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MEDIA VIOLENCE AND SEX

*What Are the Concerns,
Issues, and Effects?*

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Public concern over children's exposure to violence and sex in the media is not new. During the early 1900s (Lowery & DeFleur, 1988), parents, educators, and policymakers expressed worry that depictions of crime, sex, and love in major motion pictures were having detrimental effects on youth. Yet nearly a hundred years later, the same concern is on the mind of many child advocates in the United States (Steyer, 2002), especially given the increasingly graphic and explicit forms of media violence and sex available to today's youth. As the president of the Parents Television Council recently wrote,

> On broadcast television, the medium with the widest reach, sexual references and depictions are far more common than all the punches, kicks, and shootings put together—and though there could never be a spectacular, dramatic sexual equivalent of Littleton, the impact of media-promoted promiscuity is no less real, or less devastating, than the impact of media-glamorized violence. (Bozell, 1999, p. 2)

The purpose of this chapter is to examine whether such concerns are warranted. To this end, it is subdivided into six sections. We first examine the amount and context of violence in three popular media: television, music videos, and video games. Next, we review "effects" literature on the impact of media violence on aggression, fear, and desensitization. Within each of these outcomes, the research, theorizing, and moderating variables will be explicated. The third section focuses on content patterns surrounding media sex. Much attention is devoted to portrayals of sex across the overall landscape of television programming, as well as its presence in specific genres and day parts. In the fourth section, the handful of studies examining the impact of televised portrayals of sex on youth is summarized. Although the previous sections in this chapter treat media sex and violence separately, the fifth section examines the theorizing and harmful effects associated with exposure to the juxtaposition of these two content features. In the final section, we offer some possible solutions to the negative effects associated with exposure to media sex and violence.

◆ Media Violence

How much exposure does the American child have to media violence? Many content analyses have been conducted to answer this very question, especially with regards to television (see Gerbner & Gross, 1976; Greenberg, Edison, Korzenny, Fernandez-Collado, & Atkin, 1980; Lichter & Amundson, 1992, 1994; Potter et al., 1995; Potter & Ware, 1987). However, Wilson and her colleagues completed recently the largest and most comprehensive investigation for the National Television Violence Study (NTVS; see Smith et al., 1998; Wilson et al., 1997, 1998). Funded by the National Cable Television Association, the NTVS researchers were commissioned to monitor violence during the 1994–1995, 1995–1996, and 1996–1997 television viewing seasons.

Before presenting the results, three unique aspects of the NTVS project are worth noting. First, the scholars crafted a highly conservative definition of violence. Only intentional acts of force attempting to physically harm an animate being were included in the definition. Second, the NTVS researchers randomly sampled and assembled a composite week of television content each year across 23 popular broadcast, independent, and cable channels. The sample was created across 9 months (i.e., October to June) each year and included programs airing from early in the morning (6:00 a.m.) to late at night (11:00 p.m.). As such, the biases that may result from using an intact week or a single day cannot be leveled against the NTVS sampling plan. Third, the NTVS researchers focused on coding the context of violence, rather than amount. Summarizing all of the effects literature to date (Wilson et al., 1997, p. 22), Table 26.1 illustrates the impact that different contextual features have on three harmful outcomes associated with exposure to media violence. Using this table, the NTVS researchers crafted a coding scheme uniquely sensitive to capturing the context of violence on American television.

Across 3 years, the results from the NTVS data reveal that there are five general trends in the presentation of violence. First, violence is pervasive on television. Well over half of all programs (58%–61%) on television feature one or more instances of violence. Approximately 17,000 different

Table 26.1   The Impact of Media Violence by Context Factor

	Outcome Variables		
	Learning Aggression	Emotional Desensitization	Fear
Attractive perpetrators	↗		
Attractive victims			↗
Weapons	↗		
Extensiveness	↗	↗	↗
Graphicness		↗	
Justification	↗		
Rewards	↗		
Punishments	↘		
Realism	↗	↗	
Humor	↗		↗

Source: Smith et al. (1998). Adapted with permission.

NOTE. ↗ An increase of a particular outcome variable. ↘ A decrease of a particular outcome variable.

violent exchanges are presented per week. Furthermore, the results show that there are about 6 different violent incidents shown per hour. Using this finding, 2- to 11-year-olds who watch on average almost 3 hours of television programming per day (Nielsen Media Research, 2000) are being exposed to roughly 126 incidents of violence per week or more than 6,500 incidents per year.

The second trend is that violence on television is likely to be glamorized. More than a third of all interactions feature attractive perpetrators (37%–40%), and roughly a quarter show violence as justified or socially sanctioned. Third, violence on television is sanitized. Despite the fact that many violent incidents on television involve a gun (23%–26%) and a majority would result in moderate or extreme harm in the real world (52%–54%), the bulk of aggressive exchanges are devoid of pain. For example, roughly 55% of all violent incidents involve absolutely no pain to the victim, and less than 20% of all violent programs feature the long-term physical, emotional, financial, or societal effects of aggression. As little as 14% to 15% of all violent scenes feature some blood or gore.

The fourth trend is that violence on television is not chastised. Roughly 40% of all violent shows with bad characters show them getting away with their violent actions. Looking at violent scenes, approximately three fourths show violence without any verbal or nonverbal remorse, criticism, or penalty (71%–75%). Fifth, violence is often trivialized. In roughly 40% of all violent scenes, humor is juxtaposed with aggressive acts.

Although these are overall trends, it is worth noting that genre may exert a considerable influence on these patterns. Perhaps the two "worst offenders" are movies and children's shows. Movies, which are primarily shown on the premium outlets, are the most likely genre to feature violence. Almost 90% depict one or more acts of aggression, and roughly 60% of violent films feature 9 or more violent exchanges (Smith et al., 1998). Movie violence also is more likely to be realistic and graphic, thereby potentially heightening a desensitization effect. Children's shows are also problematic, with roughly 13 violent incidents per hour (Smith et al., 1998), which is substantially higher than all other genres. Violence in children's series is likely to also be devoid of the long-term repercussions of aggression, presented in humorous contexts, and filled with incidents involving unrealistically low levels of harm.
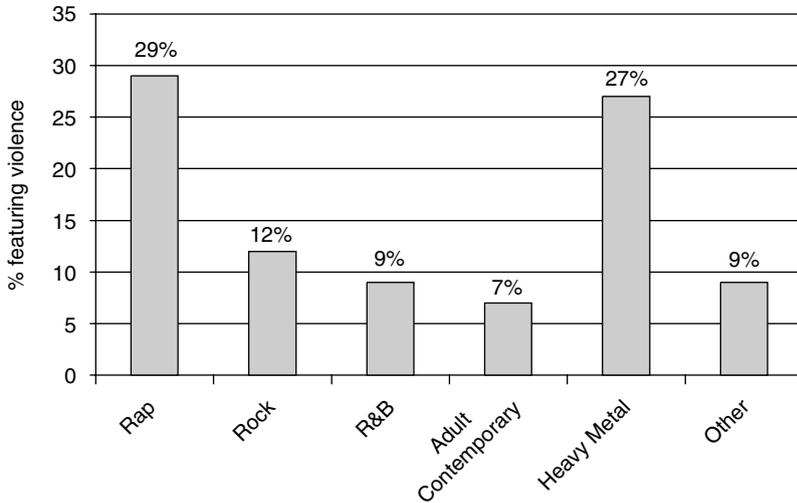
Figure 26.1 Proportion of Music Videos With Violence by Genre

Despite the fact that children spend a great deal of time with television, other forms of media consumption may also routinely feature violent messages. Music is important, especially among young adolescents and teens. The Kaiser Family Foundation (1999, p. 20) nationwide survey reveals that 14- to 18-year-olds spend 2 hours and 34 minutes per day listening to the radio, CDs, and/or tapes, and 8- to 13-year-olds spend 1 hour and 22 minutes. Among those 7th to 12th graders who listened to music on one of these sources the day before being interviewed, the three most frequently mentioned types of music consumed were rap/hip-hop, alternative rock, and heavy metal. These three types of genres sometimes feature music videos with violence (see Figure 26.1), especially rap songs (DuRant et al., 1997; Smith & Boyson, 2002). Although a great deal of public concern has generated over the violent, sexual, and drug-laden lyrics in rock and rap (American Academy of Child and Adolescent Psychiatry, 2000; American Academy of Pediatrics, 1997), we have little systematic evidence to date regarding the prevalence of aggression or others forms of antisocial conduct in words associated with such music.

Video games also are popular among youth. According to the nationwide Kaiser survey (Kaiser Family Foundation, 1999), 8- to 18-year-old boys spend roughly 41 minutes per day playing video games, whereas girls spend only 12. There is much concern surrounding the increasingly realistic, graphic, and explicit violent content in interactive games (Parvaz, 1999) such as *Grand Theft Auto, Carmageddon,* or *Kingpin: Life of Crime.* However, only a handful of content studies have examined violence in video games (Braun & Giroux, 1989; Dietz, 1998; Thompson & Haninger, 2001). Using the NTVS coding scheme, Smith, Lachlan, and Tamborini (2000) assessed the amount and nature of violence in 60 of the most popular games across three platforms: Nintendo 64, Sony Playstation, and Sega Dreamcast. Based on ratings by the Entertainment Software Review Board (ESRB), comparisons were made regarding violence between those games rated for all players (i.e., "K-A" or "E") and those rated for teen/adult players (i.e., "T" and "M").

The results revealed substantial differences in the prevalence and context of violence (see Figure 26.2). Games for older children and adults feature four times as
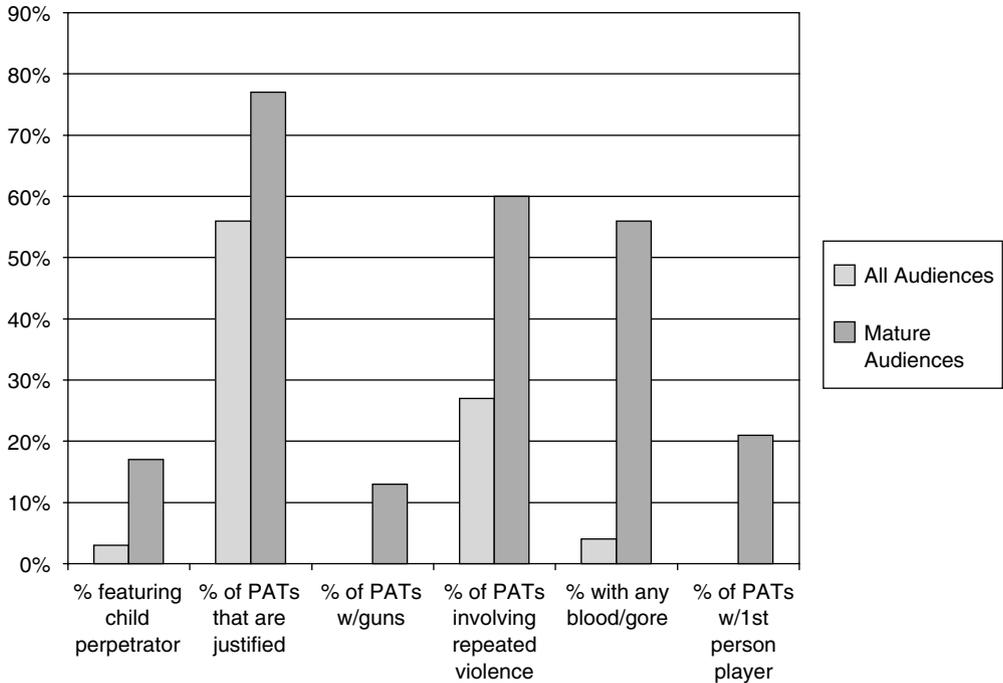
Figure 26.2   Amount and Context of Violence by Video Game Rating

many violent interactions per minute than do those general-audience games (e.g., 4.59 incidents per minute vs. 1.17 per minute). Thus, the average boy playing mature video games is exposed to roughly 188 violent exchanges per day, 1,300 per week, or 5,200 in 1 month. Furthermore, the violence in games rated "T" or "M" is more likely than games rated "K-A" or "E" to feature perpetrators engaging in repeated acts of justified violence involving weapons that result in some bloodshed.

Clearly, the research presented above reveals that violence is a staple in most American children's media diets. Whether they are watching broadcast television or playing games on their new X-box video game platform, youngsters are being bombarded with messages involving carnage and cruelty. Given this, the next question we have to ask is what impact does media violence have on children's and adolescents' socioemotional development. The answer to this question is in the next section.

◆ Effects of Media Violence

Perhaps no other feature of media content has attracted so much empirical attention as violence. Over the past 40 years, innumerable investigations have been conducted to examine the impact of television violence on individuals' thoughts, attitudes, and behaviors (for review, see National Institute of Mental Health, 1982; Paik & Comstock, 1994). We consider the effect of exposure to media violence on three harmful outcomes below.

AGGRESSION

One of the early psychologists to examine the relationship between exposure to television violence and subsequent aggression was Albert Bandura. Using the infamous "Bobo" doll paradigm (Bandura, 1965), children would view a model aggressing against an inflated doll with a

variety of toys and inanimate objects. Immediately after, children saw the model either being rewarded for his aggressive acts, punished, or receiving no reinforcements. The children were then given the opportunity to play with toys and objects, some of which were similar to those seen in the short film and others were not. The results revealed that children exposed to the conditions where the model was rewarded or not punished for his actions were significantly more aggressive than were those exposed to the model punished (Bandura, 1965). The results from this experiment and others reveal that mediated depictions may not only be teaching children how to behave violently but that reinforcements may also moderate performance effects.

The laboratory early research of Bandura and others (Bandura, Ross, & Ross, 1963a, 1963b; Berkowitz & Geen, 1966; Hicks, 1965) was criticized for its low external validity (Freedman, 1984). Yet a number of scholars also have examined the relationship between viewing TV violence and aggression with survey methodology (for review, see Comstock & Scharrer, 1999). For example, McLeod, Atkin, and Chaffee (1972) found that violence viewing was a significant and positive predictor of adolescents' aggressiveness, even when multiple controls are taken into account. Other surveys have found a similar relationship (McIntyre & Teevan, 1972; Robinson & Bachman, 1972). Despite these findings, the survey research is not without its limitations. One criticism is that some uncontrolled third variable may be driving the correlation between violence viewing and aggression. Another criticism is that the causal direction between violence viewing and aggression is not clear. It could be the case that exposure to TV violence leads to aggression, whereas it is equally plausible that aggressive children seek out violent content.

To tease out the directionality issue, Leonard Eron and Rowell Huesmann conducted a series of longitudinal investigations (Lefkowitz, Eron, Walder, & Huesmann, 1972). They found that early exposure to television violence at age 8 was a significant but weak predictor of adult criminality 22 years later, despite controls for social class, intellectual functioning, and parenting variables (see Huesmann & Miller, 1994, p. 168). Although this relation only held for boys, other investigations have demonstrated a longitudinal effect between early violence viewing and later aggression for girls as well (Huesmann, Lagerspetz, & Eron, 1984; Huesmann, Moise, Podolski, & Eron, 1998). This later finding is presumably due to the increase in aggressive females on television over the past few decades.

In sum, research reveals that exposure to television violence contributes to aggressive behavior. This conclusion has been reached by virtually every professional organization looking into the issue, such as the U.S. Surgeon General (Surgeon General's Scientific Advisory Committee, 1972), the American Psychological Association (1993), and even the American Medical Association (1996). Now that we know television violence can increase aggressiveness, it becomes important to examine the *size* or *magnitude* of this effect. Based on the most recent and comprehensive meta-analysis incorporating 217 published and unpublished studies, Paik and Comstock (1994) found an overall effect size of $r = .31$, which is moderate using Cohen's (1988) rule of thumb. Put another way, TV violence can explain 10% of the variability in viewer aggressiveness.

What theoretical mechanisms can be used to account for the impact of television violence on viewer aggression? Early research in the media violence arena relied heavily on Bandura's (1971) social learning theory. According to this perspective, individuals learn new behaviors by observing live or vicarious models such as those depicted in the mass media. This perspective further illustrates that reinforcements delivered to models can influence performance effects. In the 1980s, Bandura revised his theory to account for cognitive (e.g., attention, retention), motivation (e.g., vicarious, direct reinforcements), and

performance factors as well as observer characteristics that may influence the media violence-aggression relationship, either through learning or disinhibition. His reformulation, social cognitive theory (Bandura, 1986), proposes one of several cognitive mechanisms heavily relied on by researchers to explain and predict the effect of media violence on viewer aggression.

Other cognitive models have also been advanced. Berkowitz (see Jo & Berkowitz, 1994) has offered a "priming" effects explanation for the short-term effects of media violence on aggression. Using cognitive models from psychology, Berkowitz (see Jo & Berkowitz, 1994, p. 45) argues that memory is a collection of networks that store in nodes previous thoughts, feelings, and action tendencies. This perspective further assumes that stimuli can "prime" other semantically related concepts in memory, thereby heightening the probability that similar thoughts, feelings, and action tendencies with the same meaning will come to mind (p. 46). Based on this approach, Jo and Berkowitz (1994, p. 46) argue that exposure to media violence may, for a short time, (a) prime hostile thoughts in viewers, thereby altering their evaluations of others; (b) cause viewers to perceive violent actions as justified and resulting in positive outcomes; and (c) increase resultant aggression.

Research has investigated the impact of media violence on priming aggressive thoughts (Bushman & Geen, 1990). For example, Bushman (1998) found that participants exposed to a short violent film clip were more likely to list aggressive associations when presented with a list of homonyms than were those exposed to an equally exciting short nonviolent film. Arguing that priming effects occur rather automatically and involuntarily, Bushman conducted a second experiment to assess whether viewing violent content activates and increases the accessibility of aggressive thoughts from memory. Using a lexical decision task, he found that individuals exposed to a violent film clip recognized aggressive words significantly faster than did those exposed to a nonviolent film clip.

Although these findings reveal a priming effect, they do not demonstrate whether activating aggressive thoughts is the cognitive mediator between exposure to violence and antisocial behavior. Research has offered priming as the causal explanation for increases in subsequent aggression after exposure to media violence (Jo & Berkowitz, 1994; Josephson, 1987), but we could only find one study that has tested the relationship more directly. Anderson and Dill (2000) found that undergraduates playing a violent video game had more aggressive thoughts immediately after as well as retaliatory aggressive behavior (i.e., noise blasts delivered to opponent) than did those playing an equally arousing and enjoyable but nonviolent video game. These results are consistent with other social psychological research demonstrating priming effects on aggression with nonmedia stimuli (Carver, Ganellen, Froming, & Chambers, 1983).

Berkowitz's priming perspective focuses on explaining transient effects, whereas Huesmann (1988) presents an information-processing model designed to explicate both the short- and long-term impact of consuming media violence on aggression. Huesmann argues that scripts or cognitive maps guide social problem solving. Scripts can be formed by direct experience or vicariously through observation of media models (p. 15). Through repeated viewing of media violence, children may develop and reinforce aggressive scripts for dealing with interpersonal conflict (Huesmann et al., 1984).

Encoding of violent acts seen in the media will be contingent on a variety of factors, however. As noted below, the realism of the portrayal and identification with violent characters should facilitate encoding effects. Also, Huesmann (1988) argues that emotional state (e.g., anger, arousal) should also play a role in the encoding process. Not only must violent acts be encoded, but they must also be retained in memory. Mental

rehearsal, fantasizing about aggression, and cognitive rumination should all strengthen storage of aggressive content in long-term memory.

In addition to encoding and storage, media violence may also trigger the retrieval of aggressive scripts for social problem solving. Cues present in the natural environment that are similar to those when the script was encoded can facilitate retrieval (Huesmann, 1988, p. 21). Huesmann (1988, p. 21) also argues, however, that other "aggressive" stimuli (e.g., guns or knives) can activate violent scripts from memory, even if they were not present when the script was encoded. As a result, this perspective can also account for the short-term priming effect that exposure to media violence may have on viewer aggression.

The impact of media violence on aggression will undoubtedly be moderated by a variety of factors. In terms of message features, evidence suggests that violence on television that is enacted by attractive perpetrators (Bandura, 1986), realistic (Atkin, 1983; Berkowitz & Alioto, 1973), gun laden (Berkowitz & LePage, 1967; Leyens & Parke, 1974), extensive (Huesmann et al., 1984; Huesmann et al., 1998), devoid of consequences (Baron, 1971a, 1971b), rewarded or not punished (Bandura, 1965; Bandura et al., 1963b), and humorous in nature (Berkowitz, 1970) can all increase the probability of resultant aggression in both children and adults.

Viewer variables can also ameliorate or exacerbate the effects of exposure to media violence on aggression. Research reveals that younger children (Paik & Comstock, 1994), the socially unpopular (Huesmann, 1986), low intellectual achievers (Huesmann, 1986), the characteristically aggressive (Bushman, 1995; Josephson, 1987), high identifiers with characters on TV (Huesmann & Eron, 1986; Huesmann et al., 1984), and those who believe TV is realistic (Huesmann et al., 1984) are more at risk of learning and/or enacting aggression after exposure to media violence.

FEAR

Another potential harmful effect associated with exposure to media violence is fear. There are two types of fear effects: short-term responses and long-term alteration of beliefs about the world in which we live. Research in each of these areas will be reviewed below.

Most of the research on children's fear responses to media content has been conducted by Joanne Cantor and her graduate students at the University of Wisconsin, Madison (for review, see Cantor, 1994, 2002). Research reveals that most children are frightened by mass media fare over the course of development. To illustrate, Wilson, Hoffner, and Cantor (1987, p. 42) asked preschool and elementary school age children if they had ever been scared by something on TV or film. Roughly 75% of the children in two separate studies responded affirmatively. More recently, Cantor and Nathanson (1996, p. 145) found that 43% of randomly sampled parents of kindergarten and second, fourth, and sixth graders said that their children had been frightened by something on TV. These latter findings are consistent with other research revealing that parents often underestimate children's fright reactions to media content (Cantor & Reilly, 1982).

Not only are children being aroused by scary images on television, but some of these reactions can persist over time in the form of behavioral and emotional upset (Hoekstra, Harris, & Helmick, 1999). For example, Harrison and Cantor (1999) asked undergraduates if they had ever been frightened by a TV show or movie and experienced lingering upset. A full 90% responded that they had, and nearly half (44%) indicated that the recalled incident occurred before the age of 13. More than half of the undergraduates stated experiencing disturbances in behaviors such as eating or sleeping patterns, and 35.5% indicated that they avoided or dreaded the depicted situation (p. 105). Roughly a quarter of those experiencing lingering fright indicated

that the upset lasted more than a year and that they were still being affected at the time they filled out the survey.

Cantor (2002, p. 291) explains the impact of the mass media on fear by using a stimulus generalization perspective. She argues that there are certain conditioned/unconditioned stimuli that evoke fear responses. When these stimuli are shown in the mass media, they evoke a similar—but less—intense arousal response. Cantor has shown from research that three types of depictions may evoke fear: dangers and injuries, deformities and distortions, and/or characters' expressions of fear or depictions of endangerment (p. 291). Each of these types of portrayals is relatively common in violent media content.

Empirical research also reveals that not all types of viewers will be affected by these types of depictions. Age or level of cognitive development moderates how children make sense of and respond to different types of mass media fare (see Wilson & Smith, 1998). In general, preschool and younger elementary school age children interpret television programming differently than do their older elementary school age counterparts. At least two skills influence the types of images younger and older children perceive as scary.

The first skill is the ability to attend to perceptual versus conceptual information. Given their focus on appearance or perceptual cues (Flavell, 1977), younger children attend to those striking visual or audio components presented in media fare (Hoffner & Cantor, 1985). Older children, on the other hand, are able to discount striking appearances and instead focus on conceptual or behavioral information that is relevant to character evaluations or the plot (Hoffner & Cantor, 1985). The second skill is the ability to differentiate between fantasy and reality. Younger children are more likely than their older counterparts to believe that what they see on TV is real (Hawkins, 1977). With age and maturity, children begin to evaluate television characters, settings, and events based on whether

they are possible or probable in the real world (Dorr, 1983; Morison, Kelly, & Gardner, 1981).

Because of differences in skills, younger and older children respond to different types of media depictions with fear. For example, a younger child is more likely to be frightened by concrete dangers that "look" scary but actually pose no threat of real world harm, such as monsters and witches (Cantor & Sparks, 1984; Sparks, 1986). Older children are more likely to fear abstract threats that are possible or probable in the real world such as depictions of terrorism, nuclear war, and stranger violence (Cantor, Wilson, & Hoffner, 1986; Cantor & Nathanson, 1996; Smith, Moyer, Boyson, & Pieper, 2002).

In addition to age, at least a few other variables may moderate fright effects. One variable is gender. Females are typically more scared by dangers and threats depicted in the mass media than are males (Peck, 2000; Smith & Wilson, 2002; Wright, Kunkel, Pinon, & Huston, 1989). Usually, these differences are explained in terms of sex role socialization, with girls being taught that expressing their emotions is more normative or socially appropriate than boys. Another factor is dispositional empathy. Highly empathic children may be more likely to respond with fear when individuals in the media are shown falling prey to violence than their less empathic peers. Indeed, Hoffner and Haefner (1993) found that empathy was a positive and significant predictor of negative affect and enduring upset in response to the Gulf War news footage. Hoekstra et al. (1999) found that fantasy empathy and, to a lesser degree, perspective taking predicted undergraduates' fear responses to scary mass media fare as children or adolescents.

In sum, research reveals that a fair number of children report being frightened by the mass media and that some effects endure well beyond the viewing situation. These fear effects may be moderated by age, gender, and other dispositional attributes such as empathy. Another line of inquiry

has investigated the long-term impact of exposure to television violence on "cultivating" beliefs that the world is a mean and scary place. Leading this research program back in the 1970s was George Gerbner and his research team at the University of Pennsylvania (see Gerbner, Gross, Morgan, & Signorielli, 1994). The concept of cultivation refers to television's influence on shaping individuals' perceptions of social reality in a way that mirrors the world seen on television (Gerbner et al., 1994).

This idea was first tested in terms of entertainment messages about violence. Because violent messages permeate television programming, heavy viewers should see the world as a more violent and scary place than light viewers. In fact, a large body of evidence shows that when compared to light viewers, heavy viewers tend to (a) view society as more violent; (b) perceive a greater danger walking alone at night in a city; (c) purchase protective devices such as dogs, locks, or guns; and (d) have more overall fear of crime (Gerbner & Gross, 1976; Gerbner, Gross, Jackson-Beeck, Jeffries-Fox, & Signorielli, 1978; Gerbner, Gross, Signorielli, Morgan, & Jackson-Beeck, 1979). Many of these results have been obtained with both adult and child samples (for comprehensive review, see Hawkins & Pingree, 1982).

Despite these findings, cultivation theory has been criticized over the past few decades (Hawkins & Pingree, 1982; Potter, 1994). One criticism is that much of the research documenting cultivation effects is based on cross-sectional surveys, making the direction of causality between exposure and social reality beliefs impossible to ascertain. Yet experimental research shows that repeated viewing of violence can also elicit increases in fear amongst viewers (Bryant, Carveth, & Brown, 1981; Ogles & Hoffner, 1987). Thus, there seems to be a correlational and causal relationship between repeated viewing of television and distorted beliefs about social reality.

Conceptually, cultivation theory has been criticized for not explicating the psychological processes responsible for the relationship between heavy viewing and distorted perceptions of social reality (Hawkins & Pingree, 1982). However, Shrum (1995, 2002) has explained this relationship in terms of heuristic processing. According to research on the availability heuristic, individuals' estimations or "set size" judgments are a function of the ease with which relevant information is available or accessible in memory (Tversky & Kahneman, 1973). The more easily that information about a particular construct is recalled, the higher are individuals' probability or frequency estimates of a given class of events. Based on this reasoning, heavy consumers of violent content should have in memory numerous exemplars pertaining to violent crime that are readily accessible, thereby explaining their increased or distorted estimates of violent activity in the world.

Scholars have also argued that the effects of heavy viewing on perceptions of social reality may be moderated by several content and viewer variables. In terms of content, Gerbner et al. (1994) argues, "Exposure to the total pattern rather than only to specific genres or programs is what accounts for . . . the cultivation of shared conceptions of reality among otherwise diverse publics" (p. 18). Yet researchers have argued (Gunter, 1994) and studies show that heavy viewing of specific types of programming content (e.g., crime dramas, cartoons, news) is positively associated with distorted perceptions of violence in society, even after controlling for total television viewing and/or exposure to different genres (Hawkins & Pingree, 1982; Smith & Wilson, 2002).

It has been argued that viewer variables may also influence the impact of exposure to television on social reality perceptions. For example, studies show that perceived realism (Potter, 1986), experience with crime (O'Keefe, 1984), cognitive abilities (Van Evra, 1990), and family communication/peer integration (Rothschild, 1984) may all moderate cultivation effects.

DESENSITIZATION

A final harmful effect associated with exposure to television violence is desensitization. Desensitization refers to "an attempt to create conditions whereby information about a fear stimulus is encoded in the absence of fear responses" (Foa & Kozak, 1986, p. 27). Systematic desensitization procedures were used originally to treat individuals suffering from phobic responses to different types of threatening stimuli such as blood, bodily mutilation, or insects. Scholars have argued that the same process can occur with exposure to television violence. Through repeated exposure to violence, viewers become "desensitized," or less aroused by, more accepting of, and less sensitive to televised aggression. These effects, as will be demonstrated below, can also "spill over" and have serious social consequences.

Some of the early work on systematic desensitization explored the impact of televised violence on individuals' physiological responsivity (Thomas, 1982). Cline, Croft, and Courrier (1973) found that heavy viewers of television were significantly less aroused by a violent film clip than were light viewers of television. Although these data suggest an over-time effect, other studies reveal that physiological desensitization to violence can occur rather quickly. Thomas, Horton, Lippencott, and Drabman (1977) found that men exposed to a short violent film clip subsequently were less aroused by a portrayal of real-life violence (18-minute riot film) than were men exposed to a short sports clip. Similar findings were obtained with a sample of children (Thomas et al., 1977).

Although this research demonstrates the impact of television violence on arousal, it does not reveal whether individuals' attitudes towards violence are affected. That is, does exposure to television violence influence viewers' attitudes or evaluations towards aggression? Research suggests that it can. In one study, Thomas and Drabman (1978) found that children exposed to a short aggressive film were more likely to indicate that aggression is a normative response to social conflict than were those exposed to a short neutral film. Thus, viewing television violence can influence both arousal responses and attitudes towards aggression.

Tolerance of real-life violence can also be affected by exposure to TV violence. Drabman and Thomas (1974) exposed children to either a short violent film or nothing. Immediately after exposure, the children were asked to "babysit" two younger children by watching them on a videotape monitor ostensibly broadcast from another location. The measure of aggression tolerance was the amount of time it took for participants to seek the experimenter for help when a fight broke out between the younger children on the tape. The results revealed that children exposed to the violent clip took significantly longer to seek help when a staged physical altercation occurred than did those who did not see any violent content. Similar findings have been obtained with other samples of children (Hirsch & Molitor, 1994; Thomas & Drabman, 1975), even when incorporating viewing control groups and using more contemporary depictions of violence.

Overall, the results from the desensitization literature suggest that media violence can affect viewers' arousal responses, attitudes, and tolerance of real-life aggression. It must be mentioned, however, that most of the evidence above relied on fairly benign depictions of violence from shows and films popular in the 1960 and 1970s (e.g., *Mannix, Hopalong Cassidy, The Champion*). Because media content is more graphic and shocking today, the impact of exposure to such explicit aggression on desensitization is likely to be even more pronounced.

◆ Media Sex

How much sex is on American television? Kunkel and his colleagues have been doing

research at the University of California, Santa Barbara to answer this very question (Kunkel, Cope, Farinola, Biely, & Donnerstein, 1998; Kunkel, Cope-Farrar, Biely, Farinola, & Donnerstein, 2001). Commissioned by the Kaiser Family Foundation, Kunkel and his research team have been biennially assessing the frequency and context of sexual talk and behavior on television. Sampling across 10 broadcast and cable channels, the researchers compiled a composite week for each programming source from early in the morning to late at night. Yearly, the researchers evaluate roughly 1,100 programs for sexual content (Kunkel et al., 2001).

The results reveal four main conclusions. First, sex on television is on the rise. A full 68% of all programs in the sample contained some form of sex talk or behavior, as compared to 56% two years earlier. Second, portrayals of teenagers engaging in sex have become more frequent. From 1998 to 2000, representations of teenagers tripled from 3% to 9% of all characters engaging in sex. This figure goes up to 32% when teens are combined with young people ages 18 to 24. Portrayals of young characters pose a potentially greater risk for imitation because young viewers are likely to identify with similar, attractive characters (Bandura, 1986).

Third, safe sex messages are extremely rare on television. Of all scenes with sexual content, only 2% featured any mention of precaution. A similarly low proportion of scenes depicted the realistic consequences of sex (2%), which is unfortunate because portrayals featuring the negative reinforcements of unprotected sex may inhibit such risky behavior (Bandura, 1986). Fourth, sex on television is frequently combined with humor, which may trivialize the seriousness of such mature behavior. The overwhelming majority of sitcoms contain sex (84%), at an average rate of 7.5 scenes per hour. This is especially important when considering that sitcoms are the genre of choice among 8- to 18-year-olds (Kaiser Family Foundation, 1999).

Although the above trends focus on the overall landscape of television programming, certain time periods may feature more or less sexual content. Given that prime time is the most popular viewing time across all segments of the population (Nielsen Media Research, 2000), many researchers have quantified the presence of sex during this day part (Cope-Farrar & Kunkel, 2002; Franzblau, Sprafkin, & Rubinstein, 1977; Greenberg, Stanley, et al., 1993; Lowry & Shidler, 1993; Lowry & Towles, 1993; Sapolsky, 1982; Sapolsky & Tabarlet, 1991; Ward, 1995). Studies have shown that sexual behavior and references occur in 75% of all prime-time network shows (Kunkel et al., 2001).

What about those prime-time programs most viewed by young people? In a recent study of the top 15 programs viewed among 12- to 17-year-olds, 82% of the episodes featured sex at an average rate of 11 sexual interactions per hour (Cope-Farrar & Kunkel, 2002). This figure is significantly higher than the amount (68%) and frequency (4 scenes per hour) of sex across the entire landscape of television programming (Kunkel et al., 2001). Unlike the previous analyses of prime-time television (Kunkel et al., 2001), teens' favorite shows were equally likely to portray sexual behaviors and sexual talk (62% vs. 67%, respectively) (Cope-Farrar & Kunkel, 2002). Furthermore, 75% of the characters involved in sexual behavior faced no clear consequences for their sexual behavior. However, when consequences were portrayed in teens' favorite prime-time shows, they were overwhelmingly positive in nature.

In addition to prime time, another factor that may influence the presentation of sex is genres. One type of genre that contains a great deal of sex is soap operas. Many content analyses have focused on soap operas because of their popularity among young girls (Greenberg & Busselle, 1994; Greenberg & D'Alessio, 1985; Greenberg, Stanley, et al., 1993; Heintz-Knowles, 1996). To sum across studies, sex is prevalent on

soaps and is most likely to occur between unmarried characters. In the Kunkel et al. (2001) content analysis, 80% of soap operas portrayed some sexual content. A recent study of 97 hours of soap operas revealed that verbal and/or visual messages about sex occurred more than 6 times per hour (Heintz-Knowles, 1996). This finding is relatively consistent with other soap studies documenting between 6.64 and 3.67 sexual incidents per hour, respectively (Greenberg & Busselle, 1994; Greenberg, Stanley, et al., 1993).

Not only is sex common on soap operas, but precautionary messages are extremely rare. In a study by Greenberg and Busselle (1994), 50 different episodes of soap operas were examined; only 3 contained a discussion of safe sex or contraception, and only 1 mentioned the risk of sexually transmitted diseases (STDs). Similarly, a recent study (Heintz-Knowles, 1996) found that only 8% of all sexual acts featured the positive or negative consequences of such intimate behavior. Thus, the template for sex on soaps seems to be unmarried characters engaging in or talking about sex with very little consequence.

Another genre that garners a great deal of research is music videos. Several analyses of music videos generally and MTV specifically also have been undertaken (Baxter, DeRiemer, Landini, Leslie, & Singletary, 1985; Greeson & Williams, 1987). The content of music videos is particularly important because of their popularity among adolescents, especially girls. Among 11- to 19-year-old females, the more frequently watched network is MTV (*Media Use,* 2000). More generally, 75% of 9- to 12-year-olds and 80% of 12- to 14-year-olds watch music videos. As the number of TV channels featuring music videos continues to grow with the advent of new outlets such as MTV2, MuchMusic, and VH1-Classics, quantifying the amount of sexual content within this genre becomes even more important. Current studies suggest that sexual content is prevalent in music videos, with 47% to 60% of music videos containing sexual references (Baxter et al., 1985; Greeson & Williams, 1987). Independent of music videos, song lyrics have been analyzed for their sexual content. One study found that the top five songs listed in *Billboard* magazine from 1950 to 1980 have shifted over time from focusing on romantic/emotional love to an emphasis on sexual behavior.

In addition to television, movies are extremely pervasive in young people's lives. Roughly 60% of 9- to 17-year-olds find it important to see the latest movies (*Media Use,* 2000). Furthermore, renting movies is now America's number one favorite leisure activity (*Media Use,* 2000). As technology increases, people are faced with more options for seeing movies than ever before. Video rentals, pay-per-view channels, and the availability of more movie channels on cable outlets may make it increasingly difficult for parents to monitor the movies their children are viewing. Going to movies at the theater is also a popular activity among adolescents, with 90% reporting that they go to the movies "frequently" or "occasionally" (*Media Use,* 2000).

When it comes to the content of movies, sex sells. In a recent study, college students read descriptions of movies that either did or did not include sex. Participants expressed preference for those movies that mentioned sex in the description (Bahk, 1998). Because the movie industry is driven by consumer demand and moviegoers prefer sex, sex is prevalent in movies. A recent analysis of the 50 most profitable films of 1996 found that 40% of the movies featured at least some sex. As expected, R-rated movies were more likely to feature sex than PG- or PG-13-rated movies (Bufkin & Eschholz, 2000).

In addition to the popularity of movies among young people, some specific movies gain extreme popularity among teen audiences. In this way, moviegoing is considered an "in" activity among 92% of teens (*Media Use,* 2000). Sex appears to be even more present in those movies most favored by teens. One study analyzed 16 R-rated

movies popular among teens (Greenberg, Siemicki, et al., 1993). All 16 of these films contained at least 1 sex act, and the average was nearly 11 sex acts per hour. The representation of sex in movies also tends to ignore risk and responsibility messages. Sexual precaution is portrayed even less in the movies than on television. Of the top-grossing movies of 1996, only 1 of 36 movies depicting sex acknowledged protection or birth control (Bufkin & Eschholz, 2000).

The Internet is another medium that has received attention and concern regarding its sexual content. One in five parents of 2- to 17-year-olds cite the Internet as the media influence of greatest concern in raising their children, second only to TV (Annenberg Public Policy Center, 1999). Basic experience with the Internet suggests that such concern may be warranted, in that sexual and pornographic content seems quite common. In fact, a recent study examined the 10 most popular search engines and revealed that the most popular term that Internet users search for online is *sex* (Pastore, 2001). *Sex* was used as a search term more often online than *games, music, travel, cars, jobs, health,* and *weather* combined.

Although sexual content seems to be abundant online, conducting a comprehensive content analysis of sex on the Internet may be difficult if not impossible due to the vast amount and constantly changing nature of online information.

Despite these limitations, a recent study examined the content of Web sites that were accessed when different terms were typed into Excite and Web Crawler search engines (Smith, Gertz, Alvarez, & Lurie, 2000). The researchers typed in five different key words: *sexual health, sex education, sexual intercourse, teen sex,* and *sex advice* for teens. The results showed the following:

> The keyword search yielded a total of 5,952,130 web pages. It was impractical to sort through all of these pages to identify duplicates. Four percent of web pages with compatibility scores greater than or equal to 70% were classified as sex education pages and 1% were position statements, for a total of 41 relevant pages. Sixty-three percent of the pages were classified as pornography. (Smith et al., 2000, p. 5)

Overall, the purpose of this section was to examine the prevalence of sex in the media. Much like media violence, sex saturates many entertainment messages independent of medium. We now turn to examine what impact exposure to such depictions may have on viewers, especially children and adolescents.

◆ Effects of Media Sex

Although a number of factors contribute to adolescents' sexual behavior, the media have been accused of playing a central role in shaping their behaviors (Kaiser Family Foundation, 1996). In a recent survey, 53% of teens said that they use TV and movies as a source of information about sex and birth control (Kaiser Family Foundation, 1996). This source of sexual learning may be problematic, especially because television often depicts sex as glamorized with attractive characters engaging in such mature behavior without precaution or consequence. Given this skewed source of sexual information, it becomes important to examine the impact of sexual portrayals on youngsters' sexual socialization.

Significantly fewer studies have been conducted on the impact of sex in comparison to violence. This is probably due to the fact that there are inherent difficulties in conducting experiments with young people when the topic of sex is involved (see Greenberg, Perry, & Covert, 1983). Despite this fact, a handful of studies have been conducted, and we review those in detail below.

LEARNING

To begin with, two studies have looked at young viewers' ability to learn sexual information from television. Results from one study show that 5th and 6th graders who viewed a sex education program scored significantly higher on a subsequent questionnaire about sexual facts than did those who did not (Greenberg et al., 1983). This revealed that television is capable of teaching sexual information, at least when programs are designed specifically for that purpose. Because most TV programming that adolescents view is designed for enjoyment rather than education, a more recent study examined learning from entertainment shows (Greenberg, Linsangan, & Soderman, 1993). In this study, 9th- and 10th-grade participants were exposed to scenes featuring various types of sexual content such as prostitution, married sex, homosexuality, and unmarried sex. Those participants exposed to three of the four sexual topic areas learned significantly more in the way of sexual terms than did those not exposed.

ATTITUDES

Aside from learning information, televised portrayals of sex may also influence viewers' attitudes towards such intimate behavior (Calfin, Carroll, & Schmidt, 1993; Greeson & Williams, 1986; Strouse & Buerkel-Rothfuss, 1993). In particular, Greeson and Williams (1986) assessed the effects of music videos on adolescents' attitudes and values about sex. To this end, 7th and 10th graders were randomly assigned to watch a series of videos that previously aired on MTV. The results on a single-item measure of acceptability of premarital sex revealed that viewers were more likely to approve of such behavior after exposure to the music videos.

Although the last study suggests that a single exposure may influence attitudes, the next question to ask is the following: What impact does heavy viewing of sexual content have on young viewers? Bryant and Rockwell (1994) attempted to address this by examining how massive exposure to sexual depictions influence adolescents' moral evaluations. For 3 hours on 5 consecutive nights, 13- to 14-year-olds were randomly assigned to watch programs featuring (a) sex between unmarried couples, (b) sex between married couples, or (c) programs that feature no sexual content. No more than a week after exposure, the adolescents returned to view 14 short excerpts from broadcast TV featuring both sexual indiscretions (i.e., extramarital affairs) and nonsexual transgressions. The results revealed that adolescents massively exposed to sex between unmarried characters rated the sexual indiscretions as "less bad" than did those in the other two conditions. Similar findings were obtained in a follow-up experiment when using a nonviewing control group.

BEHAVIOR

To date, only two studies have examined the relationship between exposure to sexual content on television and adolescents' early initiation of intercourse. These studies yield a mixed set of results. Peterson, Moore, and Furstenberg (1991) examined the relationship between sexual behavior and television exposure in a two-wave panel study. In 1976, parents of 7- to 11-year-olds filled out measures assessing their children's patterns of exposure to TV, and children indicated whether there were any rules about TV viewing in the home. Five years later, the same participants were resurveyed. At Time 2, the 11- to 16-year-olds were asked to estimate their exposure to television and to report on their own as well as their friends' sexual experiences. Early exposure to television at Time 1 was not correlated with later sexual activity. However, the authors caution against making any definitive

conclusions on the basis of these data alone, due to methodological limitations of the study (i.e., imprecise exposure measurement).

A second study has also looked at the relationship between TV viewing and adolescents' sexual behavior (Brown & Newcomer, 1991). A total of 391 adolescents ages 10 to 15 were surveyed in 1978, 1979, and finally in 1981. Each time, participants responded to questions about their (a) overall exposure to TV, (b) exposure to 67 predetermined "sexy" prime-time shows, and (c) own sexual behavior. At Time 3 only, the results show a significant relationship between sexual behavior and the proportion of "sexy" television programming watched relative to total viewing. That is, nonvirgins reported viewing a higher proportion of sexy television than did virgins, despite controls for social class, pubertal development, or friends' encouragement about sex.

Overall, the research revealed above suggested that youngsters are learning information about sex from television and that exposure is affecting their attitudes and moral evaluations. The effect of viewing TV sex on behavior is less clear. However, theories suggest that television may play a key role in shaping adolescents' thoughts, attitudes, and beliefs about romantic relationships, intimacy, and even sexual behavior. For instance, a cultivation approach may argue that viewing repeated messages regarding sex on television may be teaching viewers that sex is to be taken lightly, without much thought, precaution, or consequence. With heavy viewing, young viewers may cultivate unrealistic attitudes and beliefs about negative consequences of sex or the importance of practicing safe sex.

The theory of reasoned action (Ajzen & Fishbein, 1980) specifies more precisely the impact of television sex on shaping adolescents' attitudes and behaviors. According to this approach, intentions and behaviors are determined by the combined influence of attitudes and subjective norms surrounding the behavior. Attitudes are composed of perceived positive and negative consequences of a behavior, whereas subjective norms are made up of perceptions of what important others think about engaging in the behavior. Using this model, television's sanitized view of sex and its consequences may contribute to young viewers developing positive attitudes towards risky sexual behaviors (e.g., not practicing safe sex). Because televised portrayals of teen sex are on the rise, adolescent viewers may also perceive that engaging in such mature behavior is important or even normative in romantic relationships.

A script perspective may suggest a different course of events. Children who are biologically predisposed to early intercourse (i.e., hormonal, genetic predispositions) may be particularly attentive to and encode depictions about sex on TV. Such active involvement may lead to the development of sexual scripts that influence adolescents' perceptions and expectations about romantic relationships. Repeated exposure to sexual scenes on television may frequently prime such scripts, thereby increasing their chronic accessibility and use to guide sexual decision making.

Similar to media violence, the impact of media sex should be moderated by a variety of factors. Age is important because many of the sexual phrases and terms used on television will be inaccessible to children due to a lack of understanding (Silverman-Watkins & Sprafkin, 1983). Thus, televised "sex talk" should have very little impact on younger children. Another important intervening variable is gender. It has been demonstrated that girls enjoy sexual depictions on broadcast TV more than do boys (Greenberg, Stanley, et al., 1993). In addition to greater reported enjoyment, girls may look to the media as a source of social information about sex. In fact, one study found that after exposure to a music video about teen pregnancy, girls reflected more about the content than did boys (Thompson, Walsh-Childers, & Brown, 1993). Some studies have shown that children from families where parents are

not very involved, are more likely to engage in sex at an early age (Peterson et al., 1991). Communication and active coviewing can actually help to protect young viewers from the effects of exposure to sexual content (Bryant & Rockwell, 1994; Strouse, Buerkel-Rothfuss, & Long, 1995).

SEX AND VIOLENCE

Although the previous sections focused on sex and violence in isolation, this section examines the effects of juxtaposing these two explicit content features on viewers. This pairing is often found in particular R-rated "slasher" films that feature graphic violence, often in a sexualized context (Yang & Linz, 1990). For example, films from the *Halloween, Friday the 13th,* and *Nightmare on Elm Street* series are quintessential examples of slasher content. Such films are often popular among teen audiences. A study revealed that nearly 70% of college students reported at least some exposure to slasher films on video and at the movie theater (Buerkel-Rothfuss, Strouse, Pettey, & Shatzer, 1993).

Given their popularity, it becomes important to examine the impact that viewing such explicit content may be having on teens. Research in this area has demonstrated that exposure to R-rated, sexually violent slasher films can lead to a desensitization effect, such that viewers experience less negative emotional arousal (e.g., anxiety) with heavy viewing (Linz, Donnerstein, & Adams, 1989; Linz, Donnerstein, & Penrod, 1984, 1988). This effect has been demonstrated using self-report as well as physiological measures of arousal.

One particular study (Linz et al., 1984) looked at the impact of repeated exposure to full-length slasher films on men over 5 consecutive days. Measures were taken after exposure each day. When compared to evaluations on Day 1, the men rated the films on Day 5 as less violent and less degrading to women, and they reported fewer negative reactions to the content. In a similar study,

participants were exposed to either two or five films, one every other day. Again, increased exposure was negatively correlated with negative affect (Linz et al., 1988).

These studies also went a step further by investigating how exposure to sexually violent films may "spill over" and affect evaluations of violence in "real life." To accomplish this, after exposure to the slasher films, participants viewed a rape trial and were asked to evaluate the victim and the defendant on several variables. Compared to a nonviewing control group, male participants exposed to massive doses of sexually explicit content judged a female rape victim as significantly less injured (Linz et al., 1984; Linz et al., 1989) and less worthy, and they tended to perceive her as being more responsible for what happened and as making less of an attempt to resist assault (Linz et al., 1984). Participants also had less sympathy for the victim (Linz et al., 1984; Linz et al., 1988), even when the measures were taken as much as 2 days after the last violent exposure. Although all of the research above has involved all males, heavy viewing of sexually explicit and graphically violent stimuli has been found to affect females' perceptions of the victims of violence as well (Krafka, Linz, Donnerstein, & Penrod, 1997).

Linz et al. (1984) have suggested that repeated viewing of slasher content systematically desensitizes viewers to violence and its real-world consequences (Foa & Kozak, 1986). In explanation, heavy viewers become increasingly comfortable with anxiety-provoking situations in the films. They also assert that this self-awareness of anxiety reduction is paramount in the formation of other perceptions and attitudes about violence portrayed in the films that are then carried over to other contexts. This idea is based on notions of exposure therapy to treat pathological fears. Research reveals that simply showing a phobic a feared stimulus will significantly reduce anxiety once evoked by the object or situation (Foa & Kozak, 1986).

Does exposure to the admixture of sex and violence influence aggression? The answer to this question has been sharply disputed in the social sciences. For obvious ethical reasons, most of the research in this area has focused on *adults'* aggressive reactions to violent sexually explicit content. As a result, we will only briefly mention it here. Studies in this domain usually occur in the laboratory, where male participants are either angered or not and then exposed to videos featuring (a) explicit sex, (b) violence plus explicit sex, or (c) neutral content. After exposure, the participant is given an opportunity to aggress against the confederate, usually by means of electric shock. Using this general procedure, several studies have demonstrated that exposure to violent pornography can increase aggressive behavior among male viewers (Donnerstein, 1980; Donnerstein & Barrett, 1978; Donnerstein & Berkowitz, 1981). Typically, these findings have been explained in terms of excitation transfer (Zillmann, 1991) or a social learning perspective (Bandura, 1971).

In fact, a meta-analysis of pornographic effects (Allen, D'Allessio, & Brezgel, 1995) has demonstrated that exposure to sexually explicit violence is a small to moderate predictor of aggressive behavior ($r = .217$, $k = 7$, $n = 353$). Such effects may be moderated by the sex of the confederate (Donnerstein, 1980; Donnerstein & Berkowitz, 1981) as well as the presence of anger manipulation prior to exposure (Allen et al., 1995; Donnerstein, 1980; Donnerstein & Berkowitz, 1981). Taken together, these studies indicate that participants previously angered by a female confederate are most likely to act aggressively after exposure to violent sexually explicit content.

SOLUTIONS TO HARMFUL EFFECTS

We have discussed throughout this chapter the potential harmful influences of exposure to specific media depictions of sex and violence. One should not assume, however, that these effects cannot be mitigated. Thus, we would like to conclude this chapter by reviewing the potential solutions to these concerns and addressing which ones are considered to be the most viable and why.

Media Literacy and Critical Viewing

A large number of organizations concerned with the well-being of children and families have recommended that professionals take a more active role in reducing the impact of violent media (e.g., American Medical Association, American Psychological Association). Research on intervention programs has indicated that we can reduce some of the impact of media violence by "empowering" parents in their roles as monitors of children's television viewing (e.g., Singer & Singer, 1998). Potentially effective strategies for parents to use to reduce the impact of viewing television violence have been summarized elsewhere (Comstock & Paik, 1991).

Another strategy has been to provide child viewers themselves with the cognitive tools necessary to resist the influence of television violence. For example, Huesmann, Eron, Klein, Brice, and Fischer (1983) attempted to motivate children not to encode and later enact aggressive behaviors they observed on television. They designed their intervention to take advantage of ideas from counterattitudinal advocacy research found effective in producing enduring behavioral changes in other domains. Specifically, the intervention was predicated on a notion contained in both dissonance and attribution theory—when a person finds himself or herself advocating a point of view that is either unfamiliar or even counter to an original belief, he or she is motivated to shift attitudes into line with what is being advocated. Children in the Huesmann et al. experimental group were first credited with the antiviolence attitudes that the experimenters wished them to adopt and then asked to make videotapes

for other children who had been "fooled" by television and "got into trouble by imitating it," even though they themselves knew better. The children composed persuasive essays explaining how television is not like real life and why it would be harmful for other children to watch too much television and imitate the violent characters. A videotape of each child reading his or her essay was then played before the entire group. This gave the child an opportunity to see himself or herself advocate an antiviolence position and also made the child's position public. The intervention was successful both in changing children's attitudes about television violence and in modifying aggressive behavior. Four months after the intervention, there was a significant decline for the experimental group in peer-nominated aggression and attitudes about the acceptability of television violence.

Some of the techniques based on the cognitive consistency approach discussed above have been applied to interventions designed to mitigate the impact of exposure to mass media sexual violence (i.e., Linz, Arluk, & Donnerstein, 1990; Linz & Donnerstein, 1989). As one example, Linz et al. (1990) tested the effectiveness of an intervention designed to modify reactions to sexually violent films, decrease rape myth acceptance, and sensitize viewers to the plight of a rape victim presented in a videotaped legal trial.

Male college students were brought into the laboratory and shown a documentary on the psychological impact of sexually violent films (an ABC *20/20* presentation in which the first author, film producers, and adolescents discussed the impact of such films on viewers and society). They then watched the two rape education films. After viewing, participants were assigned to one of three experimental conditions: a "cognitive consistency" condition in which the men wrote essays about myths of sexual violence, videotaped these essays, and watched a videotape playback of themselves and others advocating their antirape position; a "no-playback" condition in which the men wrote the same essays and

read them to the camera but exchanged their essays with others instead of seeing themselves advocate their position; or a "traditional persuasion" condition in which they wrote neutral essays about media use and watched a playback of these. Two additional control conditions—one in which men watched a film documentary on television news, rather than the rape and sexually violent film documentaries, and a no-intervention condition in which the men participated in the final phase of the research only—were also included in the design. A few weeks later, the men were contacted and asked to participate in a film-viewing study, in which they watched clips from sexually violent films and a videotaped reenactment of a rape trial, and then evaluated both.

The results indicated that levels of rape myth acceptance were lowest for those men who had participated in either the cognitive consistency or the no-playback conditions. Participants in these groups reported being more depressed in response to the violent films, were more sympathetic to the victim portrayed in the rape trial, and were more likely to perceive the victim as less responsible for her own rape than were participants in other conditions.

Linz, Wilson, and Donnerstein (1992) have suggested that a systematic program of research be undertaken, with the goal to develop a formal, easily administered educational program concerning media sexual violence. The program should be suitable for high school educators. To create such a program, research is needed to examine what types of information would be most powerful in changing adolescents' attitudes about mass media sexual violence, the optimal format for adolescents to learn and incorporate these messages into their repertoire of values, the most effective communication source for conveying this educational information, and whether social psychological factors, such as a critical viewing companion, facilitate immediate and long-term changes in beliefs and attitudes about sexual violence. We believe that educational

interventions will be effective to the extent that they are formed and administered on the basis of systematic research into each of these questions.

Another educational resource is the mass media themselves. Professionally produced educational movies about violence, which are also designed to be entertaining, have great potential for informing the public and, under some conditions, might even change antisocial attitudes about violence. An example in this area is provided by an NBC made-for-television movie. In September 1990, NBC aired a made-for-TV movie about the trauma and aftermath of acquaintance rape. This program, titled *She Said No,* was featured during prime-time hours and attracted a large audience. *She Said No* also received critical acclaim, winning an award from American Women in Radio and Television for its realistic portrayal of the plight of a rape victim. An evaluation of the effectiveness of this movie was undertaken by Wilson, Linz, Donnerstein, and Stipp (1992). The study measured whether exposure to this movie would decrease acceptance of rape myths and/or increase awareness of date rape as a serious social problem.

The study employed a total of 1,038 adults, randomly selected from four locations in the United States who were assigned to view or not to view *She Said No* over a closed-circuit channel, prior to the network broadcast of the film. Individuals from this representative sample were randomly assigned to view or not view the made-for-TV movie in their own home—a more naturalistic viewing environment than is achieved in most media experiments. The viewers and nonviewers were contacted the next day and asked about acceptance of rape myths and perceptions of rape as a social problem.

The results of this study indicated that the television movie was a useful tool in educating and altering perceptions about date rape. Specifically, exposure to the movie increased awareness of date rape as a social problem across all viewers, independent of gender or age. The movie also had a prosocial effect on older females who were less likely after exposure to attribute blame to women in date rape situations, as compared to older women who did not view the movie.

The above strategies have focused primarily on traditional media such as TV and film. We know, however, that children and adolescents spend more time currently with the Internet, which presents its own problems with regard to exposure. In thinking about solutions to children's and adolescents' access to inappropriate Internet content, there are additional approaches that could be considered, although not considered all that effective. The first is government regulation, restricting the content. The second is technology, including blocking software and some form of rating system.

Government Regulation

Within the United States, the First Amendment protects offensive speech from censorship, including sexually explicit materials. In general, the U.S. courts have struck down most content restrictions on books, magazines, and films. There are, of course, exceptions such as "obscenity," child pornography, and certain types of indecent material, depending on the time, place, and manner of the presentation. In 1996, Congress passed a bill to deal specifically with Internet content regulation primarily in the area of pornography.

The bill took as its premise a number of questions that are to be considered with regard to the issue of the protection of children. First, is access to pornography *easy* for children? The answer is probably yes, if the individual has some computer savvy. As we discussed earlier, sophisticated search engines make the search rapid and extensive. Second, is access to pornography *accidental*? Except for the typing errors, the answer is probably no. Finally, is access to this type of material *harmful*? This is difficult to assess and depends on many factors, as we discussed above. Nevertheless, most of us would agree that we should certainly

monitor and protect children from these unwanted sites.

The Supreme Court of the United States ruled on the Communications Decency Act in 1998 and, as expected, held it to be unconstitutional and an infringement on freedom of speech. Likewise, other courts have noted that service providers, such as America Online, could not be held liable for the sending of pornographic materials over the Internet. More recently, the courts have upheld the First Amendment rights of virtual child pornography. It is obvious that the courts are well aware that government regulation in this area would be difficult or near impossible, given not only the vastness of materials available but also the global scope of the Internet.

Blocking Technology

One solution has been the development of software that is designed to block unwanted sites. This blocking software can block known adult sites, for instance, or any site containing predetermined words such as *sex* and *gambling,* as well as other unwanted content. There are a number of these types of software available that perform these and other functions.

But none of these blocking systems is completely effective. The Web changes quite rapidly, and software designed for today may not be entirely appropriate tomorrow. In one test of the effectiveness of blocking adult sites (Consumer Reports, 1999), it was found that one program was able to block out 18 of 22 selected sites. Other programs were able to block about half the adult sites, and one of the tested programs did not block any of the sites. Furthermore, those blocking e-mail or chat group communications were often defeated by either transposing letters or renaming the Web browser on the hard disk.

In a more recent test of these products by Consumer Reports (2001), there was some improvement in the ability of this type of software to block objectionable materials that contain sexually explicit content or violently graphic images or that promote drugs, tobacco, crime, or bigotry. Far more troubling, however, was the finding that a filter appeared to block legitimate sites based on moral or political value judgments. Given their blocking of certain word strings or known sites, highly educational Web pages are also blocked. As the report rightfully concludes, filtering software is no substitute for parental supervision.

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