

Media and Children's Aggression, Fear, and Altruism

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Summary

Noting that the social and emotional experiences of American children today often heavily involve electronic media, Barbara Wilson takes a close look at how exposure to screen media affects children's well-being and development. She concludes that media influence on children depends more on the type of content that children find attractive than on the sheer amount of time they spend in front of the screen.

Wilson begins by reviewing evidence on the link between media and children's emotions. She points out that children can learn about the nature and causes of different emotions from watching the emotional experiences of media characters and that they often experience empathy with those characters. Although research on the long-term effects of media exposure on children's emotional skill development is limited, a good deal of evidence shows that media exposure can contribute to children's fears and anxieties. Both fictional and news programming can cause lasting emotional upset, though the themes that upset children differ according to a child's age.

Wilson also explores how media exposure affects children's social development. Strong evidence shows that violent television programming contributes to children's aggressive behavior. And a growing body of work indicates that playing violent video games can have the same harmful effect. Yet if children spend time with educational programs and situation comedies targeted to youth, media exposure can have more prosocial effects by increasing children's altruism, cooperation, and even tolerance for others. Wilson also shows that children's susceptibility to media influence can vary according to their gender, their age, how realistic they perceive the media to be, and how much they identify with characters and people on the screen. She concludes with guidelines to help parents enhance the positive effects of the media while minimizing the risks associated with certain types of content.

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Children today live in a world where many of their experiences are mediated by screen technologies. Small children are likely to feel some of their first fears as they watch a scary movie or television program, feel some of their earliest non-familial attachments as they view a favorite media character, and even experience the beginnings of emotional empathy as they follow the adventures of a well-liked media protagonist. Because American children spend so much time with the media, much of their social life takes place while they sit in front of a television or a computer screen or concentrate on an iPod or a cell phone. In fact, children under the age of six spend more time watching television than they do playing outdoors.¹ Historically, the United States has reached a point where most of children's social experiences no longer consist of face-to-face interactions with other people.

Children develop their emotional and social capabilities through a complex process. To participate effectively in their culture, they must acquire the norms, rules, and values that will enable them to form connections and function in families, peer groups, and the broader society. They learn about emotions and about relationships from parents, friends, teachers, and siblings. They also bring their own personalities, temperaments, and cognitive abilities to each social situation. Electronic media too play a role in children's socialization. Television programs, movies, and even the Internet provide children with a window into popular culture. Children can come to appreciate norms and standards of conduct by watching social actors in fictional stories and can even experience emotional and social situations in a vicarious way through the media.

In this article I review the research evidence regarding how electronic media influence children's emotional and social well-being. I begin by exploring the role the media can play in children's affective or emotional development. I show how children can learn about the nature and function of emotions from the media, and I summarize research on how electronic media contribute to the development of empathy in children. Next, I address the questions of whether the media can elevate children's fears and anxieties. Moving away from emotions, I then explore the effect of media on children's social development. In particular, I examine how repeated exposure to electronic media can influence children's moral development. I also review evidence about how the media can affect children's tendency to behave in a prosocial manner with others and also their tendency to act aggressively in social situations. I then sum up the positive and negative effects of exposure to media on children's well-being, commenting on considerations that make youth susceptible to media's influence and on ways they can be shielded from harmful effects. I conclude by discussing the important role parents can play in their children's media experiences.

Two themes emerge in this review. First, electronic media can have both positive and negative effects on children's development. It is thus simplistic to argue that the media are detrimental or valuable to children. Much of the effect depends on the content to which children are exposed. Some media messages can teach children positive, prosocial lessons, while others can lead children to be fearful or even to behave antisocially. What children are watching onscreen makes a crucial difference, perhaps even more than how much time they spend in front of that screen. Second, not all children are influenced by the media in the

same way. A child's age or developmental level makes a difference, for example. In some situations, younger children are more susceptible to media influence than older children are. But older children and teens are certainly not immune. In fact, media content that is complex or highly abstract is likely to affect only those with more sophisticated cognitive skills who can comprehend the message. A child's gender, race, temperament, and home life also come into play. Throughout this article, I will highlight which groups or types of children are more susceptible to media's influence on emotional and social development.

Media and Emotional Development

Children need emotional skills to form relationships with others. Indeed, the capacity to recognize and interpret emotions in others is a fundamental building block of social competence.² Developmental psychologists and media scholars alike have argued that screen media play a crucial role in children's emotional development.³ Yet few studies address this larger issue, in part because researchers have given so much empirical attention instead to media's impact on maladaptive or antisocial behaviors.

Learning about Emotions

One of the first skills of emotional competence is the ability to recognize emotions in others. Research indicates that preschoolers are able to identify and differentiate basic emotions such as happiness, sadness, and fear experienced by television characters.⁴ Very young children, however, struggle to recognize more complex emotions. They tend to remember emotions experienced by people better than those experienced by Muppets or animated characters, and they do not necessarily focus on emotions of the characters when retelling the narrative of a television

program.⁵ By the time they reach age eight, however, children, especially girls, are more likely to mention characters' affective states when retelling a televised story.⁶ Older children also begin to understand television characters' more complex emotions, such as jealousy.⁷ Like their younger counterparts, older children's recall of affect is higher if they perceive the program as realistic.⁸

Developmental psychologists and media scholars alike have argued that screen media play a crucial role in children's emotional development.

But do emotional portrayals teach children about emotions? Surprisingly little evidence on this subject exists. One early study found that regular viewing of *Sesame Street* helped preschoolers learn to recognize emotions and emotional situations, though the preschoolers learned more about traditional school-based content than they did about emotional content.⁹ In recent years, *Sesame Street* has incorporated emotions and emotional coping into its curricular goals. Several storylines during the 1980s, for example, focused on birth, death, and marriage. In 2001, a series of episodes focused on a hurricane that hit New York City and destroyed Big Bird's home. Big Bird and his friends spent considerable time dealing with this emotional issue and rebuilding his nest. Later that year, *Sesame Street* tried to help preschoolers cope with the September 11 terrorist attacks on New York and Washington by featuring a story about a grease fire in Hooper's Store, which required the help of brave firefighters to save people. Scholars have conducted no

grammatic research, however, to ascertain the long-term effects of watching such content on preschoolers' emotional development.

Researchers have found that older children can learn about emotions from television content. In a series of studies, Sandra Calvert and Jennifer Kotler explored how second through sixth graders' acquired different types of information from their favorite programs.¹⁰ Samples of children recruited from schools across the country were invited to visit a specially designed website to report on what they had learned from particular television episodes they had recently viewed. The researchers found that children do remember lessons and that they can clearly articulate them. When asked about programs rated as educational/informative (E/I), children reported learning socio-emotional lessons more often than informational or cognitive lessons. In other words, the educational programs taught them more about emotions, such as overcoming fears and labeling different feelings, and about interpersonal skills, such as respect, sharing, and loyalty, than about science, history, or culture. Girls learned more from these programs than boys did. This gender difference was attributed to the fact that girls reported liking such programs more and feeling more involved while viewing them. Finally, children learned more of these socio-emotional lessons from their favorite educational (E/I rated) than from their favorite entertainment-based programs. Because the researchers did not disentangle emotional from social lessons, it is difficult to ascertain which is more prominently featured in E/I programming and, in turn, in children's subsequent memories. Nor did the study assess whether this learning persisted over time and more crucially, whether the lessons carried over into real life in some way.

One piece of experimental evidence—research involving a randomly assigned control group—demonstrates that children can transfer to real life the emotional lessons they learn from TV.¹¹ In the study, elementary school children from two age groups (kindergarten through second grade and third through fifth grade) watched a popular family sitcom whose main plot featured one of two negative emotions: the fear felt by a young character about earthquakes or the anger felt by a young character who fell while trying to learn how to ride a bicycle. Half the children in the study (the control group) watched the main plot only, and half watched a version where the main plot was accompanied by a humorous subplot. The presence of the subplot interfered with the ability of younger children to understand the emotional event in the main plot, but not with the ability of older children. This finding is consistent with other researchers' insights into developmental differences in children's ability to draw inferences across scenes that are disconnected in time.¹²

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No matter what their age, children who viewed the humorous subplot tended to minimize the seriousness of the negative emotion. It may be, then, that the humor in situation comedies impairs children's ability to learn about negative emotional issues from such

content. The humorous subplot also affected the children's perceptions of emotion in real life. Children who viewed the earthquake episode with the humorous subplot judged earthquakes in real life as less severe than did those who viewed the episode without the subplot. This pattern was particularly strong among those who perceived the family sitcom as highly realistic.

The study demonstrates that a single exposure to a television episode can alter children's ideas about emotions in real life and is consistent with the idea that media portrayals can influence a child's mental representation, or schema, for emotional events. (A schema is an organized structure of knowledge about a topic or event that is stored in memory and helps a person assimilate new information.¹³) Scholars have theorized that people's schemata for emotions include information about expressive cues, situational causes, and rules about how to display each emotion.¹⁴ Research indicates that children use schemata to help them interpret what they encounter in the media.¹⁵ In turn, media content can contribute to a child's schemata. As an example of this interplay, one study found that children who perceived television as highly realistic had mental schemata for real-world occupations such as nursing and policing that were similar to TV portrayals of such jobs.¹⁶

In summary, there is surprisingly little evidence that electronic media affect emotional development. Early work demonstrates that regular viewing of *Sesame Street* can help preschoolers develop a fuller understanding of emotions and their causes. More recent research indicates that elementary school children, especially girls, can learn social-emotional lessons from television. The type of content viewed makes a difference. Programs rated as E/I teach emotional lessons more

effectively than do entertainment-based programs. Some experimental evidence suggests that children can transfer what they learn from emotional portrayals on television to their beliefs about emotional events in real life. This type of learning is greatest among those who perceive television as highly realistic. Once again, the content of the program matters. In one experiment, the simple insertion of a humorous subplot distorted children's perceptions of a negative emotional event in a program and also caused children to minimize the seriousness of a similar event in real life. No research as yet addresses the long-term consequences of repeated exposure to electronic media on emotional development. It may be that children who are heavy viewers of, say, situation comedies develop a distorted perception of emotional problems as trivial and easily solved in thirty minutes or less. On the other hand, regular viewers of E/I programs may learn more about the intricacies of different types of emotional experiences because such portrayals are not routinely clouded in humor. Longitudinal studies—those that follow a cohort of individuals over a long period—are required to fully explore these issues.

Emotional Empathy

Learning to feel empathy or share emotions with others is part of what makes children effective social agents. Empathic children are more sensitive to others and are more likely to engage in socially desirable behavior in groups.¹⁷ Empathy is typically construed as a developmentally acquired skill, dependent on a child's ability to recognize what emotion the other person is feeling and to role-take, or imagine the self in that person's place.¹⁸ Infants often respond to the crying of other babies by crying themselves.¹⁹ But this emotional contagion is different from empathy, though it may be a precursor to it.

Although children clearly share experiences with media characters, few researchers have studied this phenomenon. One early experiment confirms that empathy is a developmental skill.²⁰ In the study, children from two age groups (three through five and nine through eleven) watched a movie clip of either a threatening stimulus or a character's fear in response to a threatening stimulus that was not shown directly. Younger children were less physiologically aroused and less frightened by the character's fear than by the fear-provoking stimulus. The older children, however, responded emotionally to both versions of the movie. The preschoolers did not lack empathy because they failed to recognize the nature of the character's emotion—the vast majority did recognize the character's fear. But they were less likely than the older children to engage in role-taking with the character, a skill that other studies have found to emerge around age eight and increase during the elementary school years.²¹

Besides their developmental stage, other characteristics of children seem to encourage empathy with media portrayals. Children, for example, are more likely to share the emotions of a same-sex than an opposite-sex character.²² They are also more likely to experience empathy if they perceive the media content as realistic.²³

To summarize, a few experimental studies show that children engage in emotional sharing with well-liked characters. Because empathy requires the ability to identify others' emotions and to role-take, older children are more likely to share the emotional experiences of on-screen characters than younger children are. Once again, content matters. Children are more likely to experience empathy with plot lines and characters that they perceive as realistic. They are also more

likely to share the emotions of characters similar to themselves, presumably because it is easier to role-take with such characters. Thus, movies or television programs that feature younger characters in emotional situations that are familiar and seem authentic should produce the strongest empathy in youth. But all of these insights are derived from short-term studies. No longitudinal studies of children's media exposure over time address its effect on empathy. Nevertheless, a recent survey of adults' lifetime media habits is suggestive. In the study, adults reported on their exposure to various types of fiction (romance, suspense novels, thrillers, science fiction, fantasy, domestic and foreign fiction) and nonfiction (science, political commentary, business, philosophy, psychology, self-help) print media.²⁴ They also filled out a questionnaire measuring social skills and various facets of empathy, including perspective-taking. Even after controlling for age, IQ, and English fluency, researchers found that readers who were more exposed to narrative fiction were more empathic and had higher general social abilities. Furthermore, readers of more fiction became more deeply absorbed in stories. In contrast, readers who were more exposed to nonfiction were less empathic. In order to untangle definitively whether empathic people seek out fiction, or whether fictional stories help teach empathy, or whether both are true, researchers will have to track children's media habits over time.

Media, Fear, and Anxiety

Children can not only witness and share emotions experienced by media characters, but also respond directly to emotionally charged events depicted in the media. Much of the research on the media's capacity to evoke children's emotions has focused narrowly on its ability to arouse their fears and anxieties. Recent movies such as *Monster*

House, *Corpse Bride*, and *Harry Potter and the Order of the Phoenix* are just a few examples of horror-filled content that is targeted to children. Classic Disney films such as *Bambi*, *Snow White*, and *The Lion King* can also be upsetting to very young children. Even programs not designed to be scary sometimes cause fear among younger age groups. *The Incredible Hulk*, for example, a television series featuring a large, green-skinned creature that helps people, was so frightening to preschoolers that *Mister Rogers' Neighborhood* screened a special segment to explain the Hulk's motives and make-up to young viewers.

Research shows that most preschoolers and elementary school children have experienced short-term fright reactions to the media.²⁵ Furthermore, many of these children report that they regret having seen a particular scary program or movie.²⁶ In one nationally representative survey, 62 percent of parents of two- to seventeen-year-olds agreed that their children had "sometimes become scared that something they saw in a movie or on TV might happen to them."²⁷ The more pressing question concerns the long-term ramifications of such emotional reactions.

Long-Term Fears and Phobias

Evidence is growing that the fear induced in children by the media is sometimes severe and long-lasting. A survey of more than 2,000 elementary and middle school children revealed that heavy television viewing was associated with self-reported symptoms of anxiety, depression, and post-traumatic stress.²⁸ Watching more than six hours of television a day put children at greater risk for scoring in the clinical range of these trauma symptoms. A survey of nearly 500 parents of elementary school children found that the children who watched television just

before bedtime had greater difficulty falling asleep, were more anxious at bedtime, and had higher rates of nightmares.²⁹ It is difficult to draw firm causal conclusions from these studies, which simply correlate television watching and anxiety, but it seems more likely that heavy watching would trigger fearfulness than that skittish children would seek out television before bedtime.

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Using a different approach, Kristen Harrison and Joanne Cantor interviewed a sample of 150 college students at two universities about their memories of intense fears related to the media.³⁰ A full 90 percent of the students were able to describe in detail a movie or television program that had frightened them in a lasting way. Although most had seen the show during childhood or adolescence, 26 percent reported still experiencing "residual anxiety" as an adult. When questioned about long-term effects, more than half of the sample (52 percent) reported disturbances in sleep or eating after seeing the TV show or movie. In addition, 36 percent said they avoided real-life situations similar to the events depicted in the media, 22 percent reported being mentally preoccupied or obsessed with the frightening content, and 17 percent said they avoided similar movies or television programs. The researchers also found that the younger the child was at the time of the exposure, the longer the fear lasted.

The media content that upsets children varies by age. Preschoolers and younger elementary school children (two to seven years of age) are most frightened by characters and events that look or sound scary.³¹ Creatures such as ghosts, witches, and monsters are likely to provoke fear in younger children; even characters that are benign but visually grotesque, such as E.T., can be upsetting to a preschooler, much to the surprise of many parents. This pattern is consistent with younger children's perceptual dependence, their tendency to fixate on visual and auditory cues rather than more conceptual information such as the motives of a character.³² Older elementary school children (eight to twelve years of age) are frightened more by scenes involving injury, violence, and personal harm.³³ Older children also are more responsive than younger children are to events in the media that seem realistic or could happen in real life.³⁴ This heightened responsiveness is consistent with their more mature understanding of the distinction between fantasy and reality.³⁵ Several studies have found, for example, that older children or tweens (age eight to twelve) are more frightened by television news than are younger children.³⁶

Catastrophic news events, in particular, have raised concerns among many parents in recent years. Round-the-clock coverage of child abductions, war, terrorism, and even hurricanes has made it difficult to shield young children from graphic news stories. Indeed, the content of television news has become more violent and graphic over time.³⁷

Several studies have found that exposure to news increases children's fear and anxiety. One study examined sixth graders suffering from post-traumatic stress disorder two years after the Oklahoma City bombing.³⁸ The disorder is characterized by intense fear, helplessness,

horror, and disorganized or agitated behavior. The children in the study lived 100 miles away from the event, had no direct exposure to it, and knew no one affected by the bombing. Yet almost 20 percent reported that the event continued to cause them to have difficulty functioning at school or at home, or both, two years later. Moreover, children who had watched, listened to, or read more news about the bombing reported greater symptoms of post-traumatic stress.

According to cultivation theory, people who watch a great deal of television will come to perceive the real world as being consistent with what they see on the screen.

Researchers have reported similar findings in the wake of the September 11 terrorist attacks. One nationally representative survey of parents found that 35 percent of American children experienced one or more stress symptoms, such as difficulty falling asleep or trouble concentrating, after the attacks and that 47 percent were worried about their own safety or the safety of loved ones.³⁹ Children who watched more TV coverage of the attacks had significantly greater stress symptoms.

In general, children's fear reactions to the news are intensified if they live in close geographic proximity to the tragedy.⁴⁰ Fear is also greater among children who closely identify with the victims of tragic events.⁴¹ Finally, older elementary school children tend to be more frightened by these types of news stories than do younger children.⁴² Older children feel heightened fear partly

because they watch more news than young children do.⁴³ They are also more likely to be able to comprehend news stories, which often contain abstract terminology, such as terrorism and abduction, and fewer visuals than fictional, entertainment media content does.⁴⁴ But as with fictional content, developmental differences help explain which types of news stories children find frightening. Although children under the age of eight are less likely to be scared of the news, when they are, it is most often in response to stories with graphic and intense visual images, such as natural disasters and accidents.⁴⁵ Older children are more likely to be upset by stories involving crime and violence.⁴⁶

To summarize, a moderate amount of evidence links media exposure, both to fictional content and to the news, with children's fears and anxieties. Cross-sectional snapshot-in-time studies indicate that most children have experienced fright, sometimes intense and enduring, in response to media content. Experimental studies corroborate that the types of content that upset children vary as a function of age. Children under eight are most often frightened by fantasy portrayals that involve gruesome or ugly-looking characters. Children older than eight are more upset by realistic portrayals, including the news, involving personal injury and violence. Fear reactions differ by gender as well. Girls tend to experience more fear from media than boys do, especially as they get older.⁴⁷ But gender differences are more pronounced for self-reported fear than for physical measures of fear, such as facial expressions. Thus, gender differences may reflect socialization differences among girls and boys.

Longitudinal evidence also links media and fear. Heavy exposure to major catastrophes in the news is associated with intense fear and

even post-traumatic stress in children. But although most of the longitudinal evidence pertains to news events, one recent study suggests that television viewing in general may be linked to children's fear. Jeffrey Johnson and several colleagues followed the television viewing habits and sleep problems of a cohort of adolescents at age fourteen, sixteen, and twenty-two.⁴⁸ Those who watched three or more hours of television daily at age fourteen were significantly more likely than lighter viewers to have trouble falling asleep and to wake frequently at night at ages sixteen and twenty-two. The link held true even after researchers controlled for previous sleep problems, psychiatric disorders, and parental education, income, and neglect. And the link ran only one way: sleep problems in the early years did not predict greater television viewing in later years. The study, however, did not assess *what* the teens were watching on television. Clearly, more longitudinal studies are needed on how exposure to different types of fictional and nonfictional media content affects children's fears and worries.

Cultivating a Fear of Victimization

Media can also contribute to long-term fear through cultivation—its influence on people's conceptions of social reality. According to cultivation theory, people who watch a great deal of television will come to perceive the real world as being consistent with what they see on the screen.⁴⁹ Cultivation theory has been applied to many types of reality beliefs, but much of the focus has been on perceptions about violence.

Researchers' preoccupation with violence is partly owing to the prevalence of aggression in American media. Large-scale studies of television programming, for example, have documented that nearly two out of three programs contain some physical violence.⁵⁰

Moreover, a typical hour of television features an average of six different violent exchanges between perpetrators and victims. The extent of violence in programs targeted to children is even higher; 70 percent of children's shows contain violence, with an average of fourteen violent interchanges an hour.⁵¹

How does all this violence affect people's perceptions of reality? Studies have found that frequent viewers of television, no matter what their age, see the world as a more dangerous place and are more frightened of being a victim of violence than infrequent viewers are.⁵² Most of the evidence is correlational, but a few experiments using control groups show that repeated exposure to television violence increases people's fear of victimization.⁵³ Combining all the evidence, Michael Morgan and James Shanahan conducted a meta-analysis of published studies on cultivation that combined all the individual studies to get an aggregate numerical effect size. According to scientific convention, an effect size of 0.10 is considered small, 0.30 is medium, and 0.50 is large.⁵⁴ Morgan and Shanahan found that television had a small but statistically significant effect on people's perceptions of violence ($r = .10$).⁵⁵ The effect was slightly larger for adults than for children, but because fewer studies involved younger age groups, this finding may not be reliable.

Early cultivation research focused on the sheer number of hours that people watch television, based on the assumption that violent content is formulaic and pervasive regardless of what is viewed. More recently, scholars have begun looking at particular types of genres, especially the news.⁵⁶ In one study, elementary school children who frequently watched the news believed there were more murders in a nearby city than did infrequent viewers, even when researchers

controlled for grade level, gender, exposure to fictional media violence, and overall TV viewing.⁵⁷ Another survey found that children and teens who were heavy viewers of the news were more frightened by high-profile child kidnapping stories such as the Elizabeth Smart case than were light viewers of the news.⁵⁸ Heavy viewers of the news were also personally more worried about being abducted than light viewers were, even after researchers controlled for the child's age and gender as well as for parental news viewing and parental fear of abduction. Children's fear of kidnapping was not related to overall television exposure, only to news viewing.

Kidnapping is one news topic that the media tend to sensationalize. Since the late 1990s, the number of stories about child kidnapping in the news has been on the rise.⁵⁹ Yet kidnapping constitutes less than 2 percent of all violent crimes in the United States targeted at children under the age of eighteen.⁶⁰ Moreover, children are far more likely to be abducted by someone they know than by a stranger. In 1997, for example, 40 percent of juvenile kidnappings were perpetrated by a family member, 27 percent by an acquaintance, and 24 percent by a stranger.⁶¹ A very small fraction of abductions are what the FBI calls "stereotypical" kidnapping cases involving a child taken overnight and transported over some distance to be kept or killed.

Despite these statistics, there has been a rash of stories in the news about stranger kidnappings. Dramatic programs such as NBC's *Kidnapped* and USA's *America's Most Wanted* also focus on abduction. These fictional and nonfictional stories may attract viewers, but they can also fuel an exaggerated fear of violence in young children.

To summarize, researchers have found modest evidence that electronic media can

influence children's perceptions of how dangerous the world is. This effect is particularly evident among children who watch a great deal of news programming. Most of the evidence, however, is correlational, not causal, and is a snapshot of its subjects at one time. To date, no longitudinal research has tracked children over time to determine the long-term effects of such exposure on children's perceptions of social reality.

Media and Moral Development

One criticism often leveled against the media is that they are contributing to the decay of morality. Indeed, a recent national poll reported that 70 percent of Americans are very or somewhat worried that popular culture, as portrayed in television and movies, is lowering moral standards in the United States.⁶² The concern is fueled by the tremendous amount of time youth are spending with the media and by their easy access to explicit content. Children can readily find stories about violence, sexual promiscuity, theft, and greed in a variety of media outlets including fictional programming, reality shows, rap music, and the Internet. Almost no research, however, focuses on how the media shape children's moral development. Researchers have written widely on how the media affect children's behaviors, both prosocial and antisocial. But they have paid little attention to the moral lessons children learn from the media that may be underlying these behaviors.

Moral development in children follows a predictable developmental path. When presented with an ethical dilemma, children under the age of eight typically judge an action as wrong or incorrect when it results in punishment or goes against the rules set forth by authority figures.⁶³ As children mature, they begin to consider multiple perspectives in a situation, taking into account the

intentions and motives of those involved and recognizing the often-conflicting rules inherent in moral dilemmas. In other words, their moral reasoning becomes more flexible and "other" oriented.

Marina Krčmar and her colleagues have conducted several studies on whether watching violence on television affects children's moral reasoning. In one survey, they presented six- to twelve-year-olds with hypothetical stories in which a perpetrator performed aggression either for reasons of protection, called "justified" violence, or for random reasons, called "unjustified" violence.⁶⁴ Most of the children perceived the unjustified aggression to be wrong. But children who were heavy viewers of fantasy violence programs such as *Power Rangers* were more likely than children who seldom watched such programs to judge the "justified" aggression in the stories as being morally correct. And indeed researchers have found that much of the violence in popular superhero cartoons is portrayed as justified.⁶⁵ In the Krčmar study, both children who watched a great deal of fantasy violence and those who watched more realistic entertainment violence, such as *Cops*, displayed less advanced moral reasoning strategies, focusing more on rules and the presence or absence of punishment in their reasoning about moral dilemmas.

A follow-up study found the same pattern.⁶⁶ Again, children who watched a great deal of fantasy violence were more likely than light viewers to perceive justified violence as morally acceptable. Heavy doses of fantasy violence also were linked with a child's ability to take on someone else's perspective. In particular, children heavily exposed to fantasy violence had less advanced role-taking abilities, which in turn predicted less sophisticated moral reasoning skills. This second

study also looked at the family's influence on children's television viewing and moral reasoning. In families where parents stressed communication, children were less likely to watch fantasy violence on television and therefore exhibited higher moral reasoning skills. Parents who stressed control had children who watched more fantasy violence and had less advanced moral reasoning.

Both these studies suggest that watching a great deal of violence on television may hinder children's moral development. Yet it may also be that children with less sophisticated moral skills are drawn to violent programs, especially superhero shows, because their fairly simplistic storylines depict aggression as typically justified and rarely punished.⁶⁷

Two recent studies shed some light on this puzzle. In an experiment, Marina Kremer and Stephen Curtis tested the causal effect of television on children's moral conceptions of right and wrong.⁶⁸ Children between the ages of five and fourteen were randomly assigned to one of three groups: one group watched an action cartoon that featured characters arguing and eventually engaging in violence; another group watched a similar clip involving an argument from which the characters walked away instead of fighting; and a control group did not watch television. Afterward, children listened to and judged four hypothetical stories involving violence. Children who had watched the violent program were more likely than those in the control group to judge violence as morally acceptable. They also exhibited less sophisticated moral reasoning in their responses, often relying on authority or punishment as rationales (for example, "You shouldn't hit because you'll get in trouble"). The reaction was the same regardless of the children's age. In fact, older children (nine to fourteen years) who had

seen the violent clip displayed reasoning skills that were on par with those of younger children (five to eight years) in the control group. The experiment demonstrates that exposure to a single program containing fantasy violence can alter children's short-term moral evaluations of aggression and can even adversely affect the strategies they use to make sense of those evaluations.

Unexpectedly, the study found that children who viewed the nonviolent version of the cartoon reacted much the same as those who viewed the violent version; that is, they judged violence as being more morally acceptable than did members of the control group. The authors reasoned that action cartoons might be so familiar to children and so typically full of violence that even watching a nonviolent segment from this genre triggers mental models or schemata in children that involve justified violence.

A second study, in this case a longitudinal one, also illuminates how the media affect moral development. Judy Dunn and Claire Hughes tracked forty "hard-to-manage" preschoolers and forty matched control children over a two-year period, measuring their cognitive skills, social behavior, and emotional functioning.⁶⁹ The two groups of preschoolers engaged in similar amounts of pretend play at age four, but the hard-to-manage children were substantially more likely to engage in play that involved killing, death, and physical violence. Many of these fantasy play incidents were tied to media characters and programs. In addition, children from both groups who engaged in much violent pretend play at age four had significantly lower moral reasoning scores at age six, even after researchers controlled for verbal ability, aggression, and friendship quality at age four. These violent-play children were more likely than their peers to respond

in selfish or hedonistic ways to moral dilemmas, often focusing on punishments rather than on the motives and feelings of the story characters. Although the study did not directly measure children's media habits, the preschoolers' violent fantasy play was often tied to violent television and movies they had seen.

The focus of research to date has been on detrimental effects of media exposure, not on whether some programs and genres can enhance moral development.

To summarize, some research suggests that extensive viewing of television violence can alter children's views about the acceptability of violence and perhaps even hinder the development of their moral reasoning. Fantasy violence that is portrayed as justified or heroic is most strongly implicated here, again suggesting that the type of content children watch is important. Such conclusions must be tentative, however, because of the paucity of studies in this area. With the exception of one experiment and one longitudinal study, nearly all the evidence is of the snapshot-in-time variety and does not permit drawing causal conclusions. In addition, the research has examined only children's moral views about aggression. It has paid little attention to media's effect on other moral issues such as altruism and even other types of antisocial behavior such as cheating, lying, and stealing. Finally, the focus to date has been on detrimental effects of media exposure, not on whether some programs and genres can enhance moral development. And the research has focused solely on television.

Websites, video games, movies, and even children's books sometimes grapple with moral dilemmas, and researchers need to explore their impact as well.

Media and Antisocial Behavior

No issue in the media effects arena has received as much attention as violence. Television, movies, video games, and even rap music have been widely criticized for portraying physical aggression as an entertaining solution to problems. Today, most American parents believe there is too much violence in the media and that it is harmful to society.⁷⁰

Researchers have used scientific methods to quantify the violence in different media. The National Television Violence Study, a three-year assessment of more than 3,000 programs a year, found that a steady 60 percent of programs across twenty-six channels contain some physical aggression.⁷¹ On average, a typical hour of programming features six different violent incidents. Violence varies considerably by genre and channel, however. Children's programming is more violent than all other program types, and virtually all superhero cartoons as well as slapstick cartoons contain violence.⁷² In terms of channels, only 18 percent of PBS programming contains violent content, compared with 84 percent of premium cable shows, such as HBO, 51 percent of broadcast network shows, and 63 percent of basic cable shows.

Other media products that are targeted to youth also contain violence. One study found that virtually all G-rated movies released between 1937 and 1999 featured some violence.⁷³ Another study found that 64 percent of E-rated (for "Everyone") video games released between 1985 and 2000 contained physical violence.⁷⁴

What happens when a child is exposed to violent entertainment? Two theories are helpful in answering that question. One, social cognitive theory (formerly called social learning), posits that children learn ideas, values, emotions, and even behaviors by observing others in their social environment.⁷⁵ Children can imitate people in their immediate surroundings or they can imitate characters in the media. Indeed, children as young as one are capable of imitating simple behaviors displayed on television.⁷⁶ According to social learning theory, children are more likely to imitate observed behaviors that are rewarded than those that are punished.⁷⁷ Children will also imitate behaviors that produce no consequences because, especially in the case of antisocial acts, the lack of punishment can serve as a tacit reward.⁷⁸ The type of media role model also makes a difference. Children are most likely to learn from models that are attractive and from those they perceive as similar to themselves.⁷⁹

Social cognitive theory, then, helps explain how children can acquire new behaviors from watching a media character on the screen. Rowell Huesmann uses a second theory, information processing theory, to explain the long-term effects of media exposure. Focusing on the learning of scripts—mental routines for familiar events that are stored in a person’s memory—Huesmann theorizes that children develop scripts for bedtime routines, for going to the doctor, and even for getting ready for school.⁸⁰ He argues that a child who is exposed to a great deal of violence, either in real life or through the media, will acquire scripts that promote aggression as a way of solving problems. Once learned, these scripts can be retrieved from memory at any time, especially when the situation at hand resembles features of the script. The more often an aggressive

script is retrieved, the more it is reinforced and becomes applicable to a wider set of circumstances. Thus, children who are repeatedly exposed to media violence develop a stable set of aggressive scripts that are easily prompted and serve as a guide in responding to social situations.

Scholars have written hundreds of studies of the impact of media violence on children’s aggressive behavior.⁸¹ In 2000, six major medical organizations (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) reviewed this research and issued a joint statement to Congress, concluding that “viewing entertainment violence can lead to increases in aggressive attitudes, values, and behavior, particularly in children.”⁸² In this section, I will review the findings concerning the impact of media on physical aggression as well as social aggression.

Physical Aggression

In support of social cognitive theory, numerous experiments show that children will imitate violent behaviors they see on television, particularly if the violence is rewarded. As an example, one study exposed elementary school children to a single episode of the *Mighty Morphin Power Rangers* and then observed verbal and physical aggression in the classroom.⁸³ Compared with a control group, children and especially boys who had watched the violent program committed significantly more intentional acts of aggression such as hitting, kicking, and shoving. In fact, for every aggressive behavior enacted by children in the control group, children who had seen the *Power Rangers* committed seven aggressive acts. Other research shows that children,

especially preschoolers, will imitate a cartoon character as readily as a human character and that they can reproduce aggressive behaviors they have seen on TV up to eight months later.⁸⁴

But experiments are capable of testing short-term effects only. It will take longitudinal studies that track children over time to assess the long-term effects of media violence. Rowell Huesmann and his colleagues have conducted several of these studies, the most recent one involving more than 500 elementary school children.⁸⁵ The researchers collected measures of television viewing and aggressive behavior when the children were in grade school and then again fifteen years later when they were adults. The composite measure of adult aggression included self-reports of spousal abuse, punching and choking another person, and shoving others, as well as documented criminal behavior. In support of the idea of learned scripts, heavy exposure to television violence in childhood predicted increased physical aggression in adulthood. This pattern held for both boys and girls, even after researchers controlled for the child's initial level of aggressiveness, the child's IQ, the parents' education, the parents' TV habits, the parents' aggression, and the socioeconomic status of the family. The reverse, however, was not true: being aggressive in childhood did not predict more viewing of violence in adulthood. Put another way, there was more evidence that television viewing contributed to subsequent aggression than that being aggressive led to more viewing of violence.

In one of the most extensive meta-analyses of television violence, Haejung Paik and George Comstock analyzed 217 studies and found an overall effect size of .31, a medium effect.⁸⁶ Animated and fantasy violence had a stronger effect on aggression than more realistic

programming did, which challenges the claim that cartoons are innocuous. The effect of television violence on aggression also varied with age: the effect was greatest on preschool children younger than six. The effect was also slightly larger on boys than on girls.

To provide some context, Brad Bushman and Craig Anderson compared the effect of television violence on aggression with other well-established connections in the medical field.⁸⁷ The television violence-aggression link turns out to be larger than the link between lead exposure and children's IQ. The effect of television violence on aggression is only slightly smaller than the documented effect of smoking on lung cancer.

Clearly, repeated exposure to television violence poses risks for children. What about playing violent video games? That topic has attracted less research, particularly with regard to youth. A few early experiments showed that video game play had no effect on children's aggression.⁸⁸ The violent games tested in these studies, however, were quite mild compared with the games available today. The more recent experimental evidence generally is in line with studies of violent television.⁸⁹ The largest experiment to date randomly assigned 161 nine- to twelve-year-olds to play a violent or a nonviolent video game for twenty minutes.⁹⁰ Two different E-rated (for "Everyone") violent games were used; both involved cartoon-like characters engaging in continuous violence against nonhuman enemies. Afterward, children played another computer game that allowed them to select how much punishment, such as a noxious noise blast, to deliver to an opponent, whom they were told was a competitor in the game. Children who played a violent video game delivered significantly more intense noise blasts than did those who played a

nonviolent game. Although boys were generally more punitive (that is, aggressive) than girls were, playing violent video games increased short-term aggression in both genders.

To date, only one published study has focused on the long-term effects of playing violent video games on youth.⁹¹ Craig Anderson and several colleagues tested a sample of 430 third through fifth graders twice, roughly five months apart. Children were asked to report on their violent media exposure, aggression, and hostile attribution bias (that is, their tendency to perceive ambiguous situations in a hostile fashion). In addition, the study collected teacher reports and peer ratings of aggression for the children. The study revealed that students who played violent video games early in the school year engaged in significantly increased physical aggression and hostile attributions several months later. The patterns held up even after researchers controlled for sex, race, initial levels of aggression, total time spent with screen media, and parental involvement. Viewing violence on television also predicted increases in aggression over time, but the effect of video game playing was more robust after various controls were introduced.

Although the evidence available is not large, scholars have conducted meta-analyses on the video game research. The most recent analysis evaluated thirty-two independent samples of participants and found a significant and positive overall effect size of .20.⁹² When researchers eliminated studies with serious methodological shortcomings, the effect size rose to .25, which is closer to the effect documented for television violence. It should be noted, however, that most of the studies in this meta-analysis involve adults rather than children.

To summarize, scholars have accumulated strong evidence from experiments, surveys, and longitudinal studies that viewing violent television programming contributes to both short-term and long-term increases in children's aggressive behavior. Younger children may be particularly vulnerable to social learning from television, although older children are not immune and can be primed to act aggressively after viewing violent programs. Boys show slightly stronger effects than girls do, but no demographic group is immune to this type of influence. The evidence on violent video games is less extensive but is growing. Controlled experiments, surveys, and one longitudinal study now document a link between game playing and aggression in children. Again, boys show slightly stronger effects, but they also play more video games and prefer violent content more than girls do.⁹³ Some speculate that video games may be more harmful than television because they are highly involving and often allow players to become violent perpetrators, strengthening the personal identification in this fantasy violence. Yet comparing the effects of television and video games may be less important than looking at a child's overall media diet. As it turns out, youth who are attracted to violence on television are also more likely to play violent video games.⁹⁴ All of these screen experiences can increase and reinforce the number of aggressive scripts that a child develops in memory.

Social or Relational Aggression

Parents, teachers, and even researchers have been so preoccupied with physical aggression that they have tended to overlook other forms of hostility, especially those that are more social or relational in nature. Social aggression involves harming others' feelings through social exclusion, gossip, or friendship manipulation. This type of behavior begins to emerge

Table 1. Top 10 Cable TV Programs, Week of March 5, 2007

Millions of viewers

Rank	Program	Network	Rating	Viewers
1	WWE Entertainment (WWE Raw)	USA	3.6	6.152
2	WWE Entertainment (WWE Raw)	USA	3.2	5.356
3	I Love New York	VH1	2.5	4.066
4	SpongeBob	NICK	2.4	3.604
4	Fairly Odd Parents	NICK	2.4	3.495
4	Princess Diaries, The	DSNY	2.4	3.700
7	Zoey 101	NICK	2.3	3.303
7	Fairly Odd Parents	NICK	2.3	3.387
7	SpongeBob	NICK	2.3	3.155
10	Drake and Josh	NICK	2.2	3.156
10	SpongeBob	NICK	2.2	3.302
10	Law and Order: SVU	USA	2.2	3.271
10	Ned Declassified	NICK	2.2	3.065
10	Parent Trap, The (1998)	DSNY	2.2	3.354
10	Family Guy	ADSM	2.2	3.257
10	Ned Declassified	NICK	2.2	3.072

Note: Rankings are based on Nielsen Media Research's national people meter sample. Ratings are estimates of the size of the television viewing audience, relative to the total television households in the United States (110.2 million households). Viewers include anyone over the age of two. Several programs are mentioned more than once because they run during multiple time slots during the week, and the data do not provide the different time slots for these programs.

as early as the preschool years and is more common among girls than boys.⁹⁵

The popularity of movies such as *Mean Girls* and television programs such as *Lizzy McGuire*, which feature girl friendship struggles, have led some to ask what role the media play in children's social aggression. The topic, however, has attracted little research. One study found incidents of relational aggression in 92 percent of television programs popular with teens.⁹⁶ Another study found that teens who viewed social aggression on television tended to practice such behavior.⁹⁷ Longitudinal research has linked heavy exposure to television violence in childhood to increased social aggression in adult females, even after controlling for childhood aggression, childhood IQ, parental education,

parental TV habits, and the socioeconomic status of the family.⁹⁸ Although these studies are suggestive, it will not be possible to draw conclusions about whether media violence causes this alternative form of childhood aggression until more research is conducted.

Media and Prosocial Behavior

So much public attention has been paid to potential negative effects of the media on children that parents and researchers alike have scarcely acknowledged the positive. Yet if television and movies can teach children antisocial behaviors such as aggression, then it makes sense that these same media can teach beneficial behaviors as well. The challenge is to differentiate the media messages that are potentially harmful from those that are positive or prosocial in nature.

Prosocial behavior can be broadly defined as any voluntary behavior intended to benefit another person.⁹⁹ Altruism is the most common example of prosocial behavior. Others are friendliness, sharing, cooperation, sympathy, and even acceptance of others from different groups.

Clearly children are exposed to a great deal of violence in the media. But how often do they witness prosocial behavior? One recent, large-scale study examined a randomly selected week of television programming across eighteen channels.¹⁰⁰ The total sample included more than 2,000 entertainment shows. Nearly three-fourths of the programs (73 percent) featured at least one act of altruism, defined as helping, sharing, giving, or donating. On average, viewers of these programs saw about three acts of altruism an hour. Human characters rather than anthropomorphized ones enacted most of the altruism, and about one-third of the behaviors were explicitly rewarded in the plot. Altruism was more common in situation comedies and children's shows than in other types of programs. It was also more common on children's cable networks such as Disney and Nickelodeon than on general audience cable such as A&E or TNT or on the broadcast networks. Thus, programs targeted to younger viewers often portray helping behavior. As examples, *Sesame Street* (PBS), *Dora the Explorer* (Nickelodeon), and *Dragon Tales* (PBS) are popular prosocial and educational programs for preschoolers. *Arthur* (PBS) and *The Wild Thornberrys* (Nickelodeon) are prosocial shows that are well liked by younger elementary school children, and *The Suite Life of Zack and Cody* (Disney) and *Drake and Josh* (Nickelodeon) are prosocial shows popular among older elementary school children.

Comparing the findings on prosocial TV content with those of the National Television Violence Study reveals much about the landscape of television.¹⁰¹ Children are more likely to encounter depictions of altruism (in three out of four programs) than of physical aggression (in two out of three programs) when they watch television. But the concentration of altruistic behaviors is lower (three incidents an hour) than that of violence (six incidents an hour). In children's programming itself, altruism occurs about four times an hour, but violence occurs roughly fourteen times an hour. Thus, an American child who watches an average of three hours a day of children's television programming will see 4,380 acts of altruism and 15,330 acts of violence each year.

But children and adults do not watch television indiscriminately. They are generally selective and gravitate toward their favorite programs. An examination of the top-rated programs on cable television is revealing (see table 1).

In a typical week in 2007, most of the top cable shows were targeted to children and were featured on children's networks such as Nickelodeon. Most were also situation comedies about young people in social situations. *Zoey 101*, for example, features a teenage character named Zoey who is one of the first girls to attend an all-boys boarding school. She is described as "a quick thinker who is constantly saving the day with her smarts and problem-solving skills." Other child-oriented programs on this list such as *Drake and Josh* are similarly prosocial in nature. Nevertheless, the top two programs that same week were two episodes of *WWE Entertainment Raw*, which features professional TV wrestling. Because these ratings are not calibrated by age, it may be tempting to conclude that

children are watching the Nickelodeon and Disney shows, whereas adults are watching the violent wrestling shows. Yet 15 percent of the audience for wrestling shows consists of children under the age of twelve.¹⁰²

The TV ratings data highlight both the variety of programming available to youth and the challenge of guiding youthful preferences in a prosocial direction. In the next sections, I will explore the impact of the media on three types of prosocial children's behaviors: altruism, positive social interaction, and acceptance of others.

Altruism

Most of the research on prosocial effects of the media focuses on children's altruism or helping behavior. Early studies had children watch a television clip that featured a character engaging in helping behavior and then placed the children in a similar situation to see if they would imitate the behavior. In one experiment, first graders who viewed an episode of *Lassie* in which the main character saved a puppy were subsequently more helpful toward distressed puppies than were first graders who saw a neutral *Lassie* episode with no prosocial behavior or a *Brady Bunch* episode with no prosocial displays or dogs.¹⁰³

Of course, one question is whether such short-term imitation can persist beyond the viewing situation. Field experiments that control children's viewing over time in naturalistic settings can shed light on this issue. In one such study, kindergartners were assigned to watch either *Mister Rogers' Neighborhood* or neutral programming that did not feature prosocial behavior, over the course of four sessions.¹⁰⁴ In addition, some of the children watching the prosocial *Mister Rogers* received puppet role-play training that re-enacted the main events and dialogue

in each episode they had seen. Two to three days later, all the children were given the opportunity either to work on an art project or to help another child who was struggling with the project. The children who had viewed the prosocial programs were more helpful than those who had seen the neutral programs were, especially if the prosocial programming had been reinforced by role-playing.

Other studies have found that training or follow-up lessons can enhance the effects of prosocial television.¹⁰⁵ One reason why such guidance may be beneficial is that prosocial morals on television can be difficult for children to extract. Compared with violent programming, prosocial shows typically have less action and more dialogue, which makes their plots and subplots more challenging to follow and comprehend, especially for younger children. In one study, four- to ten-year-olds watched an episode of the *Mighty Morphin Power Rangers* and were asked about possible lessons in the program.¹⁰⁶ Most of the children agreed that there was a "moral" to the show, yet only the eight- to ten-year-olds were able to identify the lesson—in this case, that work should come before play. The younger children focused instead on the fighting in the program. Other research demonstrates that moral lessons on television that are conveyed in the context of violence are often misunderstood by children under the age of eight.¹⁰⁷

Social Interaction

Another concern often voiced about screen media is that they may interfere with children's social interaction. Indeed, preschoolers and their parents spend less time talking with and looking at each other when the television set is turned on than when it is off.¹⁰⁸ Moreover, families that eat dinner in front of the

television converse less and talk about fewer topics than do families that turn the television off before they sit down to dinner.¹⁰⁹ On the positive side, families engage in more physical contact and cuddling when they watch television together than when they are doing other activities.¹¹⁰

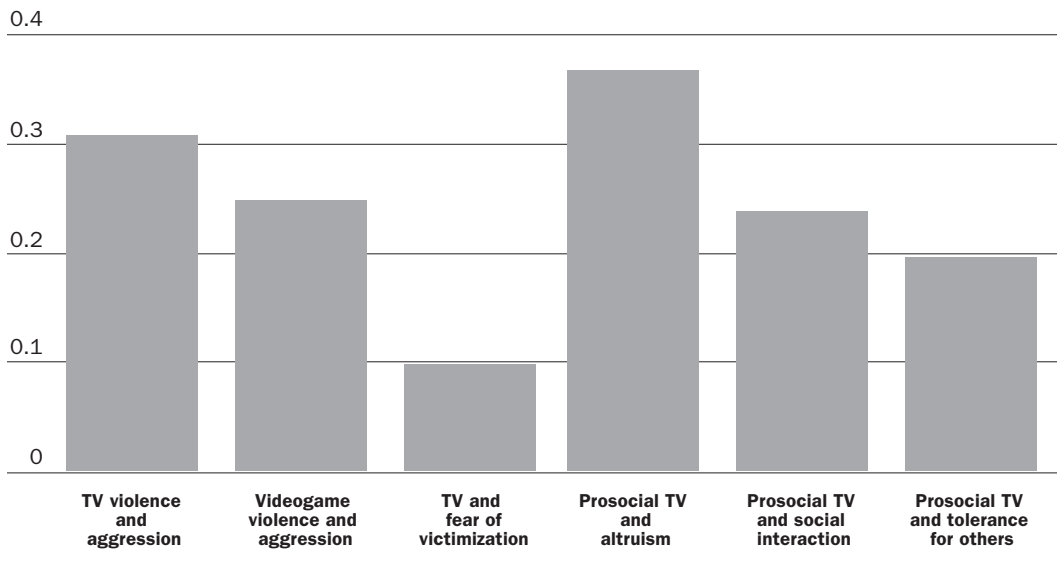
Although the sheer amount of time spent in front of a TV or computer screen may have detrimental effects on social interaction, viewing particular types of programs can teach children social skills. One early study found that second and third graders who watched a single episode of *The Waltons* displayed more cooperative behavior in a prisoner's dilemma game than did students in a control group who had not seen the program.¹¹¹ A single episode of prosocial television, however, may not be sufficient for teaching cooperation among younger, preschool-aged children.¹¹² Part of the difficulty here is that cooperation is more difficult to model behaviorally than helping is. Also, good drama often features cooperation after a period of interpersonal conflict, and this type of mixed message is likely to be particularly confusing for younger viewers.

Even though a single program may do little, repeated exposure to prosocial television can affect preschoolers' social behavior. In one study, three- to five-year-olds watched fifteen minutes a day of either *Sesame Street* or *Mister Rogers' Neighborhood* in their preschool.¹¹³ The study observed the children's social behaviors before, during, and one week after the treatment. Exposure to *Mister Rogers* increased the sheer amount of social contact preschoolers had in the classroom and increased their giving of positive attention such as praise and physical affection to others. *Sesame Street* had a similar positive effect, but only for those who were low in

social skills at the baseline. Because the study did not include a no-exposure control group, it does not permit firm causal conclusions. Nevertheless, it suggests that regular viewing of particular TV series may have a lasting impact on children's social behavior.

Acceptance of Others

The casts of prosocial and educational programs for children, such as *Sesame Street* and *Dora the Explorer*, are typically more diverse than those of adult or general audience television.¹¹⁴ Such programming also portrays children from different racial and ethnic groups interacting with one another. Early research on *Sesame Street* found that over time, preschoolers who watched the program extensively developed more positive attitudes toward people of different groups.¹¹⁵ More recently, Children's Television Workshop, the creator of *Sesame Street*, has developed content that explicitly tries to teach tolerance and respect for others. One such effort is *Rechov Sumsum/Shara'a Simsim*, a series broadcast throughout Israel and Palestine. Like *Sesame Street*, the program teaches basic educational lessons to preschoolers, but it also features characters who live on an Israeli street (Rechov Sumsum) and visit their friends who live on a Palestinian street (Shara'a Simsim). One research study compared the social attitudes of Israeli-Jewish, Palestinian-Israeli, and Palestinian preschoolers before the series debut in 1998 and four months later.¹¹⁶ Before the show began airing, children as young as four held negative stereotypes about people from the other culture, reflecting the political turmoil in this region. Four months after the series had been regularly aired on TV, the two groups of Israeli children showed more positive attitudes toward Arabs. Unexpectedly, the Palestinian children's attitudes toward Jews became more negative, suggesting a boomerang effect of sorts. The study

Figure 1. Effect Sizes Of Exposure to Various Types of Media Content and Various Social Outcomes, from Various Meta-analysis Studies

Sources: For TV violence and aggression (.31), see Haejung Paik and George Comstock, "The Effects of Television Violence on Antisocial Behavior: A Meta-Analysis," *Communication Research* 21, no. 4 (1994): 516–46. For videogame violence and aggression (.25), see Craig Anderson, "An Update on the Effects of Playing Violent Video Games," *Journal of Adolescence* 27 (2004): 113–22. For TV and fear of victimization (.10), see Michael Morgan and James Shanahan, "Two Decades of Cultivation Research: An Appraisal and Meta-analysis," *Communication Yearbook* (1996): 1–45. For prosocial TV and altruism (.37), prosocial TV and social interaction (.24), and prosocial TV and tolerance of others, see Marie-Louise Mares and Emory Woodard, "Positive Effects of Television on Children's Social Interactions: A Meta-Analysis," *Media Psychology* 7, no. 3 (2005): 301–22.

did not, however, measure individual children's exposure to the program, so it could be that other factors contributed to this negative effect. The study illustrates how challenging it can be to alter stereotypes, even among young children.

Summary of Prosocial Evidence

To sum up all of this research, Marie-Louise Mares and Emory Woodard conducted a meta-analysis in 2005.¹¹⁷ Their analysis of thirty-four studies of the prosocial effects of television involving more than 5,000 children found an overall effect of .27 (a medium size effect), indicating that viewing prosocial programming does in fact enhance children's prosocial behavior. The strongest effects of prosocial content were on altruism (.37); the effects on positive interaction (.24) and on tolerance for others (.20) were

slightly weaker. This finding is consistent with the idea that it is easier for television characters to demonstrate behaviorally how to help someone than how to be cooperative or tolerant of others. In general, effects were also stronger when the television content mirrored the behavior that children were to imitate afterward. Finally, the effect of prosocial content varied by children's age and socioeconomic status, but not by gender. Effects increased sharply between the ages of three and seven and then declined until age sixteen. That effects peak at age seven is consistent with the notion that prosocial lessons may be difficult for very young children to understand, especially lessons conveyed with words instead of action. Prosocial television had a greater effect on children from middle- to upper-class families than on children from lower-class families. The authors speculated

that the relatively happy world depicted in most prosocial programming might resonate best with children from more affluent backgrounds.

Media Choices and Children's Well-Being

American children spend a large part of their lives with television and other screen-based technologies, and there can be little doubt that they learn from these mediated experiences. Parents and educators often worry about the harmful effects of media, but the evidence is clear that time spent with media can also be beneficial for children. The point I have emphasized throughout this article is that content matters. Watching two hours of *Sesame Street* will provide a young child with a rich set of academic and social-emotional lessons; watching two hours of a superhero cartoon will recommend aggression as a way of solving problems.

Figure 1 charts the effect that exposure to different types of media content has on various social and emotional outcomes, based on the meta-analyses already noted. The good news is that prosocial television has a larger effect on altruism than any other content has on any other outcome. Close behind, however, is the effect that violent television has on aggressive behavior. Slightly smaller effects have been found for violent video games on aggressive behavior, for prosocial content on positive social interaction, and for prosocial content on teaching tolerance for others. The smaller effect for video game violence should be interpreted with caution, however, because studies in this area are few, and most involve adults. Some of the more recent research comparing television with video games suggests that the violent games may be a more potent stimulator of aggression. The smallest effect of all is

that of television in cultivating a fear of victimization. One reason for the latter finding may be that research on cultivation has tended to ignore content and instead simply measured hours of television viewing. As noted, cultivation effects tend to be stronger among heavy viewers of news programming and other authentic portrayals of violence such as those sometimes found in reality shows.

The important conclusion to draw is that all the effects displayed in figure 1 are positive, statistically significant, and established across large numbers of participants and settings. One way to interpret these effects is to treat them like correlations that can be used to estimate how much variance is explained in a given behavior or outcome. For example, television violence accounts for about 10 percent (.31²) of the variance in children's aggression. Although that share does not seem large, it is larger than any other single factor that accounts for violent behavior in youth. The truth is that, taken separately, most risk factors do not account for much of the variance in children's aggression. Being male accounts for about 3.6 percent of the variance, poverty accounts for about 1 percent, and abusive parenting accounts for about 0.8 percent.¹¹⁸ The only factor that comes close to media violence is gang membership (9.6 percent). Thus, reducing children's exposure to media messages that condone violence in our culture could reduce a small but crucial portion of youth aggression in society.

Risk Factors for Media Effects on Youth

The modest effect sizes charted in figure 1 suggest that other variables interact with or modify the media's influence. As I have noted along the way, one such variable is the age or developmental level of the child. Television

violence seems to have the strongest impact on preschool children, in part because they are still learning social norms and inhibitions against behaving aggressively. Prosocial effects of watching television are strongest for slightly older children, peaking at about age seven or eight. Prosocial lessons are often conveyed more subtly in the media and therefore require more advanced cognitive skills to decipher. The influence of media on fear and anxiety is common throughout childhood, although the types of content that upset children differ with age. Younger children are frightened more by fantasy portrayals; older elementary school children and preteens, more by realistic content, including the news.

Another important variable is a child's perception of how real the media are. Children differ in the degree to which they believe that what they see on the screen is realistic.¹¹⁹ When media storylines seem realistic, children are likely to pay closer attention to what they are watching and presumably exert more cognitive effort in processing the information. Shows perceived as being real may also encourage children to imagine themselves in the characters' place. And indeed, television violence has a heightened effect on children who perceive television as realistic.¹²⁰ On the other hand, children who are able to discount television as unrealistic will have a less intense fear reaction to a scary television portrayal.¹²¹

Another variable in children's susceptibility to the media is the extent to which they identify with characters and real people featured on the screen. Children begin developing attachments to favorite media characters during the preschool years.¹²² Fondness for media characters can last throughout childhood and adolescence. In one survey nearly 40 percent

of teens named a media figure as their role model—nearly the same share that named a parent or relative.¹²³ Consistent with social cognitive theory, children are more likely to learn from those they perceive as attractive role models. Strongly identifying with violent characters, for example, makes children more likely to learn aggression from the media.¹²⁴ Identifying with victims of tragedy also enhances children's fear responses to news stories.¹²⁵

Parental Influence on Children's Media Experiences

Parents, it turns out, can play an important and positive role in how electronic media affect young people's lives: they can not only enhance the benefits but also reduce the risks associated with children's media exposure. Parents who watch prosocial programming with their child and reinforce the messages in different portrayals can enhance their child's prosocial learning.¹²⁶ Such active media-tion can include explaining and discussing the moral lessons in a plot, reinforcing the information through rehearsal, and engaging in role-playing activities that elaborate on the information.

By helping children think critically about potentially harmful content in the media, parents can also reduce the impact of media violence.¹²⁷ In one experiment, elementary school children who were encouraged to think about the victim while watching a violent cartoon liked the aggressor less, liked the victim more, and believed that the violence was less justified than did children who received no such guidance.¹²⁸ Moreover, boys who were given such guidance were less aggressive after viewing the cartoon than were boys who received no such help; girls were less aggressive overall so the mediation had no impact on their behavior.

Parents can also teach children coping strategies to deal with frightening images in the media. Discussing the special effects used in a horror film or explaining that fantasy events on the screen cannot happen in real life are both effective techniques to reduce children's fright reactions.¹²⁹ Such "cognitive" strategies work especially well with older elementary school children who can comprehend such information and store it in memory for later use.¹³⁰ For younger children, "noncognitive" strategies such as providing physical comfort and turning off the program seem most effective.¹³¹ Parents should consider shielding children, especially preschoolers, from the types of fictional themes that are most frightening at different points in development.

When it is the news that is frightening to children, parents' role is more challenging. Older children can be taught to recognize that news programming overemphasizes crime and violence and that many terrible events covered

in the news, such as child kidnapping, occur only infrequently in the real world.¹³² Permitting children under the age of eight to see graphic images in the news, even inadvertently when the TV is on in the background, may present challenges because such content is hard to explain to younger age groups. In the case of major catastrophes, research suggests that all children benefit from curtailed television exposure and constructive conversations with a calm parent.¹³³

In general, it is essential for parents to monitor the media content their children view and find attractive. Such parental involvement is arguably more important than establishing rules about how much time children can spend watching TV or playing video games. Guiding children's media choices and helping children become critical consumers of media content can foster the prosocial benefits of spending time in front of a screen while preventing some of the risks.

Endnotes

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