

# Introducing the Issue

---

*Jeanne Brooks-Gunn and Elisabeth Hirschhorn Donahue*

---

**M**edia technology is an integral part of children's lives in the twenty-first century. The world of electronic media, however, is changing dramatically. Television, which dominated the media world through the mid-1990s, now competes in an arena crowded with cell phones, iPods, video games, instant messaging, interactive multi-player video games, virtual reality sites, Web social networks, and e-mail.

American children are exposed to all these media and more. The vast majority of children have access to multiple media. Virtually all have television and radio in their homes, and half have a television in their bedrooms. Most have Internet and video game access, and a significant portion has a cell phone and an iPod. The numbers joining social networking websites like Facebook and MySpace grow daily. Technological convergence, a hallmark of media use today, enables youth to access the same source from different, often portable, media platforms. Thanks to convergence, a teen can watch a television show on a computer long after the show has aired on

television and can use a cell phone to surf the Internet. Children, particularly adolescents, thus have almost constant access to media—often at times and in places where adult supervision is absent. As a result, America's young people spend more time using media than they do engaging in any single activity other than sleeping.

What do researchers know about how children and youth use electronic media and about how that use influences their lives? Is media technology a boon, one that leaves American children today better educated, more socially connected, and better informed than any previous generation of the nation's children? Or is it, as many voices warn, a hazard for vulnerable children—an endless source of advertising, portrayals of violence, and opportunities for dangerous encounters with strangers and possible exposure to pornography? The quantity and quality of research on these questions are uneven. Researchers have amassed a vast amount of solid information on older technologies, such as television and movies. But investigations of newer technologies and of the novel uses of existing technologies are far fewer in number and more

[www.futureofchildren.org](http://www.futureofchildren.org)

---

Jeanne Brooks-Gunn is the Virginia and Leonard Marx Professor of Child Development and Education at Teachers College and the College of Physicians and Surgeons, Columbia University. Elisabeth Hirschhorn Donahue is associate editor of *The Future of Children* and a lecturer at Princeton University's Woodrow Wilson School of Public and International Affairs.

speculative in their findings. The pervasiveness of electronic media in the lives of children makes it important for policymakers, educators, parents, and advocates to know what researchers have discovered, as well as what questions remain unanswered.

This volume focuses on the most common forms of electronic media in use today and analyzes their influence on the well-being of children and adolescents. To address questions raised by the proliferation of new electronic media, we invited a panel of experts to review the best available evidence on whether and how exposure to different media forms is linked with such aspects of child well-being as school achievement, cognition, engagement in extracurricular activities, social interaction with peers and family, aggression, fear and anxiety, risky behaviors, and healthy lifestyle choices. Because how children fare in each of these areas is influenced by multiple forms of media and even by interactions between different media, we organized the volume by children's outcomes rather than by media platforms. We also asked the authors of the articles in the volume to consider evidence for children and adolescents separately and to examine whether media use differs for boys and girls and for more and less advantaged children. Finally, we asked the authors to pay special attention to the quality of the studies on which their conclusions are based. The studies range from state-of-the-art randomized design experiments, to carefully done observational studies, to suggestive but less conclusive associational studies. Our goal has been to separate the scientific evidence from unsubstantiated claims and rhetoric that the topic has often generated.

## What We Have Learned

One of the central points of Marshall McLuhan's widely popular 1964 book, *Understanding Media*, was that the content of electronic

media, its "message," is simply beside the point—that in electronic media, unlike print media, "the medium is the message." This volume comes to a rather different conclusion. Content, it turns out, is critical to how media influence children. Key findings from each of the articles in the volume follow.

### Children's Use of Electronic Media

How do children and youth access available media today, and how has their media use changed in the past twenty-five years? The first task in investigating the effects of electronic media is to examine what forms of media children and youth use and how and how often they use them. Donald Roberts, of Stanford University's Department of Communication, and Ulla Foehr, a media research consultant specializing in children and media use, lead off the volume by presenting data on media use and comparing current and past patterns of use. Where possible, they break down access and use trends by gender, age, and socioeconomic and racial differences.

One key finding is that children's simultaneous use of different media, or media multitasking, is at an all-time high. That is, youngsters routinely have more than one media source operating at a time. Such multitasking, the authors note, makes it important to distinguish between media *use* and media *exposure*. A child who uses a computer to instant message with friends, with a television on in the background, for example, is being exposed to two media. The rise of multitasking explains why time spent viewing television has remained static and has not been replaced with other media: children are simply adding other media uses to the time that the television is on.

The primary driver of this trend is the computer—what the authors call the "media multitasking station." But other media plat-

forms are following suit and are now able to perform multiple duties—a cell phone can be a television and Internet portal and radio all in one. The high prevalence of multitasking and the growth of new media technologies complicate the measurement of media use: traditional time-use surveys were not designed to measure two, three, or even more activities being conducted simultaneously. The authors argue that analysts must develop a new way of conceptualizing media exposure to capture accurately children's media use and exposure.

### **Learning, Attention, and Achievement**

One of the central concerns of today's parents and teachers is how media technology affects children's cognitive development and academic achievement. Does media technology influence learning styles? Does leisure-time media use affect cognition and if so how? Can media technology be used effectively as a teaching tool in schools?

The impact of electronic media on children depends on the age of the child and the content of the media. Heather Kirkorian and Daniel Anderson, both of the University of Massachusetts–Amherst, and Ellen Wartella, of the University of California–Riverside, review research on young children. Infants and toddlers, they find, do not seem to learn easily from electronic media because they need direct experience and interaction with real people to develop cognitively. By age three, children can benefit from electronic media with educational content that uses specific strategies such as repeating an idea over and over, presenting images and sounds that capture attention, and using child rather than adult voices for the characters. However, more is not necessarily better; one study finds that achievement peaks at one to two hours of educational programming then declines with heavier use. Moreover, the aim of the vast majority of electronic media targeted at

preschoolers is not educational. The techniques these media use are intended to entertain rather than to teach.

Older children use multiple types of media in their homes. Moreover, media technology is increasingly being used in schools as a teaching tool. Marie Evans Schmidt, of the Center on Media and Child Health at Children's Hospital Boston, and Elizabeth Vandewater, of the University of Texas–Austin, examine links between media and learning, achievement, and attention in older children and adolescents. They conclude that content, if designed correctly, can enhance learning. Moreover, some evidence shows that certain media use, such as playing video games, can have positive effects, particularly in developing visual spatial skills. While analysts have found some links between heavy media exposure and poor school achievement, they have uncovered no clearly causal links. Nor have they found that media use causes attention deficit disorder, although there is a small link between heavy television viewing and non-clinical attention issues. Interestingly, although using media during leisure time may have benefits for children's learning and achievement, electronic technologies used in schools are not necessarily more effective than traditional teaching techniques. The results depend on how teachers use the technology and their own comfort level with the medium.

### **Emotional Development and Relationships with Parents and Peers**

Increasingly of late, discussions about electronic media have focused on the social implications of the various technologies. Do electronic media have the potential to influence children's emotions and their relationships with others? Barbara Wilson, of the Department of Communication at the University of Illinois at Urbana–Champaign,

considers the evidence for children and concludes that programs designed to promote pro-social behavior do increase social capacities such as altruism, cooperation, and tolerance of others. On the flip side, the content of some entertainment and news programs can instill fear and anxiety in children. Between ages three and eight, children are usually more frightened by evil fantasy characters; older children, by contrast, are more affected by realistic scenes of injury and violence. Children who have a heavy media diet of violence are more likely to perceive the world as dangerous and to see aggression as more acceptable than those who view media violence less often.

For older children and youth, media technology is now integral to communication with peers and parents. Kaveri Subrahmanyam and Patricia Greenfield, of the Children's Digital Media Center, UCLA/CSULA, explore whether online communication has made youths more socially isolated, by curtailing time that they spend with friends "offline," or whether it has strengthened their social connections. The authors also investigate whether new media forms have opened up novel ways of communicating. Although the research effort in this area is just beginning, the authors believe that the positives outweigh the negatives. Children and youth use electronic media mainly to communicate with their offline friends. Contrary to popular perception, adolescents today primarily use these tools to enhance communication with people they know. They use the Internet less frequently now to communicate with strangers than was the case in the early years of the Internet. That said, some teens do communicate with strangers—in chat rooms, on bulletin boards, on multiplayer games—but such communication is not necessarily negative. The authors are careful to note that new communication tools do invite harassment and

offer a place for bullying. Predators are well aware that they can use the Internet to reach out to vulnerable teens. But the authors dispute the notion that new communication tools *cause* these problems. Rather, they posit that negative behavior is simply being transferred to a new stage—from offline to online. The key challenge for parents is to be aware of how their teens are using communication tools and to look for clues about inappropriate use.

### **Healthful and Unhealthful Behaviors: Links to Media**

One ongoing concern in reports on electronic media in the popular press is that media technology has increased risky behaviors by teens. But although some risky behaviors may be on the rise, can we definitely say that media technology is the culprit? Soledad Liliana Escobar-Chaves, of the University of Texas Health Science Center at Houston School of Public Health, and Craig Anderson, of the Center for the Study of Violence at Iowa State University, find that some risky behaviors are strongly linked to media consumption, others are linked more tangentially, and still others require additional research before an answer can be given. For example, researchers have amassed clear evidence that media violence is a risk factor for aggressive behavior, though they note that there is much less evidence linking it to crime. Solid research demonstrates that advertising and product placement for cigarettes and alcohol, as well as exposure to movie characters' smoking and drinking, increase underage drinking and initiation of smoking. The authors report quite modest evidence of links between heavy media consumption and obesity. Finally, additional research is needed to know whether early sexual initiation is linked to media use.

Conversely, when a risky behavior decreases, as teenage pregnancy has in recent years,

can media technology claim credit? Douglas Evans, vice president for public health and environment at RTI International, maintains that media can enhance healthful behaviors through social marketing campaigns. He cites campaigns to prevent and control tobacco use, increase physical activity, improve nutrition, and promote condom use as examples of successful social marketing, which increasingly borrows techniques used by commercial marketers. Funding constraints complicate the task of social marketers in competing with commercial marketing, so social marketers need to work hard to create persuasive messages and reach out to community organizers to create social movements that mirror their marketing messages.

### **The Development of Consumers: Marketing to Children**

Advertising, product placement, and product tie-ins are all part of electronic media and all are used to influence children's consumption of products. Do commercial media marketers influence child and youth behavior, and if so how and how much? If marketing has a big impact on child outcomes, what should policymakers and parents do about it? Sandra Calvert, of the Department of Psychology at Georgetown University, finds that marketing and advertising are indeed an influential and integral part of children's daily lives and, not surprisingly, that many of the products marketed to children are unhealthful. Furthermore, young children do not understand that advertisements are meant to persuade them to purchase goods; instead, they see commercials as helpful sources of information about products. Although older children and youth are more aware of the intent of advertising, they too are impressionable, particularly in the face of newer "stealth" marketing techniques, which subtly intertwine advertising with the program content. Despite these negative findings, Calvert concludes, the

government has historically done little to ameliorate the effects of marketing on children. And recent trends expanding First Amendment protection of commercial speech mean that government is not likely to strengthen regulation.

### **Where We Go From Here**

The main lesson learned from this volume can be captured in one phrase: "content matters." That is, the message is the message. Rather than focusing on the type of technology children use or even how much time children spend with media, parents and policymakers need to focus on what is being offered to children on the various media platforms.

Regulating content, however, is extremely difficult. At the government level, First Amendment considerations and the increasing reality that many media forms are exempt from government oversight makes broad regulation of content close to impossible. At the community and school level, educators struggle to use media in positive ways while ensuring that technology is not used to cheat or bully. At the family level, it is easier for parents to tell their children, "one hour of media, that's it," than to wade through the content of the myriad media offerings and to compete with an industry that often cares more about commercial success than children's quality of life.

### **Implications for Policymakers**

As Amy Jordan, of the Annenberg Public Policy Center at the University of Pennsylvania, notes in her article, which concludes the volume, policymakers face major challenges as they attempt to craft legislation that both respects the First Amendment protection of speech and provides parents with effective tools to regulate content within their homes. The result is media policy that is essentially a patchwork of industry self-regulation and

government rule-making that regulates some but not all types of media. As media evolve, the challenges will become greater. First, it is difficult to enact laws and regulations that keep pace with rapidly changing technology, much of which is increasingly outside the purview of government control. Second, as technological convergence becomes the norm, regulating a specific media form, such as requiring V-chips in televisions, becomes somewhat meaningless. The alternative—government regulation of media content rather than platform—is unpalatable to many given our country's valuation of free speech.

Even the powerful First Amendment, however, has sometimes been trumped by the government's need to protect its citizens—such as its prohibition on creating and advertising child pornography.<sup>1</sup> Regulations that clearly protect the public safety of vulnerable citizens—those, for example, that protect young children from cyber predators—may survive First Amendment challenges. Indeed, last May a group of attorneys general warned executives of MySpace that if the company did not take better precautions against the use of its social networking site by sex offenders, they would take legal action, resulting in increased protections for children and teens.<sup>2</sup> Several state legislatures are considering bills that would require such sites as MySpace and FaceBook to verify the ages of all users and obtain parental permission for minors.<sup>3</sup> Still other states, such as North Carolina, have passed laws making it a felony for a person to solicit anyone on the Internet whom he or she believes to be a child.<sup>4</sup> Aside from protecting children from serious harm, however, it is hard to imagine that the government can or will regulate media content—as demonstrated in 1997 when the Supreme Court struck down as too broad legislation that sought to protect minors from indecent and offensive material on the Internet.<sup>5</sup>

Although government's ability to regulate content may be weak, its ability to promote positive programming and media research is not. Government at all levels should fund the creation and evaluation of positive media initiatives such as public service campaigns to reduce risky behaviors and studies about educational programs that explore innovative uses of media. Government should support research into potential harms and benefits caused by media.<sup>6</sup> It should also provide fund-

---

*Government at all levels should fund the creation and evaluation of positive media initiatives such as public service campaigns to reduce risky behaviors and studies about educational programs that explore innovative uses of media.*

---

ing to launch initiatives to ensure that schools teach students how to use technology in preparation for the twenty-first century world of work. Finally, although much of electronic media is outside the control of government, broadcast television and radio are still within its regulatory realm and government should continue to ensure that good educational programming is available to children.

### **Implications for Educators**

Media use in the schools is a double-edged sword. On the one hand, media technology can be used as a powerful teaching tool; one important lesson from this volume is that, with the right content, educators can use electronic media to help children learn and to

shape their behaviors in positive directions. Moreover, the pervasiveness of media technology makes it crucial for students to learn how to use electronic media constructively. On the other hand, teachers must have tools to manage the private use of electronic media in schools, ranging from such innocuous interference with learning as text-messaging during class to more harmful uses such as bullying or cheating. School systems should implement research-based programs that use electronic media to enhance classroom curricula and create professional development programs that instruct teachers in the uses of new technologies.

### Implications for Families

Parents will continue to be central to regulating their children's media diet in two ways. First, working with governmental and especially nongovernmental organizations, they can put pressure on industry to develop better content, create meaningful ratings systems, cut back on inappropriate advertising, and invent better products to help screen content. Second, they can educate themselves about good media use based on their children's developmental stages and monitor their children's use to ensure that they engage positive media in a healthful and constructive manner.

Because government will probably not intervene in the realm of media content, the most effective pressure on industry to produce positive media content will come from the court of public opinion made up of child advocates and, especially, families. For example, when FaceBook informed users about friends' recent purchases, an outcry by parents and advocates led the website to stop the practice, at least for the time being.<sup>7</sup> When Webkinz, a popular site geared toward younger elementary school children, started advertising movies and promoting movie tie-in products, similar protests caused the site to remove the advertisements.<sup>8</sup> Likewise, pressure on food companies led eleven major food and drink companies to agree to stop advertising unhealthful products to children under age twelve, and the children's television network Nickelodeon followed suit and agreed to keep their characters from appearing on most junk food packaging.<sup>9</sup>

As is evident from these successful public actions, the key is to shift the focus from the medium to the message. Government officials, community activists, child advocates, and families must put their energies into shaping content to make media technology a positive force in the lives of children and youth.

## Endnotes

1. For court rulings on child pornography, see *New York v. Ferber* 458 U.S. 747 (1982), which held that states can prohibit the depiction of minors engaged in sexual conduct; *Osborne v. Ohio* 495 U.S. 103 (1990), where the court upheld a statute making it illegal to possess child pornography; 18 USC Secs. 2251–2252, which make it a federal crime to advertise and knowingly receive child pornography.
2. Brad Stone, “States Fault MySpace on Predator Issues,” *New York Times*, May 15, 2007 [www.nytimes.com/2007/05/15/technology/15myspace.html]; Anne Barnard, “MySpace Agrees to Lead Fight to Stop Sex Predators,” *New York Times*, January 15, 2008 [www.nytimes.com/2008/01/15/us/15myspace.html].
3. Jennifer Medina, “States Ponder Laws to Keep Web Predators from Children,” *New York Times*, May 6, 2007 [www.nytimes.com/2007/05/06/nyregion/06myspace.html]. See also the 1998 Children’s Online Privacy Protection Act (COPPA), which requires Internet sites directed at or used by children under age thirteen to get parental permission and keep information gathered confidential.
4. August 17, 2006, Press Release, “SBI Uses New Law to Stop On-Line Predators Says AG Cooper,” Roy Cooper, North Carolina Attorney General, North Carolina Department of Justice.
5. *Janet Reno v. American Civil Liberties Union*, 521 U.S. 844 (1997), which struck down on First Amendment grounds portions of the 1996 Communications Decency Act that sought to protect minors from harmful material on the Internet. Note that the sections that apply to obscene material, which does not enjoy First Amendment protection, survived.
6. See, for example, the Children and Media Research Advancement Act (CAMRA), introduced by Congress in 2005, which would establish a program on children and media at the National Institute of Child Health and Human Development (NICHD) to study the impact of electronic media on children’s development.
7. Louise Story, “Apologetic, Facebook Changes Ad Program,” *New York Times*, December 6, 2007 [www.nytimes.com/2007/12/06/technology/06facebook.html]; Louise Story and Brad Stone, “Facebook Retreats on Online Tracking,” *New York Times*, November 30, 2007 [www.nytimes.com/2007/11/30/technology/30facebook.html].
8. Louise Story, “Shift Away from Ad-Free Has a Price,” *New York Times*, December 13, 2007 [www.nytimes.com/2007/12/13/business/media/13adco.html?ref=technology].
9. Andrew Martin, “Kellogg to Phase Out Some Food Ads to Children,” *New York Times*, June 14, 2007 [www.nytimes.com/2007/06/14/business/14kellogg.html]; Brooks Barnes, “Limiting Ads of Junk Food to Children,” *New York Times*, July 18, 2007 [www.nytimes.com/2007/07/18/business/18food.html]; Andrew Martin, “Nickelodeon to Limit Use of Characters on Junk Foods,” *New York Times*, August 16, 2007 [www.nytimes.com/2007/08/16/business/16kids.html].