PART V

CONTENT AND AUDIENCES

24

VIOLENT MEDIA EFFECTS

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*Times have not become more violent. They have just become
more televised.*

—Marilyn Manson (1999), "I Don't Like the
Media but the Media Likes Me"

Consuming media has become a full-time job for most children—they
spend about 40 hours per week doing it (Roberts, Foehr, &
Rideout, 2005). There is plenty of violence in the media. For example,
about 60% of television programs contain violence (e.g., National
Television Violence Study, 1998), and about 90% of video games con-
tain violence (e.g., Children Now, 2001). Children are exposed to about
10,000 violent crimes in the media each year (Signorielli, Gerbner, &
Morgan, 1995).

Parents, policymakers, and other members of society might wonder
what impact exposure to violent media has on those who consume it.
The purpose of this chapter is to review scientific research on violent
media effects. In this chapter, we divide the effects that observing
media violence has on the viewer into three categories that we name,
respectively, (1) the *aggressor* effect—the more violent media you
consume, the more aggressive you become; (2) the *fear-of-
victimization* effect—the more violent media you consume, the more

afraid you are of becoming a victim of violence; and (3) the *conscience-numbing* effect—the more violent media you consume, the less you care about others being victimized. Similar psychological processes underlie all three of these effects, and we will discuss those processes as well.

◆ Violent Media Effects

THE AGGRESSOR EFFECT

Over five decades of scientific data lead to the irrefutable conclusion that exposure to violent media increases aggression. About 300 studies involving about 50,000 subjects have been conducted on this topic and reviewed and meta-analyzed multiple times (Anderson & Bushman, 2002a; Bushman & Huesmann, 2006; Paik & Comstock, 1994). The results from Anderson and Bushman's meta-analysis (2002a) are depicted in Figure 24.1 for the different types of methodologies researchers have used. Experimental studies have shown that exposure to media violence *causes* people to behave more aggressively immediately afterward. Experimental studies typically expose participants to violent media for relatively short amounts of time (usually about 15–30 minutes) before measuring aggressive thoughts, feelings, and most importantly, behaviors. For example, research has shown that exposure to
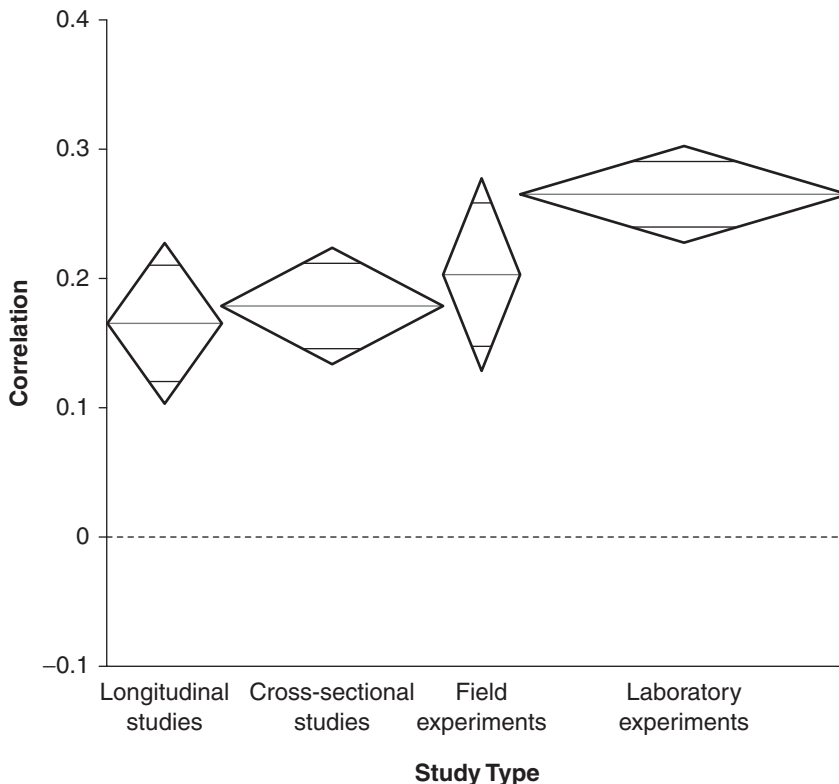

Figure 24.1 Effect of Violent Media on Aggression for Different Types of Studies

Source: Based on 287 studies involving 51,597 subjects (Anderson & Bushman, 2002a).

Note: Middle bars are average correlations. Outer bars are 95% confidence intervals. Diamonds are proportional to the number of studies.

violent media immediately makes people more willing to give others painful electric shocks (Geen & O'Neal, 1969) and loud noise blasts (Bartholow & Anderson, 2002), and makes young children and adolescents more likely to attack each other physically (Josephson, 1987).

Experimental studies have been criticized for their somewhat artificial nature (for reviews and rebuttals of these criticisms, see Anderson, Lindsay, & Bushman, 1999), but field experiments have produced similar results in more realistic settings. For example, delinquent boys who were shown violent films every night for five nights were more likely than those shown nonviolent films to get into fights with other boys (Leyens, Parke, Camino, & Berkowitz, 1975) or display higher levels of verbal aggression (Sebastian, Parke, Berkowitz, & West, 1978). Similar effects have been found with nondelinquent children who saw a single episode of a violent children's television program (Boyatzis, Matillo, & Nesbitt, 1995).

However, it is not so much the immediate effects of media violence that are of concern, but rather the aggregated long-term effects. Longitudinal studies offer evidence of a relationship between exposure to violent television as a child and aggressive and violent behavior many years later as an adult. Children who have a heavy diet of violent television are more likely to behave aggressively later in life. For example, in one longitudinal study, children exposed to violent media at ages 8 to 10 were significantly more aggressive 15 years later as young adults (Huesmann, Moise-Titus, Podolski, & Eron, 2003). Importantly, this study also found that aggression as a child was unrelated to exposure to violent media as a young adult, effectively ruling out the possibility that this relationship is merely a result of more aggressive children consuming more violent media.

Longitudinal studies have also demonstrated that exposure to violent media is related to serious aggressive behavior. For example, the amount of violent media consumed is related to aggressive behavior in adolescents (e.g., fighting) in high school students (McLeod, Atken, & Chaffee, 1972). Similarly, men who watched violent media during childhood are nearly twice as likely to have assaulted their spouses 15 years later and significantly more likely to have been arrested for a crime (Huesmann et al., 2003). Adolescent males from a high-risk sample who were high media violence viewers in middle childhood were recently found to be 18% more likely to have threatened or used a knife or a gun on someone in the last year (Huesmann et al., 2007).

Although the majority of studies to date have focused on violent television and movies, the same general pattern of effects appears to be present after exposure to different forms of media, including violent music (Anderson, Carnagey, & Eubanks, 2003; Johnson, Jackson, & Gatto, 1995) and violent video games (Konijn, Nije Bijvank, & Bushman, 2007). In fact, recent theorizing (Bushman & Huesmann, 2006) and empirical research (Polman, Orobio de Castro, & van Aken, 2008) suggest that the effects of violent video games are stronger than the effects of passive visual media. Each research method has its own strengths and weaknesses. Yet across the different methods, there is a convergence of evidence (see Figure 24.1). Scientists call this convergence "triangulation." Regardless of the method used, the conclusion is the same: Exposure to violent media increases aggression and violence.

Of course violent media is not the only risk factor for violent and aggressive behavior, or even the most important risk factor, yet it is an important risk factor that cannot be dismissed as "trivial" or "inconsequential." Although the typical effect size for exposure to violent media is relatively small by conventional standards (Cohen, 1977) and is therefore dismissed by some critics, this "small effect" translates into significant consequences for society as a whole, which may be a better

standard to measure the magnitude of the effect (Abelson, 1985; Yeaton & Sechrest, 1981). For example, the U.S. Surgeon General's Report on youth violence found that violent media is as large a risk factor for youth violence as other well-known factors such as poverty, substance abuse, and bad parenting (Anderson, Berkowitz, et al., 2003; U.S. Department of Health and Human Services, 2001).

THE FEAR-OF-VICTIMIZATION EFFECT

Research has shown that heavy TV viewers (defined as at least 4 hours per day) are more fearful about becoming victims of violence, are more distrustful of others, and are more likely to perceive the world as a dangerous, mean, and hostile place than are light TV viewers (e.g., Gerbner & Gross, 1976, 1981). For example, in one study, television exposure was predictive of fear of crime, whereas actual exposure to crime was not (Van den Bulck, 2004). A similar but stronger relationship has been reported between watching television news and fear of crime (Romer, Jamieson, & Aday, 2003). Like the *aggressor* effect, this *fear-of-victimization* effect seems to begin early in childhood, with even 7- to 11-year-olds displaying this pattern (Peterson & Zill, 1981).

In general, the fear-of-victimization effect only seems to apply when people are evaluating unfamiliar environments. Although violent media make people more afraid of crime in their city and increase their estimates of the prevalence of crime in general, they have relatively little impact on people's feelings of fear in their own neighborhood (Heath & Petraitis, 1987; Hughes, 1980; Sparks & Ogles, 1990). This suggests that the fear-of-victimization effect may be related to the availability heuristic (Tversky & Kahneman, 1973). The *availability heuristic* is the tendency to judge the frequency or likelihood of an event by the ease with which relevant instances come to mind. People make evaluations based on salient or noticeable information, and when people have relatively little firsthand experience with an environment, they may draw upon television as an additional source of information.

THE CONSCIENCE-NUMBING EFFECT

People who consume a lot of violent media become less sympathetic to victims of violence. In one study, people who played violent video games assigned less harsh penalties to criminals than those who played a nonviolent game (Deselms & Altman, 2003). People exposed to violent media also perceive victims as less injured (Linz, Donnerstein, & Adams, 1989) and display less empathy toward them (Linz, Donnerstein, & Penrod, 1988). The *conscience-numbing effect* appears to be an enduring one. Even several days after watching violent, sexually explicit scenes, men still displayed an increased tolerance to aggression directed toward women (Malamuth & Check, 1981; Mullin & Linz, 1995).

The reduced empathy for victims of violence causes people to become less willing to help a victim of violence in the real world (Drabman & Thomas, 1974, 1976; Molitor & Hirsch, 1994). Children in these studies who had been exposed to violent programs were less willing to intervene when they saw two younger children fighting. Adults are also less helpful to those in need after exposure to violent media (Bushman & Anderson, 2009). One reason why people may become more tolerant of violence and less sympathetic toward violence victims is because they become desensitized to it over time. Consistent with this interpretation, research has shown that after consuming violent media, people are less physiologically aroused by real depictions of violence (Carnagey, Anderson, &

Bushman, 2007; Cline, Croft, & Courrier, 1973; Thomas, 1982).

The effects of violent video games on children's empathy toward victims are of particular concern. Feeling empathy requires taking the perspective of the victim, whereas violent video games encourage players to take the perspective of the aggressor. Whereas in at least some television and video depictions of violence, the viewer has the choice of taking the perspective of the aggressor or victim, in most violent video games, the player is forced into taking the perspective of the aggressor. Thus, playing violent video games may have a particularly strong effect on diminishing the empathy the player feels for the victim (Bushman & Anderson, 2009; Funk, Baldacci, Pasold & Baumgardner, 2004). This conscience-numbing effect of media violence is a process that contributes to the aggressor effects described previously.

◆ *Why Do People Deny Media Effects?*

Although the scientific evidence shows that violent media effects are undeniable, many people still deny these effects. There are at least four reasons why.

First, people may think, "I (or other people I know) watch a lot of violent shows and I've never killed anyone. Furthermore, I never heard of anyone watching a lot of violence and then murdering someone. Therefore, media violence has no effect." This fallacious reasoning is a good example of how the availability heuristic coupled with the *base rate problem* (Kahneman & Tversky, 1973) distort reasoning. People have great difficulty judging influences on events when the base rate probability of the event is very low. It is not surprising that people who consume violent media have not killed anyone because very few people kill anyone. For example, fewer than 6 people per 100,000 are murdered each year in the United States (U.S. Federal

Bureau of Investigation, 2008). It is very difficult to predict rare events, such as murder, using exposure to violent media or any other factor. However, murder is the most salient violent event to most people; so when they don't have "available" in memory cases of people viewing media violence and then murdering, they ignore the base rate of murder and conclude that media violence has no effect. They do this despite the fact that one can predict less extreme and more common violent behaviors from media violence viewing. For example, in one 15-year longitudinal study (Huesmann et al., 2003), heavy viewers of violent TV shows in first and third grade were three times more likely to be convicted of criminal behavior by the time they were in their twenties. They were also more likely to abuse their spouses and assault other people at least once in the past year.

Second, researchers have also found that people believe the media have a much stronger effect on others than on themselves. This effect is very robust and is called the *third-person effect* (Davison, 1983; Innes & Zeitz, 1988; Perloff, 1999). The consequence of this psychological effect is that people may often agree that media violence has a bad effect on some people, but not on themselves, their own children, or other children who are "brought up like mine." This thinking may then lead to a denial of the overall importance of the effects from a public health standpoint.

Third, the entertainment industry frequently claims that violent media do not increase aggression (Bushman & Anderson, 2001). Even though the public may recognize that making such claims is in the economic self-interest of the entertainment industry, the repetition of the claims of no effects still seems to have an effect. In 1972, the U.S. Surgeon General issued a warning about the harmful effects of TV violence. Since then, the scientific evidence has grown even stronger (see Figure 24.2). But an analysis of over 600 news reports shows that over time, news

stories are more likely to deny the harmful effect of media violence (see Figure 24.2). Most Americans aren't even aware that the U.S. Surgeon General issued a warning about TV violence. Perhaps this is because most Americans get their information from the mass media. The entertainment industry is probably reluctant to admit that they are marketing a harmful product, much like the tobacco industry was reluctant to admit that they were marketing a harmful product.

Fourth, people do not understand psychological processes as well as they understand biological processes. If you see a violent video game player assault another person, it is difficult to know the direct cause of the assault. Was it playing violent video games for hours on end, or was it something else? The psychological process by which playing violent video games produces this result is not as intuitive to most people as are biological processes. People are probably more accepting of the idea that smoking causes lung cancer, for example, because it is much easier to grasp the idea that smoke going into the lungs damages cells and starts tumor growth.

These processes combine to create an atmosphere in which not only nonexpert journalists but also scholars who have not done research in the area write articles and books arguing that there are no effects (see Huesmann & Taylor, 2003). However, the vast majority of social scientists working in the area now accept that media violence poses a danger to society (Murray, 1998).
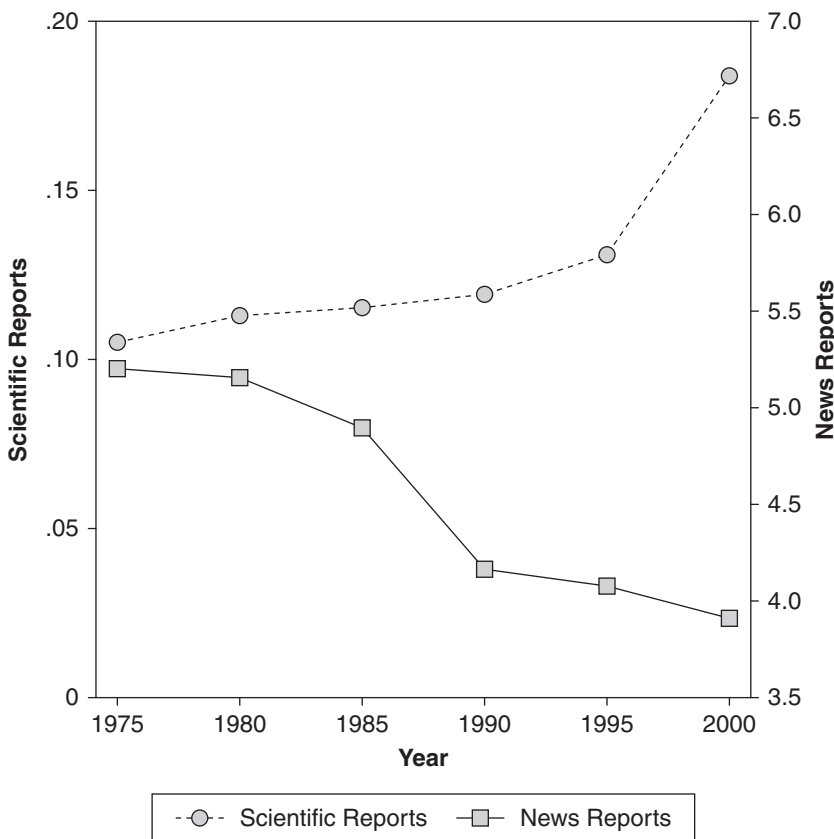

Figure 24.2   Conservative Scientific (Lower Boundary of 99.9% Confidence Interval) Versus News Reports of the Effect of Media Violence on Aggression

Source: Anderson & Bushman, 2002b.

◆ *Moderators of Violent Media Effects*

Although research has shown that violent media can produce aggressor, victim, and conscience-numbing effects, there are a number of important moderators of these effects. One is age. As we discuss in the following paragraphs, different psychological processes are responsible for short-term and long-term effects of media violence. Although the short-term effects of media violence can be detected in any age viewer, children are most at risk for experiencing the longer-term changes in social cognitions that control behavior over time. Children have less-well-developed neurological and emotional systems and less-well-developed personalities that can more easily be changed by repeated exposure to violence. Consequently, younger children appear to be particularly vulnerable to the long-term effects of violence (Eron, Huesmann, Lefkowitz, & Walder, 1972; Huesmann et al., 2003; Paik & Comstock, 1994).

Another important moderator is exactly how the violence is depicted in the media. Media that glamorize violence may have a particularly strong influence on the aggressor and conscience-numbing effects (Bushman & Huesmann, 2001). In contrast, the fear-of-victimization effect may be constrained to media that children believe have an informative role about the world around them, such as television news. Whether someone is more likely to become an aggressor or a victim may also depend on whom they identify with: the perpetrators of violence, or their victims. However, for practical purposes, the sheer amount and variety of violence children are exposed to makes it likely that all children are vulnerable to these effects in varying degrees.

Also, *who* consumes violent media is important. A number of individual differences put some people at greater risk than others. One key individual difference is trait aggressiveness. People who score high in trait aggressiveness behave more aggressively after being exposed to violent media than those low in trait aggressiveness (Bushman, 1995; Josephson, 1987). However, these findings represent trait differences at a single point in time in an experimental setting. Exposure to media violence increases trait aggressiveness, which in turn increases the likelihood of aggressive behavior (Anderson, Berkowitz, et al., 2003). This suggests that the short-term effects of violent media observed in experimental research may become increasingly pronounced within individuals as they are repeatedly exposed to violence. Additionally, there is some evidence that in the long run, more aggressive individuals turn to exposing themselves more to violent media for social comparison motivations (Huesmann et al., 2003). This leads to a "downward spiral" into greater levels of aggression (Slater, Henry, Swaim, & Anderson, 2003).

Some studies have found that males are more influenced by media violence than are females (Eron et al., 1972), but these effects are inconsistent; other researchers find little difference between males and females (Huesmann et al., 2003). This inconsistency may be a result of different measures of aggression (Anderson, Carnagey, & Flanagan, 2004) or different gender norms in the sample populations, or changes in gender norms over time. Longitudinal studies have shown that gender differences in aggression have decreased over time, probably because aggressive female models are becoming more common in the media and because it has become more socially acceptable for females to behave aggressively. One clear difference is that the combination of exposure to sex *plus* violence appears to be particularly potent in males. In one study, college students watched movies portraying violence, sex and violence, or neither sex nor violence (Donnerstein & Berkowitz, 1981). Men exposed to both sex and violence were more aggressive toward a female who provoked them than

were men exposed to only violence or men exposed to no sex or violence.

◆ Why Do Violent Media Increase Aggression?

The psychological processes that underlie media-related aggression can be divided into those that produce more immediate, but transient, short-term effects on behavior, and those that produce more delayed, but enduring, long-term effects on behavior (Bushman & Huesmann, 2006; Huesmann, 1988, 1997; Huesmann & Kirwil, 2007).

EXPLAINING SHORT-TERM VIOLENT MEDIA EFFECTS

Research shows that short-term increases in children's aggressive behavior following the observation of violence are mainly due to three psychological processes: 1) the priming of already existing aggressive behavioral scripts, aggressive cognitions, or angry emotional reactions; 2) simple mimicking of aggressive scripts; and 3) changes in emotional arousal stimulated by the observation of violence. In films and plays, scripts tell actors what to say and do. In memory, scripts define situations and guide behavior: The person first selects a script from memory to represent the situation and then assumes a role in the script. Scripts can be learned by direct experience or by observing others, including media characters.

Priming. Neuroscientists and cognitive psychologists posit that the human mind acts as an associative network that consists of nodes and links. The nodes represent concepts, and the links represent associations among concepts. Thoughts, feelings, and behavioral tendencies are linked together in memory. Exposure to a stimulus can activate or prime concepts in memory (Fiske &

Taylor, 1984). The activation produced by an observed stimulus spreads along network links to associated concepts as well. Thus, exposure to a stimulus can prime related concepts, ideas, and emotions in a person's memory, even without the person being aware of it (e.g., Bargh & Pietromonaco, 1982). For example, exposure to a weapon can increase aggressive thoughts and behaviors (Berkowitz & LePage, 1967).

Mimicry. Human and primate young have an innate tendency to mimic whomever they observe (e.g., Hurley & Chatter, 2004; Meltzoff & Moore, 2000). Neuroscientists have discovered "mirror neurons" in primates that seem to promote such mimicry and longer-term imitation (Rizzolati, Fadiga, Gallese, & Fogassi, 1996). The immediate "mimicry"of aggressive behaviors does not require a complex cognitive representation of the observed act, but only a simple "mirror" representation of the aggressive behavior. Consequently, children who observe (in the media or in the environment around them) others doing a specific aggressive behavior are more likely to do the same aggressive behavior immediately after observing it (Bandura, 1997). Theoretically, the more similar children think they and the observed model are, the more readily mimicry will take place, but the mimicry mechanism is so powerful that even fantasy characters can be imitated by young children. Children under about age 7 cannot tell the difference between reality and fantasy (e.g., Davies, 1997).

Arousal and excitation transfer. Observed violence often consists of action-packed scenes that increase physiological arousal (e.g., heart rate, blood pressure). There are two possible reasons why arousal may increase aggression in the short run. First, high arousal generated by exposure to violence makes any dominant response tendency more likely to be carried out in the short run. Consequently, the individual with aggressive tendencies behaves even

more aggressively (e.g., Geen & O'Neal, 1969). Second, when an individual is highly aroused by viewing violence, a mild specific emotion (e.g., mild anger) experienced sometime later may be "felt" as more severe (e.g., intense anger) than otherwise because some of the emotional response stimulated by the violent media presentation is misattributed as due to the provocation. This process is called *excitation transfer* (Bryant & Zillmann, 1979; Zillmann, Bryant, & Comisky, 1981).

EXPLAINING LONG-TERM VIOLENT MEDIA EFFECTS

Research shows that long-term increases in aggressive behavior are mainly due to two psychological processes: 1) observational learning, and 2) activation and desensitization of emotional processes.

Observational learning. By *observational learning* we mean the process through which behavioral scripts, world schemas, and normative beliefs become encoded in a person's mind simply as a consequence of observing others (Huesmann, 1988, 1997). Observational learning is a powerful extension of imitation in which logical induction and abstraction are used to encode complex representations in memory. For example, extensive observation of violence biases children's world schemas toward "hostility," and they then attribute more hostility to others' actions (e.g., Dodge, 1985), which in turn increases the likelihood of aggression (e.g., Dodge, Pettit, & Bates, 1995). Similarly, through repeated observation of aggressive role models in the media and in the real world, children develop normative beliefs that aggression is appropriate, and they acquire social scripts for how to behave aggressively. Whereas short-term mimicry requires only one exposure to an observed behavior, long-term observational learning usually requires repeated exposures. The more the child's attention is riveted on

the observed behavior, the fewer the number of repetitions needed. However, numerous other factors besides attention affect the extent of observational learning. For example, the more the child identifies with the observed models, and the more the observed scripts for behavior are rewarded and are portrayed as appropriate, the more firmly the scripts will be encoded in memory. Similarly, if the world schemas and normative beliefs that a child acquires through observing others (again, in real life and in the media) lead to valuable outcomes for the child, they will become more firmly encoded and more resistant to change (Huesmann & Guerra, 1997).

Activation and desensitization of emotional processes. The long-term effects of exposure to violence also involve the vicarious conditioning of emotional reactions. Through classical conditioning, fear or anger can become linked with specific stimuli after only a few exposures (e.g., Cantor, 1998). These emotions influence behavior in social settings away from the media source through stimulus generalization. An individual may then react with inappropriate fear or anger in a novel situation similar to one that he or she has observed in the media. Repeated exposure to emotionally arousing media or video games can also lead to habituation of certain natural emotional reactions. This process is often called *desensitization,* and it has been used to explain a reduction in distress-related physiological reactivity to media portrayals of violence. Indeed, violent scenes do become less arousing over time (Cline et al., 1973), and brief exposure to media violence can reduce physiological reactions to real-world violence (Thomas, Horton, Lippincott, & Drabman, 1977). Behaviors observed by the viewer that might seem unusual at first begin to seem more normative after repeated presentations. For example, most humans seem to have an innate negative emotional response to observing blood and violence, as evidenced by increased

physiological arousal, and self-reports of discomfort that often accompany such exposure. However, with repeated exposure, this negative emotional response habituates, and individuals become "desensitized." As a result, these individuals can then think about and plan proactive aggressive acts without experiencing negative affect.

♦ Reducing Violent Media Effects

The U.S. government has been involved in the TV violence debate since the 1950s. In 1972, the Surgeon General concluded that TV violence was harmful to children and issued his famous warning about it (Steinfeld, 1972). However, it took almost 25 years for the congress to actually do something about the problem. In 1996, the Telecommunications Act was passed and signed into law. This act mandated that new television sets be manufactured with a V-chip that allows parents to block out TV programs with objectionable content. This act also mandated that TV programs be rated or labeled to provide information that can be read by the V-chip. When the V-chip is activated by a special code inserted by broadcasters into the TV signal, it scrambles the reception of the incoming picture. One problem with the V-chip is that some parents have difficulty with modern technology and cannot program the V-chip. A bigger problem, however, concerns the rating system adopted. Within a year of passage of the 1996 Telecommunications Act, the TV industry announced a new age-based rating system that is similar to the movie rating system used by the Motion Picture Association of America (e.g., "TV-14, Parents Strongly Cautioned . . . many parents would find this program unsuitable for children under 14"). Some violent programs also contain a warning label (e.g., "Due to some violent content, viewer discretion is advised"). Research has shown

that such labels just make violent media "forbidden fruits" that attract young audiences (Bushman & Cantor, 2003; Nije, Bijvank, Konijn, Bushman, & Roelofsma, in press). It is somewhat ironic that although labels can increase the attractiveness of violent TV programs, the TV industry can claim that it is attempting to be more responsible and proactive about the potentially harmful effects of TV violence.

Sitting a child in front of a TV set or video game console can buy the parent time—a precious commodity to any parent, especially single parents. However, a TV program or video game is often a shoddy baby-sitter, especially when the content is not monitored. Parents are in the best position to counteract the harmful effects of violent media on their child. The primary media exposure a child experiences occurs in the home. Media habits are established early in life and are quite persistent over time. The harmful effects of violent media are also greatest for young children. Thus, the parent should take an active role in counteracting the potentially harmful effects of media violence.

Training for parents includes informing them of the negative effects that media violence can have on their child, and teaching them how to counteract these negative effects. Parents should teach their child how to be a critical media consumer. Previous research has shown that teaching children critical TV viewing skills can make them less susceptible to the harmful effects of TV violence (e.g., Abelman & Courtright, 1983; Eron, 1982; Watkins, Sprafkin, Gadow, & Sadetsky, 1988). Unfortunately, very few parents (about 10%) do this.

♦ Conclusions and Future Directions

Exposure to media violence increases the risk of anyone behaving more aggressively

in the short run. The effects will be larger for people who already have aggressive scripts that can be primed by the violence or who have poorer emotion regulation, but the increase in risk is universal. Habitual exposure to media violence also increases the risk of younger viewers developing into more habitually aggressive adolescents and adults regardless of how aggressive they were initially. Violent media have other effects too, such as increasing the fear of victimization and numbing people to the pain and suffering of others. The processes that produce these effects are now fairly well understood. Still, there are a number of unknowns that deserve further exploration.

Near the top of this list would be how the effects vary for different kinds of mass media, including new emerging media. Theorizing leads us to believe that video games should have even larger effects than passive visual media, and some research has shown this (e.g., Polman et al., 2008), but more research needs to be carried out to establish this fact. In particular, little is known about the effects of massively multiplayer online role-playing games (MMORPGs). Similarly, much more research is needed on the effects of even newer mass media. For example, what are the consequences of the exponential growth and use of Web sites to tell personal stores and present personal videos? How many of these presentations are violent, and what effect do they have? What about the growing use of "smart phones" to play videos and send material to others? Certainly, theory gives us reasons to be concerned about all of these and particularly about their long-term effects on children and adolescents.

Another promising area for future research is the investigation of individual difference moderators and internal mediators of the effects of observing violence or playing violent games. Clearly, some people seem to be more susceptible to influence than others, but it has been hard to pin down the characteristics that produce such differences. Whereas already-more-aggressive children seem more susceptible to short-term effects (as theory would predict), even initially nonaggressive children seem susceptible to long-term influences. Are individual differences in emotion regulation or other arousability important? Are changes in arousal mediating some of the effects? Fortunately, new advances in brain imaging and neuroscience are likely to make it easier to investigate the role of individual differences in physiology both as moderators and mediators. However, we also need to attend more to the moderating role of individual differences in socialization by parents and peers in the process. These kinds of investigations are also likely to lead to better insights for interventions to reduce the effects of media violence on individuals.

In his book *Civilization and Its Discontents,* Sigmund Freud (1961/1930) argued that children do not have to learn how to behave aggressively. Instead, they have to learn how to restrain their aggressive impulses. One of the main functions of society is to curb aggressive behavior. Virtually every society has laws against violent acts such as murder, assault, and rape. It is somewhat ironic, therefore, that many societies tolerate and even encourage the use of graphic forms of violent entertainment. In ancient Rome, it was gladiators killing each other or animals in a coliseum. Today, it is gamers "killing" enemies in a virtual world. In either case, violent forms of entertainment make us less civilized and contribute to a more violent and less peaceful society.

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