youth who indicated that they were exposed to unwanted sexual materials. It is interesting to note that this increase occurred in spite of the fact that more families were using Internet filtering software (over 50%) during this period. A European study of 21 countries (Livingstone & Haddon, 2009) indicates about 40% of youth report exposure to pornography.

2. Fifteen percent of all of the youth reported an unwanted sexual solicitation online in the previous year with 4% reporting an incident on a social networking site specifically. Perhaps more important, about 4% of these were considered "aggressive" in that the solicitor attempted to contact the user offline. These are the episodes most likely to result in actual victimizations.

3. Additionally, in this study 4% of those surveyed were asked for nude or sexually explicit pictures of themselves. Of more concern may be the finding that less than 5% of these were reported to law officials or the Internet provider. In many jurisdictions, these constitute criminal requests to produce child pornography (Wolak et al., 2008).

4. Four percent said they were upset or distressed as a result of these online solicitations. These are the youth most immediately harmed by the solicitations themselves.

5. These researchers also reported an increase in online harassment and bullying. Many of these episodes occur from confrontations in school from individuals who know each other. Most of those who were harassed were females.

There are two interesting questions that have been raised about the Internet and sexual exploitation (Wolak et al., 2008). The first is whether the Internet make children more accessible to offenders, and second if the participation in sex sites and easier access to child pornography by offenders “triggers” offending that would have occurred anyway. Both answers are speculative and additional research is imperative to more fully understand the complexities of the Internet and child exploitation.

With respect to the first question, the Internet can make children more accessible to offenders through social networking sites, e-mail, and texting in a manner that is more anonymous and outside the supervision of parents. Children may also find the “privacy” and anonymity of electronic communication more conducive to discussions of intimate relationships than in a face-to-face situation.

With respect to the second question, there are suggestions that the Internet can facilitate sexual offending such as pedophilia via the rapid exchange of images, the locating of victims, and development of networks (e.g, Beech, Elliott, Birgden, & Findlater, 2008; McDonald, Horstmann, Strom, & Pope, 2009). The rationale suggested is as follows (see Wolak et al., 2008):

- There is easier access to child pornography that can evoke or promote interests in children.

- There are websites and Internet groups that explicitly encourage and legitimize sexual behaviors with youth.
- There is the initial anonymity for contact and solicitation of a child. Social networking sites and Chat rooms make access easier.

As Wolak et. al., (2008) note, there are also alternative hypothesis which need to be considered. In the end, these are areas for much more in depth research, particularly in an area that is both new and often times more difficult to investigate.

Finally, it has been suggested (Ybarra & Mitchell, 2008) that at least with regard to social networking sites that are often considered the riskiest, the majority of youth who are online are not targeted for unwanted sexual solicitation or Internet harassment. Consequently, broad claims of victimization may not seem justified. The problem with this interpretation is that these are large scale National Surveys, so even if percentages are small the number of youth impacted is actually quite substantial. Researchers are correct however in asserting that more research is needed in this area mainly “because Internet-initiated sex crimes are a relatively new phenomenon, it may take some time before there is enough information to understand their role and relationship to juvenile sexual victimization overall” (Wolak et al., 2008, p. 125). Particular areas for further investigation involve (see Wolak et al., 2008):

1. The nature and dynamics of online sexual behavior involving youth. With the increase use of cell phones and other wireless devices, what will be the impact on Internet related sex crimes?

2. Are there new groups of offenders because of the Internet? Has the Internet allowed new “pathways” into sexual victimization?

3. Who are the victims? What are their characteristics, attitudes, and prior experiences?

4. More important, perhaps, is what are effective interventions? Are Internet safety programs being evaluated and do youth respond to these prevention messages?

Exposure to Violence on the Internet. Concerns about children and adolescents’ use of the Internet are not limited to sexual content. Exposure to violent or hateful content has also been among the types of materials considered risky. Among these types of content are websites for terrorism and other radical violent organizations. Some online archives provide instructions for making bombs or other weapons. Since the events of September 11, terrorist groups make extensive use of the Internet to recruit and spread propaganda. The proliferation of hate speech and hate groups has also become easily accessible on the Web. A report by the Simon Wiesenthal Center (2009) indicates that in the past decade there has been a ten-fold increase of Internet based hate groups who make extensive use of social networking sites for recruitment.

In an extensive survey of European countries, the EU Kids Online project (Livingstone & Haddon, 2009) found that seeing violent or hateful content was experienced by approximately one third of teenagers, making it one the higher risk concerns. One problem, however, was that the severity and nature of the violent content encountered was not well researched, mainly for ethical reasons.

This is one of the major research problems in this area. It is difficult in these studies to separate out the content one could see offline anyway, and simply use the Internet as a medium for viewing. It is true that the Internet allows children and adolescents easier access to materials which we already consider risk related (TV, film, video game violence), but a more important question is the role that material “unique” to the Internet might play in aggressive behaviors. The research in this area is limited, and as some have suggested, we do not really yet know how many youth are “intentionally” viewing violent websites (e.g., hate or violent sites) or being exposed to graphic realistic violence (Hamburger, Ybarra, Leaf, & West, 2009). As we noted above with child predators, we are still in need of further research on the unique role of the Internet content in these areas.

There is, however, some recent research that does suggest that the types of materials found exclusively on the Internet may have a relationship to aggressive behavior. In a national survey of youth, Ybarra, West, Markow, Leaf, Hamburger & Boxer (2008) found an association between the viewing of Internet violence and self reported seriously aggressive behavior. While exposure to violence in the media overall was related to aggressive behavior, youth who reported that many or all of the Web sites they visited depicted real people fighting, shooting, or killing, were 5 times more likely to report seriously violent behavior. These types of sites seemed to be “unique” to the Internet and included (1) hate sites, (2) web sites showing pictures of dead people or people dying, or a “snuff” site, (3) web sites showing satanic rituals, (4) web sites showing pictures of war, death, or “terrorism”; or (5) web sites showing cartoons, such as stick people or animals, being beaten up, hurt, or killed. The authors

speculated that the interactive environment of the Internet and the depiction of real people engaged in violence many explain the stronger association with reported seriously violent behavior. We need to keep in mind that this is a cross-sectional design study and does not establish causation. Nevertheless, the authors, I believe, are correct in their conclusions and recommendation:

The current findings suggest that, as the number of different types of violent Web sites visited increases, the odds of concurrently reporting seriously violent behavior increases by 50%. Visiting specific types of violent Web sites, specifically hate sites and satanic sites, also is associated with elevated odds of seriously violent behavior. Although the temporality of events is unknown, targeted efforts aimed at preventing youths' exposures to violent Web sites seem warranted (p 935).

Another national survey, this one conducted in Taiwan, also suggests some unique contribution of the Internet to youth aggression. In a survey of over 9,000 adolescents, Ko, Yen, Liua, Huang, & Yen (2009), found that heavy users of the Internet were more likely to self-report aggressive behavior during the past year. This was the case after controlling for the viewing of violent television programs. This reported aggression also occurred more often in students who were involved in online chatting, adult sex Web sites, online gaming, online gambling, and Bulletin Board Systems. The authors suggest that these later activities offer both anonymity and group identification.

Another concern, suggested earlier, is the proliferation and access to hate groups and other potentially violent organizations through web sites, chat rooms, and other Internet platforms that have the potential to recruit, organize, and reinforce individuals for aggressive related behaviors. In his book on democracy, freedom of speech and the Internet (Republic.com), Sunstein (2001) acknowledges the risks we encounter with an open and uncensored Internet. Using one example for the group Unorganized Militias, he notes:

Group polarization is occurring every day on the Internet. Indeed, it is clear that the Internet is serving, for many, as a breeding ground for extremism, precisely because like-minded people are deliberating with one another, without hearing contrary views. Hate groups are the most obvious example. A crucial factor behind the growth of the Unorganized Militia "has been the use of computer networks," allowing members "to make contact quickly and easily with like-minded individuals to trade information, discuss current conspiracy theories, and organize events." The Unorganized Militia has a large number of websites, and those sites frequently offer links to related sites. It is clear that websites are being used to recruit new members and to allow like-minded people to speak with one another and to reinforce or strengthen existing convictions. It is also clear that the Internet is playing a crucial role in permitting people who would otherwise feel isolated and move on to something else to band together and spread rumors, many of them paranoid and hateful (p. 22).

The question considered earlier about the uniqueness of the Internet from offline exposure to violent materials can also be raised with regard to hate/radical groups. While

there is an increase in the proliferation of these groups as well as (a) examinations of their content (e.g., Douglas, McGarty, Bliuc & Lala, 2005), and (b) speculation of their influences, there is little systematic research on the specific influences of these online sites and discussion groups for subsequent offline behaviors. In a recent review of this literature, McDonald et. al (2009) note that the efficacy of web based hate groups is still unclear.

A recent study by Wojcieszak (2009) does suggest that participation in radical online groups, such as neo-Nazi's, increases offline actions that support neo-Nazi movements as well as in actions that promote these movements. This study certainly has a number of limitations such as causality, self-selection, and validity of behavioral outcomes. Nevertheless, it examines the role of the Internet as an alternative to traditional face-to-face socialization in "under analyzed communities". As the author concludes, "When online communities favor racial violence or civil unrest, their mobilizing effects might be socially problematic. Interactions with such online groups influence extremism, self-expression, and public opinion perception, and also incite petitioning, rallying, and protesting" (p. 580).

Sexual Violence. While it is important to examine the unique characteristics of Internet content, we should not summarily dismiss the inadvertent (or perhaps intentional) exposure to materials children or adolescents would have difficulty viewing offline. One concern raised about children and adolescents' interaction with the web, is the inadvertent exposure to not only extreme forms of violence but sexual violence (e.g., Strasburger, Jordan, & Donnerstein, 2010; Donnerstein, 2009; Feilitzen, 2009). To date, there has been virtually no research on the effects of exposure to sexual violence on

adolescent viewers although researchers have speculated on its impact (e.g., Malamith & Impett, 2001; Donnerstein & Smith 2001; Smith, Malamuth, & Donnerstein, 2010). For ethical reasons these studies are nearly impossible to undertake. However, numerous studies involving college age students have revealed that depictions of sexual violence in the media can promote antisocial attitudes and behavior. Given that some of this research has involved R-rated films there is every expectation that adolescents and children would be exposed to these types of materials via the Internet. Particularly detrimental are violent images in pornography and elsewhere that portray the myth that women enjoy or in some way benefit from rape, torture, or other forms of sexual violence (e.g., Harris, 2009; Donnerstein, 2000; Donnerstein, 2008). If anything, we might expect even stronger effects of such content on younger viewers who may lack the necessary critical viewing skills and the experience to discount these portrayals. To an adolescent who is searching the web for information about relationships, the inadvertent exposure to sexual violence may be a potent source of influence on initial attitudes toward sexuality. Such a scenario is not unlikely given the evidence demonstrating that adolescents are increasing their reliance on mass media for sexual information and that the possibilities for adolescent exposure to sexually violent depictions are expanding given Internet access (Strasburger, Jordan & Donnerstein, 2010).

Summary. In many ways the issue of Internet violence is perhaps at a place that video game violence was a decade ago. There is a good deal of speculation and theoretical assumptions to assume that the Internet will be a substantial factor in the development of aggression. What brought video game violence to the forefront was solid empirical and theory driven research (e.g., Anderson, Gentile & Buckley, 2007; Anderson et. al, 2010).

We are beginning to see this within the realm of research on the Internet and violence. In considering the future of this research, a number of individuals reviewing this research across various countries have pointed to areas that need specific consideration (i.e., McDonald et. al., 2009; Livingstone & Haddon, 2009). Some of these recommendations are as follows:

(1) Longitudinal research to examine the causal relationships between online participation and engaging in criminal acts.

(2) The major risk factors (i.e., individual, environmental, social) that are related to someone “acting” on this Internet exposure.

(3) Given the increasing use of the Internet by younger children (under the age of 12) there is a need for specific research on this population. In particular will be studies on those in the under 6 year-old range who will have less capacity to “cope” with riskier online content.

(4) Research on expanding platforms like mobile phones and virtual game environments as well as peer-to-peer exchanges.

(5) Increased research on public health issues like self-harm, suicide, drugs, addiction.

Conclusion

In this chapter we set out to address the issues surrounding the effects of exposure to media violence on primarily children and adolescents. This is not a new endeavor, as many in the psychological community have written about these varying effects for decades (e.g., Huessman 2007; Anderson et. al., 2010). For many, there has been the

overall assumption that exposure to mass media violence can be influential in the behavior and attitudes of children, adolescents, and even adults. My intent in this review was not to reiterate that which had been focused upon in the past, but rather to expand the discussion to newer technologies, in particular the Internet. In this manner the focus becomes one on mediated violence and examines the varying mediums youth have at their disposal for being exposed to what we would consider risk related content.

In reflecting on this brief review, it would be safe to conclude that the mass media, in all its domains, is a contributor to a number of anti-social behaviors and health related problems in children and adolescents. We must keep in mind, however, that the mass media is but one of a multitude of factors that contribute, and in many cases, not always the most significant. Nevertheless, it is one of those factors in which proper interventions can mitigate its impact, and further one factor which can be controlled with reasonable insight (Strasburger, Jordan, & Donnerstein, 2010).

Unlike the more traditional mediums for exposure to media violence, there is general agreement that considerably more research is needed with regard to the Internet in its role as a technology for the learning, social, and cognitive development of children and adolescents. There is no question that we need to enrich our understanding of these new technologies as more and more children come online and the technology itself changes and expands.

When thinking about these newer technologies we should keep in mind what Huesmann (2007) notes about the decades of research and theory on traditional media. This extensive research and theory development has provided us with significant insights

into the role new technology will play in the development and mitigation of aggressive behavior. As some have said “The technology conduit may be changing, but the influential processes (e.g., priming, activation and desensitization) may be the same” (Ferdon, & Hertz, 2007).

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