chapter eleven

Effects of Media Violence

By the time the average child is eighteen years old,
he or she will have witnessed 16,000 murders.
—Facts and Figures About Our TV Habit, TV Turnoff Network
www.tuneintokids.org/docs2007/rm2.pdf

One of the most important social issues of our time has been the public concern for the negative effects of exposure to media violence, especially among children. Most studies on violent media fare have focused on movies, television dramas, cartoons, and other fantasy shows, as well as news reports, violent video games, and websites.

Through the years, many studies have revealed that viewing mediated violence leads to or causes aggressive behavior. Adults and children have been the research participants in these numerous experiments and studies. Despite the findings, critics of these studies and the research methods they employ abound. Due to the implications for society as a whole, the entire media violence issue has been one of major concern for public policy makers over the years. This chapter will review the important studies and the voice of the critics from a public policy standpoint. We will take a brief look at the research methods used to study the effects from mediated violence, including the ways media violence is measured. Then we turn to the various types of effects from violence, including behavioral, emotional, and cognitive effects. Finally, we note new directions that media violence researchers are taking.

Media Violence Research and Public Policy: History and Future

Through the years, numerous studies of media effects have examined the negative effects on behavior that result from consuming media violence, whether reading, viewing, or listening to it. Since the beginning of radio, movies, and television, concern about media violence has been a major force in public policy making. The struggle for lawmakers has always been maintaining balance between First Amendment rights in a free society and concern for the public welfare.

In her book *Violence on Television,* author Cynthia A. Cooper (1996) identified three phases in the public policy debate that emerged through the years. In the first phase, the debate focused upon the rising rate of juvenile delinquency. Next, the boundaries of the debate expanded to include concern about the effects of television violence on the social behavior and well-being of society in its entirety. In the third phase, the concern of policy makers shifted from identification of detrimental effects on viewers to a proactive attempt to reduce televised violence through legislative restrictions.

Social scientists coordinated their efforts in the 1920s and 1930s to investigate the behavioral and social influences of viewing motion pictures. The Payne Fund studies were a series of tests conducted on adults and children who went to movies. The studies found that the violent and sexual content of movies did not match conventional social mores, but the research evidence did not provide any wholesale support for popular public contentions of detrimental effects upon the social standards of adult movie audiences. The findings did suggest, however, that particularly "vulnerable" children who were prone to juvenile delinquency were influenced by violent and criminal behavior they watched on the screen (Blumer & Hauser, 1933; Dysinger & Ruckmick, 1933).

The next major study to gain public attention appeared in the mid-1950s. This time, the comic book industry came under intense scrutiny. A popular book, *The Seduction of the Innocent* (Wertham, 1954), contended that comic books offered children a distorted picture of reality and were responsible for problems with reading and even instances of juvenile delinquency. The author's methods and interpretations were questioned by the social scientific community, but the general public and the press challenged the findings far less rigorously.

In the 1950s and early 1960s, when television became a popular medium for entertainment, communication researchers in the United States and Great Britain became curious about the effects of exposure to the new medium, especially among young audiences. In their studies, researchers in the United States (Schramm, Lyle, & Parker, 1961) found a connection between viewing televised violence and aggressive behavior among youngsters, whereas a British group (Himmelweit, Oppenheim, & Vince, 1958) did not find evidence of such a causal relationship and contended that such a link would be difficult to prove.

Later, in the socially turbulent and violent 1960s, two more important reports again produced findings that conflicted with one another. First, Presi-

dent Lyndon Johnson's National Commission on the Causes and Prevention of Violence (1969) studied the issue and found that television could not be implicated as a primary cause for violence in society. Soon thereafter, the U.S. Surgeon General's Scientific Advisory Committee on Television and Social Behavior issued its five-volume report. According to the Surgeon General's committee, the evidence indicated that viewing violence on television *did* increase a viewer's tendencies to behave aggressively (1972).

Throughout the 1980s, the Federal Communications Commission loosened earlier restrictions that had been placed on broadcasters to operate "in the public interest." Although the relaxing of restrictions signified a victory for broadcaster's First Amendment rights, the resulting changes in programming caused considerable public concern. Many children's programs disappeared, for example, and those that remained were more violent or highly commercial. A 1982 report from the National Institute of Mental Health, called *Television and Behavior*, did little to settle the issue, but only fueled more public controversy.

Congress reacted to the lowering of program standards with the Children's Television Act of 1990, which required broadcasters to air a certain amount of educational programming suitable for young viewers. It also placed time limits on the amount of commercials shown on children's programs.

Three years later, Congress began hearings to explore the subject of media violence and its effects on children. Due to increased public awareness and concern over the issue, the television networks decided to begin labeling programs to warn parents about violent and unsuitable content. This led to the suggestion for some device that would permit parents to control which programs could be seen on their television sets.

The Telecommunications Act of 1996 made installation of the V-chip mandatory on new models of televisions. This device allows parents to block signals and prevent certain undesirable programs containing violence, sex, or strong language from being received in their homes. The act also required the television industry to rate programs based upon suitability for certain age levels (see Figure 11.1).

Whereas many saw these developments as positive steps, others pointed to problems inherent in such attempts to limit or prohibit children's exposure to undesirable programming (Potter & Warren, 1996). According to some, advisory warnings and blocking devices created a "forbidden fruit" effect, causing children to be extremely interested in seeing the very programs their parents were trying to block (Christenson, 1992).

At the end of the century, a three-year study on television violence conducted by researchers at several leading universities again confirmed the link between viewing violence and subsequent aggressive behavior. Released in 1998, the *National Television Violence Study* found that not only had the proportion of violent prime-time network and cable shows increased since 1994, but the *way the violence was portrayed* on these programs actually encouraged children to imitate the behavior they saw. The study also found that age-based ratings did not indicate the amount of violent content in a program (Federman, 1998).

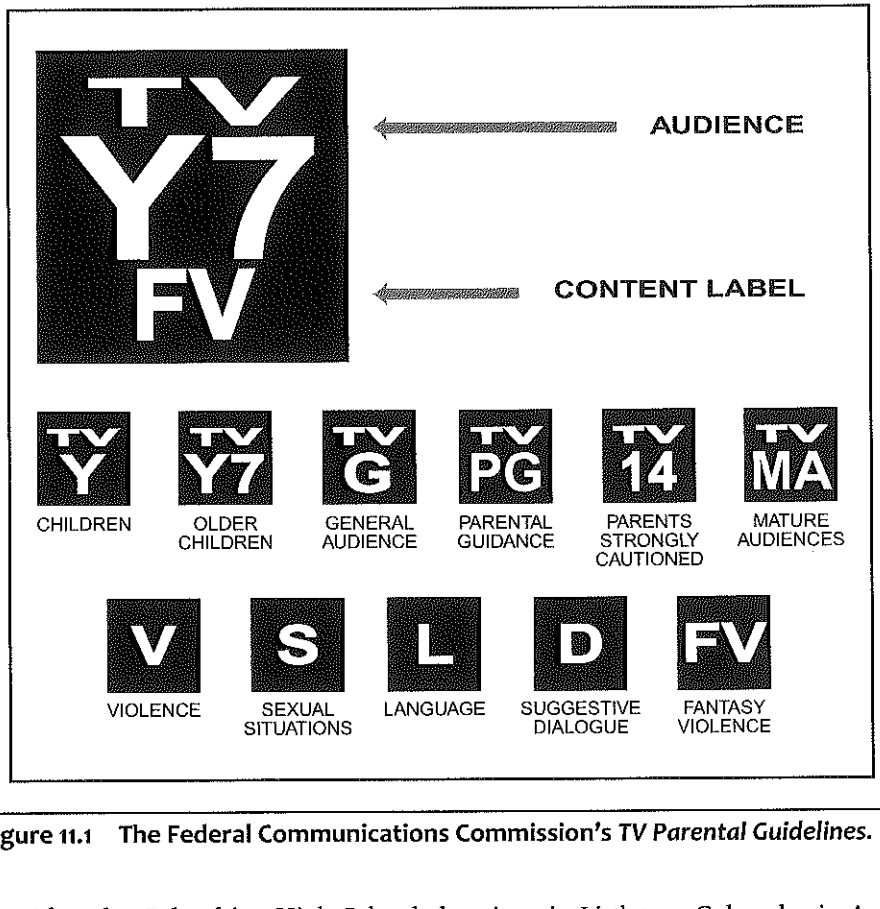

Figure 11.1 The Federal Communications Commission's *TV Parental Guidelines*.

After the Columbine High School shootings in Littleton, Colorado, in April 1999, the perceived link between media violence and murderous behavior thrust itself squarely into the public eye once again. The reactions of horror to the senseless slayings resulted in congressional actions and a subsequent report on violence from the U.S. Surgeon General ordered by President Clinton. *Youth Violence: A Report of the Surgeon General* found a strong relationship between consumption of media violence and short-term aggression, but the aggressive behavior that typically resulted stopped far short of breaking limbs or committing murder.

In 2000, the American Academy of Pediatrics, American Academy of Child and Adolescent Psychiatry, American Psychological Association, American Medical Association, American Academy of Family Physicians, and American Psychiatric Association issued a Joint Statement on the Impact of Entertainment Violence on Children. It pointed to 30 years of research that had suggested that viewing violent media content could lead to aggression, especially among children, but it qualified its stance on the issue by pointing out that other important factors contribute to youth aggression, such as the influence of peers, the situation at home, and the easy availability of weapons in this country (Joint Statement, 2000).

In the first issue of *Annual Review of Public Health* in 2006, Huesmann and Taylor wrote:

> Media violence poses a threat to public health inasmuch as it leads to an increase in real-world violence and aggression. Research shows that fictional television and film violence contribute to both a short-term and a long-term increase in aggression and violence in young viewers. Television news violence also contributes to increased violence, principally in the form of imitative suicides and acts of aggression. Video games are clearly capable of producing an increase in aggression and violence in the short term, although no long-term longitudinal studies capable of demonstrating long-term effects have been conducted. The relationship between media violence and real-world violence and aggression is moderated by the nature of the media content and characteristics of and social influences on the individual exposed to that content. Still, the average overall size of the effect is large enough to place it in the category of known threats to public health. (p. 393)

Other studies continued to confirm "real and strong" effects from media violence (Murray, 2008). Barrie Gunter, in a study that appeared in *American Behavioral Scientist,* concluded that studies on media violence should not be dismissed, but he advised caution in accepting "blanket conclusions about harmful effects of media violence" (Gunter, 2008, p. 1061). He also said that some people who watch violent media fare may be more susceptible to harmful effects than others, and that media depictions of violence also play a role in the mix.

Despite the enormous number of studies linking mediated violence to aggression, critics point to statistical problems within the studies that have to do with effects sizes, which tend to be small to moderate. Researchers usually respond by pointing out that even small effects sizes could be detrimental when considering that mass media audiences number in the millions.

Savage (2004) conducted a methodological review of the literature on media violence and concluded that a clear causal relationship between viewing violence and subsequent criminal behavior does not exist (see also Savage, 2008, and Grimes & Bergen, 2008). Reports such as these, however, make a giant leap when linking viewing violence to criminal behavior. The vast majority of studies on mediated violence do not make such a jump. They only point to aggressive predispositions and tendencies being measured after viewing mediated violence. Aggressive tendencies do not equal criminal behavior. Other critics point to the nature of the experiments in an artificial setting and the use of college students as subjects, as well as the short-term nature of the effects usually measured.

Zillmann and Weaver (1999) answered some of these criticisms:

> It seems that critics of media-violence research could only be satisfied with longitudinal experimental studies in which, within gender and a multitude of personality variables, random assignment is honored and exposure to violent fare is rigorously controlled—that is, with research that in a free society simply cannot be conducted. (p. 147)

Media Violence Research Methods

When carried to perhaps its worst extreme, the modeling or imitation of screen violence has been linked to violent and brutal "copycat" crimes—rapes and even murders. As we discussed in Chapter 5 on priming, violent copycat crimes are among the most disturbing examples of imitative behavior.

The sensational nature of copycat crimes attracts the notice of print and electronic news media, and therefore examples of such crimes abound in the public's memory; in reality however, copycat crimes are extremely rare. Millions of other viewers who watch the same film or program are *not* inspired to imitate such extreme violent behavior. This suggests that other individual factors, such as a person's disposition (or predisposition to violent behavior), state of mind, emotional stability, and personal circumstances play a major role in determining whether that person will resort to aggression after viewing violent fare.

Social scientists attempt to record more subtle media effects—those that they can measure through strictly controlled experiments and studies, which do not involve actual harm or injury to anyone. These researchers concentrate their efforts on several major issues related to media violence. Many studies are designed to measure the *amount* of violence that occurs on various media. Other studies explore the *contexts* in which the violence occurs, as research has shown that such contexts are very important in determining the extent of harmful effects. (Examples of such contexts would be whether or not the violence was accidental in nature or performed with malicious intent, whether or not the perpetrator was punished, or whether or not the consequences of the violence were shown.) Most importantly, these and other studies examine viewers' exposure to such violence and attempt to answer the difficult question: What effect does media violence have on those who consume it?

Research studies on the effects of viewing violent media fare have employed a number of different methodologies. Gunter (1994) reviewed the vast body of research and identified six major research methods that have been used to study the question. These include laboratory experiments, field experiments, correlational or cross-sectional surveys, longitudinal panel studies, natural experiments, and intervention studies. To that list we also add meta-analysis, a statistical technique that allows researchers to combine various studies to reveal significant results in the area of media violence research. We will discuss each in turn.

Laboratory Experiments

Strictly controlled experiments in a laboratory setting have provided compelling evidence that watching media violence may cause a viewer to behave more aggressively. Such experiments are constructed to show a *causal relationship* between viewing TV violence and behaving aggressively. Critics point to the unnatural circumstances surrounding the viewing in such experiments and question whether the results have any meaning in the real world.

One recent experiment tested the role of song lyrics, video clips, and musical tone on aggressive tendencies. The researchers found that the individuals

exposed to violent lyrics, whether or not violent images were shown with the music, showed the highest level of aggression (Brummert Lennings & Warburton, 2011).

Field Experiments

Most of these studies have taken place among children in an institutional setting, such as a nursery school. Prior to viewing violence, the children are randomly assigned to groups (one group views violence and another sees nonviolent programming). Their levels of natural aggressiveness and attitudes are measured, then compared to measures taken *after* viewing violent fare. Field experiments avoid the problem of unnaturalness associated with laboratory experiments.

One field study worth noting (Williams, 1986) provided strong evidence for the connection between viewing violent content and behaving aggressively. Of the three communities in Canada selected for study, one did not have television (notel), the second received only one channel (unitel), and the third had access to several channels (multitel). The study showed that the children in the community without television at the outset showed significant increases in aggressive behavior over a two-year period after TV was introduced. The aggressiveness of children in the other two communities did not change over the same period.

Correlational Surveys

In these cross-sectional studies, typically viewers are asked to read a list of program titles and select those programs that they watch regularly. Researchers rely on content analyses of the amount of violence in potential programs to develop a measure of the amount of violent programming exposure per viewer. Viewers are also asked about their attitudes and behavior in order to gauge some measure of aggressiveness or hostility. The two measures are then correlated to ascertain any relationship between the viewing of violence and subsequent aggressive behavior or attitudes. The major problem with such studies is that they are ultimately unable to demonstrate a causal relationship with any degree of certainty. Statistically significant correlations have been found between consumption of violent media fare and aggressive or hostile behaviors and attitudes, but most of those associations have been relatively weak.

One recent study made use of survey research in a short-term longitudinal design. Third and fourth-graders, their peers, and teachers were surveyed twice in the school year to determine if various forms of aggression might be predicted by violent media exposure. "Children's consumption of media violence early in the school year predicted higher verbally aggressive behavior, higher relationally aggressive behavior, higher physically aggressive behavior, and less prosocial behavior later in the school year" (Gentile, Coyne, & Walsh, 2011, p. 193).

Longitudinal Studies

These studies attempt to identify relationships that may develop over a period of time between consumption of violent fare and antisocial attitudes and behaviors. According to Gunter (1994), such studies "represent perhaps the best kind of

studies of TV effects. They can test causal hypotheses and they usually employ sound sampling methods" (p. 174). Researchers remain in contact with particular viewers and test them at various intervals over time to determine whether or not consumption of media violence is affecting them. Longitudinal studies take into account the assumption that exposure to media violence has a *cumulative* effect over time; in other words, repeated exposure to media violence has an increasing effect on aggressive behavior or attitudes as the years pass by.

In particular, children who have consumed a heavy diet of media violence in their most formative years are more likely than their peers to behave aggressively as adolescents and adults. In one longitudinal investigation, researchers found that children who watched a lot of violent media at ages 8 to 10 were significantly more aggressive 15 years later, when they were adults (Huesmann, Moise-Titus, Podolski, & Eron, 2003).

Natural Experiments

With these studies, researchers make use of a natural setting in which television is being introduced into the community for the first time. Through *longitudinal assessment* (similar evaluations made over a period of time), documented conduct such as criminal statistics are examined and compared before and after television becomes available in a country or community.

The results of natural experiments have varied. Through studying crime rates from 1949 to 1952, Hennigan and colleagues (1982) found that the introduction of television in certain American communities did not bring significant increases in homicides or other violent or serious crimes. Centerwall (1989) examined homicide rates from 1945 to 1975 among Whites in three countries: the United States, Canada, and South Africa. He found that in the United States and Canada the murder rate among Whites increased dramatically about 15 years after the rate of television set ownership in those countries increased, while homicide rates in South Africa (where TV ownership was very limited) were not so affected.

Intervention Studies

Just as vaccinations are used to inoculate people to protect them from dangerous or deadly diseases, intervention studies are designed to *intervene* and inoculate viewers against the harmful effects of viewing televised violence. With these studies, the harmful effects of viewing violence is assumed to be prevalent in the population; researchers then attempt to alleviate the negative effects in some way—that is, through some intervention strategy. Some intervention studies have indicated that increased television literacy (critical understanding of television content and production methods) may reduce the negative effects of TV violence (see, for example, Webb, Martin, Afifi, & Kraus, 2010).

Meta-Analyses

The technique of meta-analysis allows media effects researchers to combine the large number of studies that have been done on media violence and its effects in a statistical study that measures overall effects sizes (Sparks, Sparks, &

Sparks, 2009). A number of meta-analyses have confirmed that exposure to mediated violence and subsequent aggression are indeed related (Christensen & Wood, 2007; Hearold, 1986; Paik & Comstock, 1994; Sherry, 2001; Wood, Wong, & Chachere, 1991).

These studies have shown evidence for several major types of effects. The most prevalent effect is that of *imitative behavior* (Liebert & Schwartzberg, 1977). Children especially are likely to learn aggressive behaviors by watching them on television. After the behaviors are learned, they are subsequently imitated. Children are also vulnerable to another effect, *fear,* when viewing violent or disturbing subject matter (Cantor, 1994; Gunter & Furnham, 1984). *Desensitization,* a third prominent effect identified in the literature, may occur after repeated exposure to violence (Greenberg, 1975) or after only brief exposure (Drabman & Thomas, 1974; Linz, Donnerstein, & Penrod, 1988).

To better understand these categories of effects as well as others, we will examine them in greater depth in the next section. The various levels of psychological effects are explained, and the different types of effects common to each are discussed in detail.

Measuring Violent Content

How does one define media violence? Is it harmful physical contact? Can it be verbal in nature? What about a car crash or an accidental death? What about news footage of a suicide? What about a bomb threat? Should these be considered violent?

Social scientists must address these and other highly specific questions before they can even begin to measure the amount of violence present in mass media, much less assess the effects of this violence. The research method used to determine the amount of violent content is called **content analysis.** In using this methodology, researchers must first clearly define violent content, and then carefully watch various programs to code each instance of violence as it occurs. Sometimes content is classified according to program type, character type, weapon type, and the type of physical harm or damage that results.

The first content analyses of prime-time television programs were conducted in the 1950s and 1960s (Schramm et al., 1961; Smythe, 1956). These studies found that violence and criminal activities appeared frequently on the popular new medium; unfortunately, however, these early studies used different definitions and methods of measurement, making comparisons and trend studies impossible for the formative years of television.

Systematic analyses of television violence gained prowess and popularity in the 1960s programmatic study conducted by George Gerbner and his associates. Beginning in 1967 and for many years thereafter, these cultivation researchers have analyzed and coded samples of prime-time and daytime dramas from all the major networks in the United States. Their technique of measurement, called *message system analysis,* has become one of the most widely used measures of violence on network television.

Gerbner and his colleagues defined violence as "the overt expression of physical force against self or other compelling action against one's will on pain of being hurt or killed or actually hurting or killing" (Gerbner, 1972, p. 32). Coders use the definition to generate very specific coding categories, with which they assess the number of violent acts they witness on the programs, the type of violence, the victims, the perpetrators, and the settings. The information from the coders is then synthesized to provide a **violence profile** for each program. The profile provides an objective appraisal of the amount of violence contained in each televised drama.

During the first 10 years of message system analysis, Gerbner and his associates found that the vast majority of network television programs (8 of 10) contained violent content, and a majority of characters (6 of 10) were involved in the violent acts. Children's cartoons contained more violence than all other types of shows, including action-adventure programs for adults and crime-detective programs.

In the 1990s, two Finnish researchers developed a coding scheme to measure the obtrusiveness of TV violence and to classify the *context*—the circumstances surrounding the violence or the message the violence conveys. The study examined violence present in fictional and nonfictional programs (Mustonen & Pulkkinen, 1997).

Other research on "reality" programming, or nonfictional television, revealed that the content of such programs was more similar to television drama than to an accurate portrayal of violence in the real world. Reality programming includes national and local newscasts, police news programs, documentaries,

Violent content is present in nonfictional programming like newscasts, police news programs, documentaries, and the like.

public affairs shows, tabloid news programs, and the like. In terms of context, the violent acts shown on such programs were rarely punished and negative consequences of violence were rarely shown (Federman, 1998; Potter et al., 1997).

It should be remembered that content analysis is simply a system of coding and describing content. The perceptions of audience members and effects of the content are entirely different questions, and researchers must employ different research strategies to answer them (Gunter, 1988; Gunter & Wober, 1988).

Measuring Viewers' Perceptions

Another method of classifying televised violence is by measuring viewers' perceptions of it. Different people react differently to television programs because each person possesses a unique set of psychological traits. Their judgments about violence do not always match those of researchers (Gunter, 1985; Van der Voort, 1986). Most people—adults and children—perceive violence in the context of a program genre and personal preferences. For example, if a program is one that parents enjoy watching, they generally perceive it as being harmless to themselves and their children. This means that programs that have been labeled as highly violent by trained content analysts may be perceived as rather harmless by actual viewers.

Despite individual differences among viewers, research has shown that people often experience similar, harmful effects after viewing certain types of violence portrayed in certain contexts. Social scientists have identified five key elements of context that make people susceptible to negative effects. Children, especially, are at high risk for learning aggressive behaviors from portrayals that feature all five of the following elements:

1. A perpetrator who is an attractive role model.
2. Violence that seems justified.
3. Violence that goes unpunished (no remorse, criticism, or penalty).
4. Minimal consequences to the victims.
5. Violence that seems realistic to the viewer. (Federman 1998, p. 33)

"High Risk" Contexts

Depictions that Encourage Aggressive Attitudes and Behaviors

- Perpetrator is an attractive role model
- Violence seems justified
- Violence goes unpunished (no remorse, criticism, or penalty)
- Consequences to the victims are minimal
- Violence seems realistic to the viewer

Source: Joel Federman, Ed., (1998). *National television violence study, Vol. 3, Executive summary* (Santa Barbara: Regents of the University of California).

Research has shown that in recent years many television programs include these "high-risk" contexts. In a four-year study of television programming, researchers from the University of California at Santa Barbara found that most violence on the screen is initiated by the "good guys," the screen characters that are most likely to serve as role models. Moreover, only about 15 percent of the prime-time programs from 1995 to 1998 revealed the long-term, negative consequences of violent behavior. Approximately three out of four violent acts were performed without remorse or penalty, and the "bad guys" went unpunished in about 4 of 10 programs (Federman, 1998).

The Psychological Impact of Media Violence

In terms of effects research, communication scholars have identified three different levels of psychological impact that violent media fare may have upon viewers. These levels—behavioral, affective, and cognitive—simply refer to the different types of effects that violence may have upon viewers. In this section, studies from the various methodologies described earlier will be used to illustrate each of the levels.

Behavioral Effects

When a four-year-old boy watches an old episode of the *Power Rangers,* then pretends he is the Red Ranger while kicking and hitting "the villain" (his two-year-old brother), that child is exhibiting a *behavioral effect* from viewing televised violence. Specifically, the child is using the mechanism of *imitation,* one of five major mechanisms through which behavioral effects may occur that we will discuss in this section. The other important mechanisms include *catharsis, arousal, disinhibition,* and *desensitization.*

Catharsis

The catharsis mechanism purportedly allows viewers to vent their aggressive impulses harmlessly through viewing televised violence or by fantasizing about violent acts. In the 1950s and 1960s, Feshbach (1955, 1961) reported the existence of a cathartic effect when participants in his experiments were able to release aggressive urges nonviolently by viewing acts of televised violence or by fantasizing about violence. In 1971, Feshbach and Singer observed teenage boys in natural settings—residential schools and homes—for six weeks. During the experimental period, the researchers controlled the boys' exposure to televised violence. They found that the boys who had watched mostly nonviolent television behaved *more aggressively* toward their peers than the boys who had watched violent programming, thus presumably indicating some sort of catharsis effect.

It should be noted that very few of the hundreds of experimental studies have replicated Feshbach's findings or have supported the catharsis mechanism. Despite this weak body of scientific evidence, a substantial portion of the lay public believes that catharsis occurs through watching film, television, or video

Psychological Effects from Exposure to TV Violence

Cognitive
Watching TV violence influences a viewer's beliefs about the real world.

Affective (Emotional)
Watching TV violence causes an immediate or long-term emotional reaction.

Behavioral
Watching TV violence influences a person's behavior. Five major categories of behavioral effects:

- Arousal
- Catharsis
- Desensitization
- Disinhibition
- Imitation

game violence. Media industry spokespeople happily remind the public and its elected representatives of the alleged benefits of catharsis every time a public investigation of the effects of media violence is undertaken.

Because of the popularity of the notion of catharsis and the lack of empirical support for cathartic or pseudocathartic effects, investigators have often tried to find some perhaps very limited conditions under which catharsis can be demonstrated. For example, Gunter (1980) suggested that certain human cognitive skills are responsible for limited catharsis effects. One study revealed that people with strong imaginations or fantasy skills were able to relieve their anger by viewing a violent film, whereas those subjects who did not possess a vivid imagination were unable to experience such a cathartic effect (Biblow, 1973).

Arousal

The behavioral effect of this mechanism is that of excitement or, as the name says, arousal. Whenever a viewer watches a violent scene (or a particularly funny or sexually explicit scene), he or she becomes excited or emotionally aroused, and this arousal can be measured physiologically. Viewers usually do not attribute their elevated arousal to what they are viewing. For example, if a teenage boy who is already mad about something is watching a violent program, he interprets his heightened arousal, which is in part due to excitation from the television program, as intense anger. He may therefore respond more aggressively than he would if he had not watched the violent program, particularly if an opportunity to become aggressive occurs shortly after viewing (Tannenbaum & Zillmann, 1975; Zillmann, 1988, 2000).

Disinhibition

The disinhibition mechanism operates under the assumption that as viewers grow more accustomed to seeing violence on television, especially violence that is justified by the situation or is socially sanctioned, they become less inhibited by social sanctions against committing violent acts. Research has shown that viewers do behave more aggressively after watching a program presenting sanctioned violence, especially if they were angry when they began watching

(Berkowitz, 1962, 1965, 1974); however, more specialized investigations are required to indicate whether these results are due to disinhibition.

In one group of laboratory studies, a confederate angered research participants who then watched a clip from a violent film (usually a boxing match, which is a socially sanctioned form of violence). The same participants were then allowed to administer electric shocks to the person who had angered them. Other research participants were angered and shown a nonviolent film, and still other participants assigned to a control group were not angered. The researchers found that those who had seen the violent clip delivered harsher shocks than those who had not viewed violence, and that those who had been angered beforehand and viewed the sanctioned violence were the most aggressive of all. The investigators interpreted these results as providing evidence that watching sanctioned violence in the film clips served to remove some of the research participants' inhibitions, therefore permitting them to be more aggressive (Berkowitz & Alioto, 1973; Berkowitz, Corwin, & Heironimous, 1963; Berkowitz & Geen, 1966; Berkowitz & Rawlings, 1963).

Evidence for the disinhibition mechanism has also been found in longitudinal studies. In one such study, researchers collected data from about 800 eight-year-olds regarding their TV viewing habits and their levels of aggressiveness. Ten years later, when the children were 18, the researchers located about half of the original group and obtained additional information. They found a strong positive correlation between viewing televised violence when young and measures of aggression as adults (Eron, Huesmann, Lefkowitz, & Walder, 1972).

Imitation

This mechanism assumes that viewers learn from what they see on television and sometimes try to mimic the actions themselves. This is especially true for young children who identify with the characters they see on television and try to imitate them. (Chapter 4 discusses the concept of *observational learning*, the essence of the imitation mechanism.)

You will recall from Chapter 4 that the laboratory experiments of Albert Bandura (1965a, 1978, 1979, 1982, 1986) and Bandura, Ross, and Ross (1963a, 1963b) found that children imitate the aggressive behaviors they witness on the screen. One group of children watched a film of someone hitting and knocking about a plastic, air-filled Bobo doll. Another group watched a film that showed a person in a cat costume performing the same violent acts on the doll, and yet another group was not shown any film. The researchers then took the children to a playroom with a large number of toys—and one plastic Bobo doll. The children who had seen on film the Bobo doll being battered were not only more aggressive toward the Bobo doll than the other children, but they actually copied the violent behaviors they had witnessed in the film. Bandura attributed the copycat behavior in part to the disinhibition mechanism and in part to observational learning or the imitation mechanism.

Several intervention studies with children have attempted to mitigate the imitation effect. These studies have revealed that instructing children about television procedures, making them aware that viewing violence may have

harmful effects on them, and teaching them critical viewing skills may reduce aggressive tendencies as they grow older (Singer & Singer, 1983; Huesmann & Eron, 1986). Some significant research in recent years has focused on reducing the negative consequences of consuming mediated violence. Nathanson (1999) found that parental involvement, whether limiting programming, talking to their children, or teaching them critical viewing skills, tends to reduce aggressive effects.

Desensitization

As viewers repeatedly witness violent acts on the screen, they become less and less sensitive through the years to seeing violence, less sympathetic to the victims of violence (Linz et al., 1988), and more likely to accept real-life violence. Laboratory studies, in particular, have provided enough evidence to give some credence to the hypothesis. In one study, children who viewed a violent program beforehand were less likely to go for adult help when they witnessed a playroom fight between two other children (Drabman & Thomas, 1974; Thomas, Horton, Lippincott, & Drabman, 1977). The other study found that children who watched 25 or more hours of television per week experienced less physiological arousal when viewing TV violence than children who watched less than four hours per week (Cline, Croft, & Courrier, 1973).

Similar desensitization effects have been observed among children who play a lot of violent video games. In particular, playing violent video games seems to have a pronounced effect on diminishing the empathy players feel for victims of violence (e.g., Bushman & Anderson, 2009; Funk, Baldacci, Pasold, & Baumgardner, 2004).

Affective, or Emotional, Effects

Research has shown that everyone, regardless of age, experiences an emotional reaction when viewing violent content on television and in films. Studies have examined reactions to programs that depict violence: either physical injury or threat of bodily harm. The emotional effects from watching such violence may be immediate (e.g., fright, anxiety) or long term (e.g., persistent fear of becoming a victim of crime).

Palazzolo and Roberto (2011) showed study participants media news messages about intimate partner violence "containing information designed to increase or decrease attributions of responsibility both toward the perpetrator and toward the victim" (p. 1). The viewers experienced many emotions, but only certain emotions were triggered related to whether or not the viewers saw the perpetrator or the victim as being responsible for the violence.

The reactions of children have been of particular interest to social scientists involved in this realm of media effects research. Studies have revealed that children become very frightened when viewing certain kinds of programs. These fright reactions, which are sometimes very intense, have been observed by a number of researchers (see Blumer & Hauser, 1933; Himmelweit et al., 1958; Preston, 1941; Schramm et al., 1961). The reactions range from loss of control over their feelings (Blumer & Hauser, 1933) to horrible nightmares (Singer, 1975).

The most extensive research on children and their fright reactions has been done by Cantor and her associates (1998). Their studies have examined the effects of viewing different types of program content on various fright responses among children (Cantor & Hoffner, 1987; Cantor & Reilly, 1982; Cantor & Sparks, 1984; Cantor, Wilson, & Hoffner, 1986; Sparks, 1986; Sparks & Cantor, 1986; Wilson & Cantor, 1985). The research also explored the differences in various fright reactions of children at different ages and developmental levels. At a very young age, for example, children are more likely to be frightened by *threatening characters* and *situations.* Older children are more frightened by *threats of either realistic or abstract stimuli* rather than scary images alone.

The experiments of Cantor and associates have usually involved 3- to 11-year-olds who are randomly assigned to various groups. The children in the control group are simply shown a violent or frightening scene. The other groups of children are given certain strategies beforehand that should help them cope with the content they are about to view.

In all the studies, fright reactions are measured using one or more of four different methods. Immediately afterward, the children are asked to assess the extent of their fright by choosing one of four responses, from "not at all scared" to "very, very scared." Additionally, the researchers record and code fright reactions by evaluating the child's facial expression from a videotape made while the child is watching the program. As another supplementary measure, small sen-

Moviemakers use frightful scenes to entertain audiences. Sometimes fright reactions to mediated content can last from childhood into adulthood. © *Sunset Boulevard/Corbis*

sors are attached to the child's fingers and physiological data are collected. Finally, some studies have shown behavioral measures of fear. Wilson and Cantor (1987), for example, measured fear by a child's willingness to see a live snake after watching the snake scene from *Raiders of the Lost Ark.*

Coping strategies may be cognitive or noncognitive in nature. Cognitive strategies involve changing the child's mental conceptions of the frightening content. A thorough explanation of the fantasy nature of a character or situation is one form of cognitive coping strategy. Cantor, Sparks, and Hoffner (1988) found that by showing children a behind-the-scenes video that explained and showed the makeup preparation for the actor in *The Incredible Hulk,* the children were far less fearful during the program than those children who had not seen the video. Cantor and Wilson (1984) examined the reactions of young and older children while watching the witch in the classic, *The Wizard of Oz.* Some of the children were told beforehand that the witch was "just a regular person dressed up in a costume," and were reminded that the story was "make believe." Other children were not given such coping strategies. Results were different among the children. Older children were able to use the coping strategy to reduce their fears. They were significantly less frightened by the witch than other older children who had not received the explanations. The coping strategy did not work so well with the younger children. The scary witch frightened those who had received the fear-reducing strategy (the explanation) as much as those who had not. The researchers attributed the results to developmental differences in children of different ages.

An example of a noncognitive strategy is **desensitization**, which involves repeated exposure to the frightening matter in a secure and nonthreatening atmosphere; in therapy, this is called a "flooding" method. Several studies have shown that such desensitization procedures work to reduce fright reactions in children (Wilson, 1987; Wilson & Cantor, 1987).

Research has also revealed that children experience fright reactions to television news as well as to fictional drama. In a survey, Cantor and Nathanson (1996) found that almost 40 percent of the children of those parents surveyed had been frightened or upset by something seen on newscasts. The most fear-producing stories were those that involved violence among strangers, wars and famines abroad, and natural disasters. Younger children tended to react emotionally to upsetting images such as weapons and people dying, whereas older children were more troubled by abstract issues—fears of nuclear wars, bombing, and the reality of death (Cantor & Nathanson, 1996).

Research has shown that fright reactions to scary movies that occur in childhood and adolescence often linger into adulthood (see Chapter 13). Using a methodology called "recollective or retrospective reports," or "autobiographical memory," two independent teams of investigators found evidence for lingering fright reactions (Harrison & Cantor, 1999; Hoekstra, Harris, & Helmick, 1999; Cantor, 1999). Both studies involved content analyses of college students' reports of something that had frightened them in the mass media during their childhood. Remarkably, between 90 and 100 percent of the college students recalled such experiences, many poignantly. In both studies, the younger the child had been when he or she was frightened by something watched on televi-

sion or film, the more intense the fright reaction was reported to be. In one investigation, more than 25 percent of the college students reported still experiencing residual anxiety from their childhood exposure to frightening media portrayals (Harrison & Cantor, 1999).

Cognitive Effects

When viewing mediated violence influences a viewer's beliefs about the real world, that viewer has experienced a *cognitive* effect. Indeed, many of the affective fright reactions just discussed may have become cognitive effects over time. The most extensive research on such cognitive effects has been performed by George Gerbner and his associates.

In the 1970s, Gerbner and his colleagues analyzed data from national public opinion surveys to gauge some of the cognitive effects of television viewing. The surveys contained a large amount of useful information from each of the participants, such as how much time they spent watching television and their perceptions about the world in which they lived. The researchers found a positive correlation between the amount of time spent watching television and the prevalence of certain beliefs about the world; those who watched the most television perceived the world as a more dangerous place than light viewers (Gerb-

Mediated violence can cause viewers to think more aggressive thoughts. © *Etienne George/Sygma/Corbis*

ner, 1972; Gerbner & Gross, 1976; Gerbner et al., 1977; Gerbner et al., 1978; Gerbner, Gross, Morgan, & Signorielli, 1980). This is called *cultivation analysis*.

Through analysis of the content of network television programs, Gerbner and his associates showed the prime-time dramatic world of television to be an exceedingly violent place. They hypothesized that regular exposure to mediated violence made viewers develop an exaggerated view of real-life dangers in society.

Although widely accepted, Gerbner's methods and results have been challenged by a number of researchers (Blank, 1977a, 1977b; Coffin & Tuchman, 1973; Hirsh, 1980; Hughes, 1980; Wober & Gunter, 1988). Several of the researchers used the same database but exercised statistical controls for extraneous demographic variables and found no significant evidence for cultivation. (An extraneous demographic variable might be, for instance, the type of neighborhood in which the person lived—was it a high-crime district such as an urban ghetto or a low-crime area of affluence?)

Wober and Gunter (1982) found that a person's perception of the real world was related more to viewing certain types of programs than to the total time spent viewing. These researchers' findings indicated that people select particular types of programs that agree with, or reinforce, their personal beliefs. Such a hypothesis stands in opposition to the cultivation hypothesis.

The strength of television's influence on viewers' perceptions of the world can be mitigated by many factors. Gunter (1987) identified four leading categories of these factors which he called **levels of judgment**: program specificity, viewer perceptions or interpretations, personal judgments about crime, and situation specificity.

Program specificity means simply that television's influence on perceptions about the real world may have more to do with the types of programs watched rather than the total time spent viewing. For example, two people might watch the same amount of television each week, but one may view only violent programs, while the other watches nonviolent educational shows. The perceptions of real-world crime on the part of the two viewers might be vastly different, even though both watch the same amount of TV (Weaver & Wakshlag, 1986).

The influence of television also may depend upon how viewers perceive what they are viewing, and how they interpret it (Collins, 1973; Pingree, 1983; Teevan & Hartnagel, 1976). *Viewer perceptions and interpretations* may conceivably render the most violent programs rather innocuous in their effects.

Personal judgments about crime may also modify television's influence on viewers of violent programming. Examples of such judgments would be beliefs about the prevalence of crime in society or beliefs about one's own chances of becoming a victim of crime. Tyler (1980, 1984; Tyler & Cook, 1984) found that such judgments often were not connected to viewing behavior at all, but to a person's particular, personal encounters with crime.

Situation specificity means that television's influence on personal perceptions about crime may also be moderated by the person's individual situation or setting. For example, those who live in urban areas tend to fear crime more than those who live in rural, low-crime areas (Tamborini, Zillmann, & Bryant, 1984).

In recent years, researchers have turned their attention to video games and the Internet as sources of mediated violence to investigate. The evidence suggests that those who play violent video games are more likely to have aggressive thoughts and behaviors afterward (Anderson, Gentile, & Buckley, 2007; Anderson, 2004; Anderson et al., 2004; Anderson & Dill, 2000; Bartholow & Anderson, 2002; Bushman & Anderson, 2009; Irwin & Gross, 1995). Repeated exposure can cause desensitization to violence (Bartholow, Bushman, & Sestir, 2006).

New Directions for Media Violence Researchers

Sparks, Sparks, and Sparks (2009) identified five areas of research that have emerged as promising for media effects scholars in recent years. These include: individual differences, enjoyment of media violence, violent video games, effects on variables other than aggressive behavior, and advances in brain research.

Individual Differences

Several studies have identified that individual differences among consumers of mediated violence have a great bearing on the effects of exposure. Children diagnosed with Disruptive Behavior Disorders reacted physiologically to viewing mediated violence more so than undiagnosed children (Grimes et al., 2004). People who exhibit low levels of empathy tend to consume more media violence (Sigurdsson et al., 2006).

Enjoyment of Media Violence

One meta-analysis on the enjoyment of media violence found that males tended to enjoy violence more than females, and viewers who measured high on sensation seeking and exhibited a low measure of empathy also enjoyed violence more (Hoffner & Levine, 2005). Sparks and Sparks (2002), however, found little data to support that media violence is enjoyed more than programs that do not contain violence. In one study, Sparks, Sherry, and Lubsen (2005) showed some participants the movie *The Fugitive* unedited, and showed other participants the movie with violence expurgated. They found that the inclusion of violence had no effect on the enjoyment of the movie—those who saw the edited version enjoyed the movie just as much as those who saw the violent version.

Weaver and his colleagues (2011) manipulated violence and action in slapstick cartoons using animation software. Elementary school children in various groups watched the programs, and it was found that violence did not have a direct effect on whether or not the children liked the cartoon.

Violent Video Games

Several studies on the effects of violent video games have already been mentioned. Most of the research in this area focuses on the connection between exposure to video game violence and subsequent aggressive behavior (Anderson & Dill, 2000; Anderson, Gentile, & Buckley, 2007; Bushman & Anderson, 2009; Dill

& Dill, 1998), but some studies have examined enjoyment of violence (Jansz, 2005) and the issue of desensitization (Bartholow, Bushman, & Sestir, 2006).

Möller and Krahé (2009) conducted a longitudinal study among German adolescents and found a link between playing violent video games and physical

Research Spotlight

The Appeal of Media Violence in a Full-Length Motion Picture: An Experimental Investigation

Glenn G. Sparks, John Sherry, and Graig Lubsen (2005)
***Communication Reports*, 18(1), 21-30**

For this study, researchers edited out all the violence in a full-length motion picture to see if students would enjoy the film as much as students who saw the unedited version.

Participants

A total of 134 undergraduate students at a large midwestern university (41 males, 93 females) served as participants. Most of the participants were Caucasian and ranged in age from 18 to 22 years.

Method

Participants saw one of two versions of a full-length Hollywood film, *The Fugitive*. One version was edited to remove violence and the other version was in its original form. After watching the film, respondents rated the film on a variety of questions that were converted to scales, including overall enjoyment, desire to see the movie again, degree of entertainment, how much fun it was to watch, and other measures of the perceived quality of the movie and perceived violence.

The participants were randomly assigned to one of the two groups. Those who saw the original film version consisted of 15 males and 51 females. The edited version was shown to 26 males and 42 females.

The original film ran for 2 hours, 11 minutes, and 5 seconds and included 104 separate acts of physical violence. The edited version without the violent scenes lasted 2 hours, 0 minutes, and 49 seconds. Participants saw the films at the same time in different rooms and were asked to avoid talking during the film.

In order to disguise the purpose of the experiment, researchers asked the respondents to guess the hypothesis. Seven participants indicated that they thought the experiment involved some sort of editing of the film to test differences in perceptions of the movie. Those seven were eliminated from subsequent analysis. The final design of the study included 64 participants who watched the original movie (15 males and 49 females) and 63 participants who watched the edited version (24 males and 39 females).

Results

Using analysis of variance (ANOVA), no significant differences emerged on any of the enjoyment measures by version or by gender. Results were also analyzed for ratings of suspense. No significant differences were found by condition, but women found the film significantly more suspenseful than men did.

The results showed that the violent version of the movie was no more enjoyable than the nonviolent version. Although supporting the null hypothesis leaves open a wider range of interpretations than might be desirable, the results raise questions about the media industry's frequent claims that violence is a critical ingredient of audience enjoyment.

aggression. Anderson and his colleagues conducted a meta-analytic review of the effects of violent video games on aggression, empathy, and prosocial behavior. "The evidence strongly suggests that exposure to violent video games is a causal risk factor for increased aggressive behavior, aggressive cognition, and aggressive affect and for decreased empathy and prosocial behavior" (Anderson et al., 2010, p. 151).

Researchers have also studied the features that allow players of violent video games to design their own characters or avatars in the game. Fischer, Kastenmüller, and Greitemeyer (2010) suspected that this added feature would make the psychological effects of the video game more intense. Their study confirmed that the players with personalized characters showed higher levels of aggression.

Effects on Variables Other than Aggressive Behavior

The cultivation tradition asserts that consumption of news of violent crimes is related to fear of being an actual victim. Smolej and Kivivouri (2006) found this to be true in a study in Finland. In another study, children proved vulnerable to fear and anxiety related to coverage of terrorist attacks on the news (Fremont, Pataki, & Beresin, 2005). Anastasio (2005) exposed experimental participants to several minutes of justified violence and noticed an increased tendency to devalue others.

In addition to aggression, European researchers have measured the effects of habitual use of media violence on empathy. More than 1,200 seventh- and eighth-grade German students were measured for aggression, media use, and empathy. The researchers found that use of violent media led to higher levels of physical aggression and lower empathy (Krahé & Möller, 2010).

Advances in Brain Research

New research studies in media effects of viewing violence have used Magnetic Resonance Imaging (MRI) to examine the brain as it is exposed to violent programming. One study found differences in brain activity among children who viewed violence as opposed to children who did not view violence (Murray et al., 2006). In another study, 13 males were scanned with MRI while playing a violent video game. The images showed low activity in the areas of the brain related to affect or emotion (Weber, Ritterfield, & Mathiak, 2006).

Other researchers have taken notice of this new trend in media violence research and noted that the tools of neuroscience should prove helpful (Carnagey, Anderson, & Bartholow, 2007; see also Kalnin et al., 2011).

Summary

Public concern for the negative effects of exposure to media violence has been one of the most important, ongoing social issues of the 20th and 21st centuries. Through the years, many studies have established a causal link between viewing media violence and subsequent aggressive behavior or attitudes.

Concern about media violence has always been a major issue for public policy makers. Despite the great number of studies that have shown a link between viewing mediated violence and subsequent aggression, critics point to statistical problems within the studies.

Media effects researchers are interested in several issues related to media violence. They measure the amount of violence that occurs in various media, the context in which the violence occurs, and viewers' perceptions of the content.

Researchers have employed many different methods for studying the effects of exposure to media violence. Six of these are laboratory experiments, field experiments, correlational surveys, longitudinal panel studies, natural experiments, and intervention studies.

In measuring violent content, researchers must first define media violence. The method used to assess the amount of violence is called content analysis. Each instance of violence is coded using this technique.

Content analyses have shown that prime-time television programs contain a great deal of violent content, as do nonfictional programs. Content analyses provide a system for coding and describing content; they do not measure audience perceptions. Contextual content analyses examine the situations surrounding the portrayals of violence. Research has shown that contextual features are most important in determining what effects violence will have upon audience members.

Meta-analyses use statistical methods to combine a great number of different research studies to find overall indications of effects and general trends. Meta-analyses that examine media violence have consistently found a causal link between viewing violence and aggressive behavior. The major effects have been imitative behavior, fear, and desensitization.

Violent media fare may affect audiences at three different psychological levels: behavioral, affective (emotional), and cognitive. Behavioral effects may be exhibited through one of five different mechanisms: imitation, catharsis, arousal, disinhibition, and desensitization. Emotional effects may be immediate or extended, long-term reactions. Fright reactions of children are one example of emotional effects. Cognitive effects occur whenever viewing violent content influences a person's beliefs about the real world. The approach of cultivation analysis examines such cognitive effects.

Television's influence on viewers' perceptions can be mitigated. Four leading mitigating factors, called levels of judgment, include program specificity, viewer perceptions or interpretations, personal judgments about crime, and situation specificity.

The debate has advanced through several stages. Most recently, the Telecommunications Act of 1996 made installation of the V-chip blocking device mandatory on new models of television sets, and required broadcasters to rate their programs based upon suitability for certain age levels.