

# Cartoon violence and aggression in youth

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## Abstract

This manuscript reviews the literature concerning the effects of animated violence on aggressive behavior in youth. It begins with an overview of the research on children's and adolescents' perceptions of violence in cartoons. Next, the effects of cartoon violence on aggressive behavior across development are reviewed. In each section, the importance of the presence (or absence) of comedic elements in animated violence is addressed. Moreover, throughout the review, the potential influence of development is considered. Finally, a potential mechanism for reducing the negative influence of cartoon violence on youth is considered.  
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*Keywords:* Cartoon violence; Aggressive behavior; Youth

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## 1. Cartoon violence and aggression in youth

Children have been entertained by animated films and television shows for over 80 years. The first true animated star was the 1920s icon, *Felix the Cat*. Within the next 10 years, characters developed by the Disney Brothers' Cartoon Studios, such as Mickey Mouse, Donald Duck, and Pluto had become international celebrities and their movies were generating millions of dollars. In fact, *Disney's* first full feature length film, *Snow White and the Seven Dwarfs*, is still one of the top ten grossing films of all time, when adjusted for inflation (Box Office Mojo.com, 2004). By the 1950s, the violence-laden cartoon, *Popeye the Sailor*, was drawing a large television audience. Following the success of *Popeye*, studios such as Hanna-Barbera began to produce *The Flintstones* and other made-for-TV animated series (see Kirsh, 2006 for a more detailed review of the history of violence in the media). Currently, animated film classics and new television series can be seen on cable/satellite channels, such as Boomerang, Cartoon Network, and The Disney Channel. Moreover, feature films starring animated characters are still box office juggernauts. For instance, in 2004, *Shrek 2* generated nearly \$900 billion in international box office receipts and billions more in home DVD sales (Box Office Mojo.com, 2004).

## 2. Violent elements in cartoons

Violence in cartoons is an integral part of cartoon content. In fact, frequency of violence in cartoons is higher than in live-action dramas or comedies (Potter & Warren, 1998). As a consequence, youth are more likely to view media-depicted violence during Saturday morning cartoons than during prime-time television hours (8:00–11:00 P.M.; Gerbner, Gross, Morgan, & Signorelli, 1994). However, there are qualitative differences between the acts of violence depicted during live-action dramas and those depicted in cartoons. Cartoon violence meant for a youthful audience (as opposed to animated films for adults, such as *Heavy Metal*) tend to involve minor acts of violence: realistically portrayed death is rarely shown and graphic acts of violence are seldom televised. Additionally, cartoons sanitize the outcomes of violence, in that it is unusual to see the victims suffering in a life-like manner. In contrast, live-action dramas airing during prime-time regularly involve major acts of violence (e.g., rape and murder), and the pain and suffering of the victim is often highlighted (Potter & Warren, 1998).

Although many violent cartoons meant for youthful consumption contain comedic elements (e.g., *Woody Woodpecker*, *Scooby Doo*), some of these cartoons just portray the violence. For instance, *Samurai Jack*, *X-Men Evolution*, and *Batman: The Animated Series* depict animated violence, with little to no comedic elements. Moreover, for these types of animated shows, violence is found at the beginning and end of disputes. Presence or absence of comedy during violence is an important consideration when evaluating the effects of viewing cartoons on youth, for there is both theory and research to support the contention that comedic elements may camouflage and trivialize depictions of violence (King, 2000; Potter & Warren, 1998).

## 3. Comedy and the perception of cartoon violence

Few studies have assessed the impact of comedic elements on children's and adolescents' perception of violence depicted in television shows and in films. Moreover, the studies that have been conducted have produced contradictory findings. For instance, Snow (1974) had youth evaluate cartoons, live-action dramas, and news footage of the Vietnam War for presence of violence. Violent elements in cartoons were consistently overlooked, with only 27% of 4- to 8-year-olds and a mere 16% of 9- to 12-year-olds correctly identifying that the cartoon (i.e., *Roadrunner*) they had just watched contained violence. In comparison, nearly 70% of youth in Snow's sample classified the television Western *Gunsmoke* as containing violence. Regardless of age, all children correctly identified news clips of the Vietnam War as containing violent imagery. In contrast, in an investigation of 5th and 6th grade boys and girls Haynes (1978) found that cartoons with comedic elements were perceived as

more violent than cartoons without comedic elements, even though both cartoons contained the same amount of violence.

Studies on adults' perceptions of humorous cartoons have been consistent. Howitt and Cumberbatch (1975) found that most adults do not perceive humorous cartoons as violent. Similarly, Gunter and Furnham (1984) found violence depicted in humorous cartoons is perceived as less violent than the same behavior enacted by live actors. Given the contradictory findings and paucity of research using children, more studies are needed to establish developmental facts regarding the perception of violence in comedic and non-comedic cartoons across development. Despite lack of evidence suggesting that children perceive humorous cartoons as less violent than other media forms, there are theoretical reasons to believe that comedy does, in fact, camouflage or trivialize depictions of violence.

### *3.1. Factors that lead to the trivialization of comedic violence*

#### *3.1.1. Cognitive transformation*

Humorous elements in cartoons are thought to signal viewers that seriousness of the events they are watching should be down played. As a result, a cognitive transformation occurs, rendering material that might otherwise be considered grave as whimsical (Kane, Suls, & Tedeschi, 1977). With regard to depictions of aggression, in the context of humor such acts are transformed from solemn and gruesome events into comical ones. In fact, the more the violence deviates from reality (as is the case in cartoons, science fiction, and fantasy), the less likely it is that the act of violence will be taken seriously by the viewer. Potter (2003) suggests that in order for viewers to perceive violence in media, a feeling of *personal threat* must occur. For instance, if the viewing of a homicide causes an individual to worry about his or her own safety, then the violence that caused the murder will be perceived. Given that comedic cartoons deviate significantly from reality, and it is therefore difficult for the viewer to make a connection between the onscreen violence and a personal threat of violence, the level of violence associated with the viewed media is diminished.

#### *3.1.2. Schematic processing*

Schemas are cognitive structures that organize responses to experiences (Fiske & Taylor, 1991). With each new encounter, schemas are thought to guide us through the experience by providing a template of expectations for rules, behaviors, and outcomes. According to Potter and Warren (1998), schemas are formed for different media genres, such as westerns, action/adventure, drama, and comedy. Schemas for comedies are thought to contain expectations and rules regarding the type and pacing of jokes, the variety of characters involved, and the typical endings.

Although schemas are updated for accuracy, such modifications rarely take place in situations of low involvement. During such instances, minor discrepancies between the experience and the schema are ignored, and the schema is applied to the situation in an all-or-none fashion. Thus, any elements within the show that contradict the expected pattern are not processed. However, large discrepancies between the show and the schema can effect a change in the schema. Potter and Warren (1998) suggest that viewing of comedic television is a low-involvement activity for youth. As such, minor discrepancies between the program and the schema are ignored because the schema is being applied in an all-or-none manner. Moreover, Potter and Warren contend that schemas for comedies exclude violence. As such, when violence occurs in comedies, the viewer ignores it. In other words, schematic processing causes violence in comedies to be camouflaged. Of course, in order for this camouflaging effect to happen, the violence depicted needs to involve minor acts of aggression, which, as mentioned above, frequently happen in cartoons directed at youth.

#### *3.1.3. Priming*

Priming is a reading process in which related thoughts, emotions, and concepts residing in memory are activated. When aggressive acts are presented alone, as is the case in violent dramas, activation of aggressive thought, feelings and concepts primarily occurs. However, when comical events are paired with acts of violence, as is the case in comedic cartoons, priming not only occurs in aggression-related thoughts, concepts, and feelings, but in humor-related thoughts, concepts, and feelings, as well. As a result of this dual priming, the perceived level of violence may be lessened.

#### *3.1.4. Contextual factors*

Contextual factors are the circumstances surrounding the depiction of an act of violence. For instance, the moral justification for an act of violence can influence the perceived seriousness of that act. Two of the most frequently cited

contextual factors viewed as influencing the perceived level violence in a media offering are consequences and legitimation (Potter & Warren, 1998). Both the consequences to the victim and the perpetrator appear to influence the interpretation of a violent act. Specifically, when the victim shows a high degree of pain and suffering, it becomes difficult for the viewer to trivialize the televised violence. Moreover, when the perpetrator acts remorseful and sorrowful following an act of violence, the violence is perceived as more serious than when the perpetrator does not express such emotions (Gunter, 1985).

Elements in a story that help the viewer determine the morality of a violent act define the concept of legitimation. Potter and Warren (1998) contend that acts of violence that are rewarded or go unpunished are perceived as moral. At the very least, such acts are viewed as not wrong. As a result of such interpretations, depictions of violence become trivialized in the mind of the viewer. As it turns out, contextual factors in comedic cartoons foster the trivialization of violence. In particular, the perpetrators of cartoon violence are frequently rewarded (i.e., legitimized) and unremorseful. Moreover, the pain and suffering of the victims are often minimized, absent, or comedically presented.

### *3.2. The role of development*

In the previous section, factors that camouflage or trivialize violence depicted in comedic cartoons were presented. In almost every instance, the sample of participants used to validate the theoretical influence was comprised of adults. Therefore, the possibility exists that these factors may not generalize to children and adolescence in a one-to-one fashion. For instance, the fact that preschool children tend to apply schemas more rigidly than children in middle childhood, and that younger children tend to base morality on observed consequences than the intent of the harm doer, it may be that younger children are more likely to trivialize violence in cartoons to a greater extent than older children (DeHart, Sroufe, & Cooper, 2004). Clearly, however, more developmental research is needed, as older children tend to perceive cartoons to be less violent than younger children (Snow, 1974).

## **4. Non-comedic cartoons and perceived violence**

Although comedic elements in cartoons may result in the trivialization of violence, cartoons that lack humor are also perceived to be less violent than live-action forms of media violence. In this next section, the factors that influence the perception of violence in non-comedic cartoons are examined.

### *4.1. Graphicness*

Research has shown that the more graphic the depiction of blood and gore during scenes of violence, the higher the level of violence attributed to that scene (Potter & Berry, 1998). Given that most cartoons viewed by youth contain little in the way of graphic blood and gore, animated violence is often overlooked by the viewer. Similarly, the more an act of violence generates feelings of uneasiness in the viewer or lessens the viewer's enjoyment, the higher the associated level of perceived violence of that act (Potter, 2003). Thus, violent content that is perceived to be offensive is rated as more violent than less offensive content. Once again, cartoons readily available for youthful viewing are rarely perceived as offensive. As such, youth may discount the violence depicted.

### *4.2. Perceived actuality*

Perceived actuality is the degree to which a viewer perceives media depicted portrayals of events, settings, and characters as existing, or being able to exist, in the real world. The more a viewer believes that what they are seeing on TV or in movies could actually happen in real life, the higher the degree of perceived actuality. Perceived actuality is thought to be an important factor in determining the influence of media violence. The more viewers perceive that what they are seeing could actually happen in real life, the greater the likelihood they will attend to, remember, and be motivated to perform similar acts of aggression (Bandura, 1965). In essence, youth can learn more about real-life aggression (e.g., appropriateness of use, consequences, etc.) when the models and circumstances surrounding acts of aggression could exist in reality.

### 4.3. Perceived similarity

Perceived similarity refers to degree of similarity between the viewer and media-depicted events, settings, and characters. The more similarities perceived between the viewer's life and the content of the viewed media, the greater the level of perceived similarity. Programs high in perceived similarity are posited to influence aggression in youth to a greater extent than programs low in perceived similarity. As perceived similarity increases, the following are thought to occur: the amount of priming of aggression-related constructs increases; emotional arousal swells; observers expect to experience similar events in their lives (thereby enhancing modeling influences); and there is a greater chance of identification (Potter, 2003).

### 4.4. Perceived reality

Together, perceived actuality and perceived similarity make-up the perceived reality of a media offering. The greater the perceived actuality and perceived similarity of a violent media offering (movie, video game, etc.), the more realistic that violent media offering is perceived to be. Moreover, regardless of media form (e.g., animated, live-action, video game, etc.), depictions of violence with little realism are rated as less violent than more realistic depictions of violence (Atkin, 1983). It is worth noting that perceived reality is individually determined. As such, it is possible for two youth watching the same show to be impacted differently by it because of differences in perceived actuality and perceived similarity. By the nature of their presentation, cartoon characters are less realistic than actors in live-action shows. Moreover, the activities portrayed in modern, non-comedic cartoons tend to have a strong fantasy component. Shows containing a high degree of violence, such as *Teenage Mutant Ninja Turtles*, *X-Men*, and *Justice League Unlimited*, depict creatures that do not really exist (such as talking turtles and superheroes) doing activities that are unrealistic (e.g., flying, X-ray vision).

Developmental issues appear to moderate the perceived reality of a television program or movie. In particular, as children age their ability to correctly differentiate fantasy from reality improves, an ability that is referred to as the fantasy–reality distinction. At first, children believe that what they see on television is real. Two-year-olds will attempt to clean up an egg that was broken during a televised program and 3-year-olds believe that if a television is turned upside down the contents of the televised bowl will spill. By age 4, children no longer make these mistakes. However, the ability to differentiate fantasy from reality is still developing. Because scene cuts and replays violate real world possibilities, 6- and 7-year-olds may incorrectly identify “real” information as fantastical. By age 9, regardless of editing, children realize that news shows and documentaries present real information (Flavell, Flavell, Green, & Korfmacher, 1990; Huston & Wright, 1998; Jaglom & Gardner, 1981; Wright, Huston, Reitz, & Piemyat, 1994).

The fantasy–reality distinction may impact the potential influence of cartoons on youthful aggression. To understand why this may occur, it is necessary to briefly review how the realism of a show may influence the aggressive behavior of children and adolescents. In general, realistic portrayals of media violence engender greater levels of aggressive behavior in viewers than unrealistic media depictions (Huesmann, Lagerspetz, & Eron, 1984). For instance, adolescents report a greater likelihood of acting aggressively against another person following a provocation if they had previously witnessed acts of violence during a television newscast than if the same acts of violence were viewed as part of a commercial for an upcoming television drama (Atkin, 1983). Thus, given that the ability to correctly distinguish fantasy from reality does not become reasonably accurate until late-childhood (starting around age 8; Wright et al., 1994) and that misidentifications of fantasy as reality could result in higher levels of aggressive behavior in youth, many are concerned cartoons could disproportionately influence the behavior of young children. In fact, research has shown that preschool aged children are more frightened by animated images than are older children (Cantor & Sparks, 1984).

Although cartoons and animated movies may frighten youth, this genre of media is one of the first to be recognized by children as being unreal. In fact, 5-year-olds clearly understand the unreality of cartoons; that is to say, they recognize them as fantasy (Wright et al., 1994). Thus, by the end of the preschool years, the threat of cartoons on aggressive behavior is reduced because they are no longer perceived as real. It appears then, that the contention that young children's inability to distinguish fantasy from reality, as a risk factor for aggression, is not supported.

## 5. Cartoons and aggressive behavior: the evidence

At times, acts of aggression resulting from violent media consumption exemplify the concept of disinhibition. Disinhibition refers to situations in which youth readily enact *previously learned* aggressive behaviors. In other words,



the viewing of violent media can remove/reduce (i.e., disinhibit) reservations that youth might have with regards to performing aggressive acts already in their repertoire. Thus, witnessing of Wile E. Coyote being blown to bits by dynamite has the potential to disinhibit unrelated acts of aggression in viewers, such as pushing, shoving, and hitting. The concept of disinhibition is important to research on cartoon violence because the elements of cartoon violence are fantasy-laden. For instance, children lack the strength to punch someone with enough force to turn their head completely around. As Hapkiewicz (1979) contends, at times it is impossible for youthful viewers to mimic imaginary acts carried out by imaginary characters in imaginary situations. For more realistic types of cartoons, however, the learning of acts of aggression that are possible in real life can occur. But the concept of disinhibition diminishes the argument that unrealistic cartoons cannot affect the aggressive behavior of children because the behaviors displayed within the cartoons are impossible to reproduce in real life.

### 5.1. *Laboratory research in early childhood*

The first laboratory experiment on the impact of violent cartoons on aggressive behavior in youth was conducted involving showing a comedic and violent *Woody Woodpecker* cartoon to young children (Siegel, 1956). Siegel paired preschool children with one another and exposed them to either a violent or a nonviolent cartoon. Following the animated media consumption, youth were observed during dyadic free-play, in which the number of aggressive acts towards the peer-partner, toys and the self were counted. The following week, the children returned to the laboratory and viewed a cartoon of an opposite valence from the week before (e.g., if they watched a violent cartoon the first week, they watched a nonviolent cartoon the second week and vice versa). Results of the study indicated that amount of aggressive behavior displayed did not vary by the level of cartoon violence observed by preschool children. Similarly, studies exposing children in middle-childhood to cartoons with comedic violence have also *failed* to show increases in *peer-partner* aggression (Hapkiewicz & Roden, 1971; Hapkiewicz & Stone, 1974).

In contrast, three laboratory experiments have found that violent cartoon exposure does, in fact, negatively influence preschool children. For example, children viewing animation involving human-like figures that hit and bite one another chose to play with an aggressive toy (i.e., a hitting doll), as opposed to a non aggressive toy (i.e., a ball in a cage), in a greater percentage than children seeing a nonviolent cartoon (Lovass, 1961). Bandura, Ross, and Ross (1963) found that exposure to a violent cartoon resulted in greater aggression (e.g., hitting and kicking) towards a Bobo doll than did the screening of a nonviolent cartoon. However, it may be that these children were engaging in rough-and-tumble play, as opposed to true acts of aggression.

There are two equally compelling reasons to explain the contradictory findings mentioned above. First, whereas studies that failed to find significant effects of cartoon violence on aggression used animation depicting comedic violence, the studies that were able to demonstrate significant effects of cartoon violence on aggressive behavior used cartoons replete with violence, but lacking in comedy. Thus, presence of comedy during the cartoons may have camouflaged the violence depicted within, thereby reducing its influence on aggressive behavior in youth. Thus, although there is concern that when preschoolers watch comedic violence, they will come to learn that violence is funny (Nathanson & Cantor, 2000), thereby increasing their aggressive tendencies, the research has yet to validate this concern.

A second possibility revolves around the object of aggression assessed during the experiments. The majority of the studies finding significant effects of watching cartoon violence on youth measured object-oriented aggression (e.g., hitting Bobo doll; selection of aggressive toy). In contrast, studies that failed to find significant effects measured peer-related aggression. Given that interpersonal aggression among youth is frowned upon by society, and that acts of interpersonal aggression are punished, the preschoolers in these studies may have been concerned about social disapproval by the experimenters and reduced the level of aggression displayed. In contrast, because there is less social disapproval associated with object-oriented aggression during play, disinhibition effects may be more easy to detect.

This explanation leaves open the possibility that preschoolers' desire to act aggressively increased following media violence exposure, but that socialization experiences caused them to control their behavior. It follows, then, that if youth lack appropriate socialization experiences, and if controls set in place to limit use of aggression are absent, effects of violent media will be more pronounced. In support of this contention, research on children diagnosed with Disruptive Behavioral Disorders indicates that they are affected to a greater extent by violent imagery than youth without psychopathology (Grimes, Vernberg, & Cathers, 1997).

## 5.2. Field experiments in early childhood

There has been limited field experiment-based research on children in early childhood. For instance, [Friedrich and Stein \(1973\)](#) exposed preschool children to either 20 min of *Batman* and *Superman* or to a series of neutral live-action films. Regardless of condition, youth viewed their assigned media selections three times a week, for four weeks. At the end of the experimental period, physical and verbal aggression towards peers, rule obedience, and tolerance for delay were assessed. Youth watching the violent cartoons were more disobedient and less tolerant of delay. Moreover, youth who exhibited high levels of aggression prior to the experiment became more aggressive if they watched the violent cartoons than if they watched the nonviolent cartoons. Similarly, [Steuer, Applefield, and Smith \(1971\)](#) found that 11 daily 10 min sessions of watching Saturday morning programs (which had a preponderance of unspecified cartoons and occasional live-action programs) resulted in greater physical aggression towards peers in comparison to young children watching a series of non-violent cartoons. Interestingly, the amount of physical aggression displayed by the children who watched Saturday morning programming increased throughout the course of the experiment.

[Steuer et al. \(1971\)](#) did not list cartoons viewed by youth, thereby making it impossible to know the percentage of cartoons viewed containing humor. However, [Friedrich and Stein \(1973\)](#) showed children cartoons lacking comedic elements. Thus, in contrast to the laboratory experiments that failed to show an association between comedic violence exposure and interpersonal aggression, the field experiment of [Steuer et al. \(1971\)](#) demonstrated that non-comedic violence can increase interpersonal aggressive behavior. However, it is unclear if the aforementioned effects were due to the repeated viewing of cartoon violence over a period of days and weeks or because there were so few comedic elements in the cartoons that the screened violence was not camouflaged by comedy. What remains to be seen, then, is if repeated exposure to cartoons with comedic violence negatively impacts interpersonal aggression in early childhood.

In addition to the research mentioned above, [Silvern and Williamson \(1987\)](#) conducted an interesting field experiment involving cartoon violence and 28 preschool boys and girls. The experiment, which took place over a three day period, involved the assessment of baseline aggression during dyadic play with a classmate, the viewing of the humorously violent cartoon *Road Runner*; and the playing of the now classic arcade game *Space Invaders*, which served as the violent video game.

During the first day of the experiment, baseline aggression during dyadic play was assessed. During the second day, half of the children played the video game for six min and the other half watched the 6 min long cartoon. Children were then observed in a free-play session with the toys that were available during the base line condition. During the third day, youth who had watched the violent cartoon the day before played the video game and youth who had played the video games watched the violent cartoon. Once again, a free-play session with the familiar toys took place. Prosocial behavior and fantasy play were assessed during each of the three free-play sessions. Additionally, amount of peer-related physical and verbal aggression, and the frequency of object-oriented aggression were assessed. For each individual, the amount of aggressive, fantasy, and prosocial behavior was compared between the baseline condition and the free-play session following each of the two separate exposures to media violence.

Results indicated that, relative to baseline levels of responding, after watching the comedically violent cartoon, preschool youth demonstrated higher rates of aggressive behavior and lower rates of prosocial behavior. Unfortunately, the breakdown of peer-oriented and object-oriented aggression was not reported. Therefore, it is impossible to determine if data fit into the pattern mentioned above. It may be that, consistent with previous research, peer-related physical and verbal aggression were not affected by the media violence exposure, but that object-oriented aggression was. Moreover, because there was no control group, it is impossible to determine if aggressive behavior would have increased and prosocial behavior would have decreased during the second and third play sessions with familiar toys, regardless of whether they had been watching a violent cartoon or playing a violent video game. It is possible, for instance, that frustration of playing with the same child and the same toys over a period of days caused the aforementioned changes in behavior. In addition fatigue effects cannot be completely ruled out; it is possible that participants simply became less enthusiastic about the experiment, resulting in greater levels of hostilities with their peer partner. In fact, the reported reduction in prosocial behavior across sessions supports the contention that fatigue was taking place: participants may have been getting too fatigued to be prosocial.

### 5.3. Research on middle childhood

Research on the effects of comedic and non-comedic cartoons on children in middle childhood mirrors the effects found for early childhood. Laboratory experiments using cartoons with comedic violence failed to demonstrate significant differences in interpersonal aggression among peers (Hapkiewicz & Roden, 1971; Hapkiewicz & Stone, 1974); laboratory experiments using non-comedic, violent cartoons demonstrated increases in aggressive behavior towards inanimate objects (Mussen & Rutherford, 1961); and field experiments consistently found that the viewing of violent cartoons without comedic elements resulted in increases in aggressive behavior (i.e. physical and verbal) towards peers (Ellis & Sekyra, 1972; Liss, Reinhardt, & Fredriksen, 1983; Sanson & DiMuccio, 1993).

In contrast to the null findings associated with the viewing of comedic violence in cartoons, Nathanson and Cantor (2000) found that viewing of a humorous, violent cartoon increased aggressive responding to hypothetical questions for boys between second and sixth grades. Thus, cartoons with violent and comedic elements appear to affect aggression-related constructs in young children, such as aggressive thoughts and desires, but fail to alter actual aggressive behavior. Such a finding supports the contention that aggressive behavior is the result of a multitude of factors, and that some factors may affect only certain aspects of aggression (such as aggressive thoughts), while failing to significantly alter other aspects of aggression (such as aggressive behavior). See Kirsh (2006) for a further discussion of the risk factor approach to understanding the negative effects of media violence. Of course, with so few studies done in this area, additional research is necessary to validate this contention.

### 5.4. Research on adolescence

To date, little research has been conducted on the effects of cartoon violence during adolescence. Perhaps paucity of research is due to the fact that cartoon watching is thought to be the domain of childhood and that across adolescence, youth become more interested in live-action shows laden with more “adult” themes and content. However, the research that has been conducted suggests that additional studies are warranted. For instance, in an assessment of over 400 8th grade boys and girls, Aluja-Fabregat and Torrubia-Beltri (1998) evaluated the impact of non-comedic violent cartoons on aggression. In this study, personality characteristic (such as sensation seeking and anxiety levels), ratings of extremely violent Japanese anime, and teacher reports of adolescent aggressivity were correlated. Results of the study indicated that for boys, but not girls, perception of extremely violent cartoons as being funny and thrilling was related to higher levels of teacher-rated aggressivity. In line with these results, in a study of British youth, Belson (1978) found that the viewing of cartoon violence among adolescent boys was associated with increases in minor acts of violence. Girls were not assessed in the Belson study.

If comedy does, in fact, camouflage violence, then perception of *non-humorous* violent media as funny should reduce the perceived severity of that violence. By viewing violence as humorous (even in the absence of humor), it becomes less disturbing and less harmful to the victim. As it turns out, bullies tend to perceive their own acts of violence in a manner consistent with how they perceive violent cartoons. Bullies tend to dehumanize their victims; they do not perceive their own acts of aggression as particularly harmful; and they tend to have a positive attitude towards the use of violence (Moeller, 2001). Thus, it should be of no surprise that aggressive adolescents perceive humor in violent cartoons that are *lacking* in comedic elements. They tend to enjoy violence, be it in reality or animated fantasy.

The failure of Aluja-Fabregat and Torrubia-Beltri (1998) to find significant effects for girls may be due to the fact that their measure of aggressivity was biased towards aggressive behaviors that are easily detectable by teachers, such as name-calling and fights. Less observable acts of aggression, such as those frequently seen in relational aggression, are harder to detect in a classroom. It is this type of aggression that is most common among adolescent girls. Thus, the null findings for girls may simply reflect the fact that the type of aggressive behavior that girls typically engage in was not assessed. Clearly, more research is warranted.

## 6. Limiting the effects of cartoon violence on youth

Since the late 1960s, research has investigated the impact of active mediation on the effects of cartoon and live-action television violence (e.g., Hicks, 1968). Active mediation refers to the process of talking to youth about the content of violent media. During active mediation, negative comments, such as “how awful,” “hitting is wrong,” and



“shooting someone is terrible,” are made about media-portrayed acts of aggression (Cantor & Wilson, 2003). Such discussions can take place before, during, or after violent media consumption.

The goal of active mediation is to alter youth’s perception that violence has positive consequences, or that violence goes unpunished, thereby reducing the likelihood that youth will imitate these behaviors (Cantor & Wilson, 2003). In general, active mediation criticisms do appear to reduce the amount of aggression imitated by children. However, effects tend to be stronger in older children than in preschool aged children (Grusec, 1973). Active mediation is a means for communicating to youth what behavior is and is not acceptable. Even if youth are feeling more aggressive after watching violent television content, they are also learning that they will need to control their own behavior to avoid punishment. Thus, the finding that older children imitate aggression to a lesser extent than younger children should not be too surprising, given that older children have better impulse control than younger children (DeHart et al., 2004).

Additional research on active mediation has focused on whether youthful attitudes towards aggression can be impacted by negative comments. Once again, teachers, unfamiliar adults, parents, and even “commercial messages” (commercial-like, anti-aggression statements) have been implemented to relay anti-aggression statements to youth. Similar to the findings for imitative aggression, research on aggressive attitudes has shown that active mediation can make aggressive behavior less normal and less acceptable to youth (Corder-Bolz, 1980). However, in contrast to research on imitative aggression, mediation statements appear to have a bigger impact on attitudes towards aggression for younger children than for preteens. Nathanson and Yang (2003) suggest that older children may find statements such as “kicking someone in the head is wrong” as condescending, resulting in a “backlash” towards antiviolence attitudes. Moreover, older children may simply tune out anti-aggressive statements to avoid hearing a lecture. Furthermore, the issue of social desirability is a critical issue in this type of research. The bigger impact of active mediation on aggressive attitudes for younger children may simply reflect their desire to please the experimenter, rather than a true change in attitude. Given that preteens and teens need to rebel, social desirability may play less of a role for these children.

Finally, as opposed to inundating children with negative comments about the perpetrators of aggression, recent research has focused on the victim’s feelings. For instance, Nathanson and Cantor (2000) assessed the impact of actively mediated cartoon violence on the acceptance of aggression to solve problems in elementary school students (e.g., pushing another child to get a toy). The 7- to 11-year-old children in this study were instructed to focus on the victim’s feelings *prior* to watching a violent *Woody Woodpecker* cartoon. A control group of same aged children was given no such instructions. This study involved a pre-test post-test design, in which aggressive tendencies were measured prior to and following the experimental manipulation. For boys, but not girls, active mediation reduced the acceptance of aggressive behavior. Furthermore, for both boys and girls, those experiencing mediation found the cartoon less funny and less likeable.

## 7. Conclusions

Children are exposed to violence in cartoons in a greater frequency than in live-action dramas. Although adults consistently rate these comedic cartoons as containing little violence, the research on youth is equivocal. Moreover, although there are theoretical reasons to suggest that comedic elements in cartoons trivialize or camouflage violence depicted within, additional research on youth is necessary to discern whether developmental status influences this process. Similarly, factors that influence the perception of violence in non-comedic cartoons, such as graphicness and perceived reality, appear to be moderated by developmental processes. However, there is limited research in this area.

Across the early and middle childhood, laboratory experiments using cartoons with comedic violence have consistently failed to demonstrate significant differences in person-oriented aggression. In contrast, field experiments have consistently shown that aggressive behavior towards peers increases following the viewing of non-comedic violent cartoons. Similarly, object-oriented aggressive behavior tends to increase following the consumption of non-comedic, violent cartoons. It may be that comedic elements in cartoons camouflage animated violence, thereby reducing the negative effects of violent imagery on aggressive behavior. Although comedic violence appears to be unrelated to aggressive behavior in youth, additional research suggests that this form of violence may increase aggressive thoughts and desires.

Active mediation that focuses on the feelings of the victims appears to lessen the enjoyability of comedic violence and the acceptance of aggression to solve problems. These findings suggest that counteracting the negative effects of cartoon violence on youth may be as simple as making an active mediation statement during viewing. However, additional research is necessary to see if such statements continue to work over a period of weeks and months.

## References

- Aluja-Fabregat, A., & Torrubia-Beltri, R. (1998). Viewing of mass media violence, perception of violence, personality, and academic achievement. *Personality and Individual Differences, 25*, 973–989.
- Atkin, C. (1983). Effects of realistic TV violence vs. fictional violence on aggression. *Journalism Quarterly, 60*, 615–621.
- Bandura, A. (1965). Influence of models' reinforcement contingencies on the acquisition of imitative responses. *Journal of Personality and Social Psychology, 1*, 589–595.
- Bandura, A., Ross, D., & Ross, S. A. (1963). Imitation of film-mediated aggressive models. *Journal of Abnormal and Social Psychology, 66*(1), 3–11.
- Belson, W. A. (1978). *Television violence and the adolescent boy*. Farnborough, England: Saxon House.
- Box Office Mojo. (2004). Retrieved December 27, 2004, from <http://www.boxofficemojo.com>
- Cantor, J., & Sparks, G. G. (1984). Children's fear responses to mass media: Testing some Piagetian predictions. *Journal of Communication, 34*, 90–103.
- Cantor, J., & Wilson, B. J. (2003). Media and violence: Intervention strategies for reducing aggression. *Media Psychology, 5*, 363–403.
- Corder-Bolz, C. R. (1980). Mediation: The role of significant others. *Journal of Communication, 30*(3), 106–118.
- DeHart, G. B., Sroufe, L. A., & Cooper, R. G. (2004). *Child development: Its nature and course* (5th ed). New York: McGraw Hill.
- Ellis, G. T., & Sekyra, F. (1972). The effect of aggressive cartoons on behavior of first grade children. *Journal of Psychology, 81*, 37–43.
- Fiske, S. T., & Taylor, S. F. (1991). *Social cognition* (2nd ed). New York: McGraw Hill.
- Flavell, J. H., Flavell, E. R., Green, F. L., & Korfmacher, J. E. (1990). Do young children think of television images as pictures or real objects? *Journal of Broadcasting and Electronic Media, 34*, 399–419.
- Friedrich, K. L., & Stein, A. H. (1973). Aggressive and prosocial television programs and the natural behavior of preschool children. *Monographs of the Society for Research in Child Development, 38*, 1–110.
- Gerbner, G., Gross, M., Morgan, L., & Signorielli, N. (1994). Growing up with television: The cultivation perspective. In J. Bryant, & D. Zillmann (Eds.), *Media effects* (pp. 17–41). Hillsdale, NY: Erlbaum.
- Grimes, T., Vernberg, E., & Cathers, T. (1997). Emotionally disturbed children's reactions to violent media segments. *Journal of Health Communication, 2*, 157–168.
- Grusec, J. E. (1973). Effects of co-observer evaluations of imitation: A developmental study. *Developmental Psychology, 8*, 141.
- Gunter, B. (1985). *Dimensions of television violence*. Aldershot, UK: Gower.
- Gunter, B., & Furnham, A. (1984). Perceptions of television violence: Effects of programme genre and type of violence on viewers' judgements of violent portrayals. *British Journal of Social Psychology, 23*, 155–164.
- Hapkiewicz, W. G. (1979). Children's reactions to cartoon violence. *Journal of Clinical Child Psychology, 8*, 30–34.
- Hapkiewicz, W. G., & Roden, A. H. (1971). The effect of aggressive cartoons on children's interpersonal play. *Child Development, 42*, 1583–1585.
- Hapkiewicz, W. G., & Stone, R. D. (1974). The effect of realistic versus imaginary aggressive models on children's interpersonal play. *Child Study Journal, 4*, 37–44.
- Haynes, R. B. (1978). Children's perceptions of "comic" and "authentic" cartoon violence. *Journal of Broadcasting, 22*, 63–70.
- Hicks, D. J. (1968). Effects of co-observer's sanctions and adult presence on imitative aggression. *Child Development, 39*, 303–309.
- Howitt, D., & Cumberbatch, G. (1975). *Mass media violence and society*. New York: Halstead.
- Huesmann, L. R., Lagerspetz, K., & Eron, L. D. (1984). Intervening variables in the TV violence–aggression relation: Evidence from two countries. *Developmental Psychology, 20*(5), 746–777.
- Huston, A. C., & Wright, J. C. (1998). Mass media and children's development. In I. E. Sigel, & K. A. Renninger (Eds.), *Handbook of Child Psychology, vol. 4* (pp. 999–1058). New York: John Wiley & Sons.
- Jaglom, L. M., & Gardner, H. (1981). Decoding the worlds of television. *Studies in Visual Communication, 7*(1), 33–47.
- Kane, T. R., Suls, J. M., & Tedeschi, J. (1977). Humour as a tool of social interaction. In A. J. Chapman, & H. C. Foot (Eds.), *It's a funny thing, humour* (pp. 13–16). Oxford, UK: Pergamon Press.
- King, C. (2000). Effects of humorous heroes and villains in violent action films. *Journal of Communication, 48*, 40–57.
- Kirsh, S. J. (2006). *Children, adolescents, and media violence: A critical look at the research*. Thousand Oaks, CA: Sage.
- Liss, M. B., Reinhardt, L. C., & Fredriksen, S. (1983). TV heroes: The impact of rhetoric and deeds. *Journal of Applied Developmental Psychology, 4*, 175–187.
- Lovass, O. I. (1961). Effect of exposure to symbolic aggression on aggressive behavior. *Child Development, 32*, 37–44.
- Moeller, T. G. (2001). *Youth aggression and violence: A psychological approach*. New Jersey: Erlbaum.
- Mussen, P., & Rutherford, E. (1961). Effects of aggressive cartoons on children's aggressive play. *Journal of Abnormal and Social Psychology, 62*, 461–464.
- Nathanson, A. I., & Cantor, J. (2000). Reducing the aggression-promoting effects of violent cartoons by increasing the fictional involvement with the victim: A study of active mediation. *Journal of Broadcasting and Electronic Media, 44*, 125–142.
- Nathanson, A. I., & Yang, M. (2003). The effects of mediation content and form on children's responses to violent television. *Human Communication Research, 29*, 111–124.
- Potter, W. J. (2003). *The 11 myths of media violence*. Thousand Oaks, CA: Sage.
- Potter, W. J., & Berry, M. (1998, May). *Constructions of judgments of violence*. Paper presented at the Annual Meeting of the International Communication Association, San Francisco, CA.
- Potter, W. J., & Warren, R. (1998). Humor as a camouflage of televised violence. *Journal of Communication, 48*, 40–57.
- Sanson, A., & DiMuccio, C. D. (1993). The influence of aggressive and neutral cartoons and toys on the behaviour of preschool children. *Australian Psychologist, 28*, 93–99.

- Siegel, A. E. (1956). Film mediated fantasy aggression and strength of aggressive drive. *Child Development, 27*, 442–447.
- Silvern, S. B., & Williamson, P. A. (1987). The effects of video game play on young children's aggression, fantasy, and prosocial behavior. *Journal of Applied Developmental Psychology, 8*, 453–462.
- Snow, R. P. (1974). How children interpret TV violence in play context. *Journalism Quarterly, 51*, 13–21.
- Steuer, F. B., Applefield, J. M., & Smith, R. (1971). Televised aggression and the interpersonal aggression of preschool children. *Journal of Experimental Child Psychology, 11*, 442–447.
- Wright, J. C., Huston, A. C., Reitz, A. L., & Piemyat, S. (1994). Young children's perceptions of television reality determinants and developmental differences. *Developmental Psychology, 30*(2), 229–239.