

Children as Consumers: Advertising and Marketing

Sandra L. Calvert

Summary

Marketing and advertising support the U.S. economy by promoting the sale of goods and services to consumers, both adults and children. Sandra Calvert addresses product marketing to children and shows that although marketers have targeted children for decades, two recent trends have increased their interest in child consumers. First, both the discretionary income of children and their power to influence parent purchases have increased over time. Second, as the enormous increase in the number of available television channels has led to smaller audiences for each channel, digital interactive technologies have simultaneously opened new routes to narrow cast to children, thereby creating a growing media space just for children and children's products.

Calvert explains that paid advertising to children primarily involves television spots that feature toys and food products, most of which are high in fat and sugar and low in nutritional value. Newer marketing approaches have led to online advertising and to so-called stealth marketing techniques, such as embedding products in the program content in films, online, and in video games.

All these marketing strategies, says Calvert, make children younger than eight especially vulnerable because they lack the cognitive skills to understand the persuasive intent of television and online advertisements. The new stealth techniques can also undermine the consumer defenses even of older children and adolescents.

Calvert explains that government regulations implemented by the Federal Communications Commission and the Federal Trade Commission provide some protection for children from advertising and marketing practices. Regulators exert more control over content on scarce television airwaves that belong to the public than over content on the more open online spaces. Overall, Calvert concludes, children live and grow up in a highly sophisticated marketing environment that influences their preferences and behaviors.

www.futureofchildren.org

Sandra L. Calvert is a professor and the chair of the Department of Psychology at Georgetown University. She is also the director of the Children's Digital Media Center.

During the 1920s, U.S. advertising leaders began to see that a consumer society would create larger markets for the surplus fruits of mass production.¹ Aware that people might not buy enough goods fast enough on their own, advertisers adopted a strategy of exploiting consumers' feelings of inadequacy and sought to market products as a means of alleviating consumers' negative self-image. Their strategy succeeded beyond their greatest expectations.

Crucial to their success was the emergence and eventual dominance of television in U.S. homes.² As the medium of television developed, advertisers quickly realized that they could use it to bring products to the attention of mass audiences, both young and old, and thus deliver an enormous supply of children and adults to businesses.

Today, marketing and advertising permeate children's daily lives. Many products marketed to children are not healthful and promote obesity. Younger children often do not understand the persuasive intent of advertisements, and even older children probably have difficulty understanding the intent of newer marketing techniques that blur the line between commercial and program content. Relatively little government regulation protects children from this highly commercialized environment.

In this article, I first examine trends that have made children and youth an ever more attractive audience for marketers and advertisers and then look at marketing and advertising practices directed toward youth. I discuss content analyses of foods and beverages, toys, and alcohol and tobacco. I also examine the effects of marketing on children, focusing

both on how children of different ages—and, more important, at different stages of cognitive development—perceive commercials in different ways and on how advertising affects children's behaviors and attitudes. I turn then to how families and parents may mediate the impact of advertisements on their children and discuss the commercialization that results as marketers expand their presence in the public schools. I conclude by considering regulatory issues, including First Amendment concerns.

Marketing and Advertising

According to the American Marketing Association, marketing is “an organizational function and a set of processes for creating, communicating, and delivering value to customers and for managing customer relationships in ways that benefit an organization and its stakeholders.”³ Using the “Four Ps” of marketing—product, place, price, and promotion—advertisers use paid public presentations of goods and services in a variety of media to influence consumers' attention to, and interest in, purchasing certain products.⁴

Television has long been the staple of advertising to children and youth.⁵ Children view approximately 40,000 advertisements each year.⁶ The products marketed to children—sugar-coated cereals, fast food restaurants, candy, and toys—have remained relatively constant over time.⁷ But marketers are now directing these same kinds of products to children online.⁸

Targeting Youth

Although the kinds of products marketed to children have remained much the same, the buying power of children and adolescents has increased exponentially over time.⁹ The affluence of today's children and adolescents

has made youth a market eminently worthy of pursuit by businesses. Youths now have influence over billions of dollars in spending each year.¹⁰ In 2002, U.S. four- to twelve-year-olds spent \$30 billion.¹¹ American twelve- to seventeen-year-olds spent \$112.5 billion in 2003.¹² In 2003, 33 million U.S. teens aged twelve to nineteen each spent about \$103 a week.¹³ According to one report, parents supply 87 percent of young children's income. That share drops to 37 percent for teens, who have more of their own discretionary income.¹⁴

Youths also shape the buying patterns of their families. From vacation choices to car purchases to meal selections, they exert a tremendous power over the family pocketbook.

Youths also shape the buying patterns of their families.¹⁵ From vacation choices to car purchases to meal selections, they exert a tremendous power over the family pocketbook. Experts estimate that two- to fourteen-year-olds have sway over \$500 billion a year in household purchasing.¹⁶ Thus, to influence youth is to influence the entire family's buying decisions.

Rapid growth in the number of television stations and online venues has also led advertisers to market directly to children and youth.¹⁷ Because children and youth are heavy media users and early adopters of newer technologies, media marketing and advertising campaigns using both television and newer media are efficient pathways into children's homes and lives.¹⁸ Although television is still the preferred medium for reaching children

and youth, marketers are exploring how to reach this age group online using cell phones, iPods, game platforms, and other digital devices. Banner ads, for example, which resemble traditional billboard ads but market a product across the top of an Internet page, appear on most webpages.¹⁹ And "adver-games" integrate products such as cereal and candy into online video games to sell products to youth.²⁰

In 2004, total U.S. marketing expenditures were estimated at some \$15 billion to target products to children.²¹ Reliable estimates of spending in the newer media are not available.²² Newer forms of marketing are a small share of the overall marketing budget spent on traditional print, broadcast, radio, and online advertising, but the share spent on these newer forms is growing.²³ Indeed, online venues can reap large returns for relatively small investments. For example, Wild Planet Toys spent \$50,000 for a four-month online promotion that was associated with a doubling of Wild Planet's yearly revenues. A comparable buy for a television advertising campaign would have cost \$2 million.²⁴ And a recent Nabisco World game and puzzle website designed to increase awareness of Nabisco's cookies and crackers cost only 1 percent of the company's advertising and marketing budget.²⁵ Advertising on online games was expected to grow from \$77 million to about \$230 million between 2002 and 2007.²⁶

Marketing Techniques

Marketers use a variety of techniques to attract audiences to increase product purchases. Traditional marketing techniques in television commercials include repetition, branded characters, catchy and interesting production features, celebrity endorsements, and premiums (free merchandise that accompanies a product).

Table 1. Television and Internet Marketing Techniques: Definitions and Use Patterns

Marketing technique	Definition	Used on television	Used on Internet
Repetition of the message	Repeating the same commercial message over and over.	X	X
Branded characters	Popular animated characters used to sell products ranging from cereal to vacations.	X	X
Attention-getting production features	Audio-visual production features such as action, sound effects, and music.	X	X
Animation	Visually drawn moving images.	X	X
Celebrity endorsements	Popular actors, athletes, and musicians are either depicted on the product itself or are shown using and approving of the product.	X	X
Premiums	Small toys or products that are offered with product purchase; for example, a toy in a Happy Meal or screen savers for filling out an online survey.	X	X
Product placement	Placing a product within program content so it does not seem to be an advertisement; for example, E.T. eating the candy Reese’s Pieces.	X	X
Advergaming	Online video games with subtle or overt commercial messages.		X
Viral marketing	The “buzz” about a product that is spread by word of mouth.		X
Tracking software and spyware	Software that makes it possible to collect data about time spent on a website.		X
Online interactive agents	A virtual form of stealth advertising where robots are programmed to converse with visitors to a website to maintain and increase interest in the site and its products.		X
Integrated marketing strategies	Marketing products across different media; for example, the toy in a cereal box is also a product placement in a film.	X	X
Video news releases	Circulated stories to news media about a product that are broadcast as a news release.	X	X

In recent years advertisers have begun to experiment with new techniques. One such technique is stealth advertising, in which marketers attempt to conceal the intent of an ad.²⁷ The theory behind the new technique is that advertising is most effective when consumers do not recognize it as advertising.²⁸ If consumers’ “guards” are down, they will be more open to persuasive arguments about the product. Using this approach, marketers try to blur the line between the advertisement and the content. Stealth advertising is allowed only in media like online venues, however.²⁹ In children’s television advertising, clear markers must separate commercial content and program content.³⁰

Marketers who practice stealth advertising embed products within a program’s content,

use so-called viral (word-of-mouth) marketing, enable children to interact with online characters who promote specific brands, disguise advertisements as video news releases, and collect information from youth at online sites.³¹ All these practices are designed to create or enhance branded environments that foster user loyalty.³²

Repetition. Repetition involves simply repeating the same commercial message over and over. The idea is that familiarity with a product increases the likelihood of purchasing and using it.³³

Attention-getting production features. Attention-getting production features are designed to attract children’s interest in commercial content.³⁴ Such features, which are heavily

concentrated in children's television advertisements, include action and movement, rapid pacing, sound effects, and loud music.³⁵

Branded characters and premiums. Successful marketing campaigns often use branded characters—that is, media characters that are associated with a company, and hence promote its brand name—that appeal to children and youth.³⁶ Rights to use popular television cartoon characters like Nickelodeon's Sponge-Bob SquarePants, who are licensed for a fee to various companies, help sell products ranging from cereal to vacations, while animated characters such as Tony the Tiger are spokesmen for a specific product, in this instance Kellogg's Frosted Flakes. Similarly, the Ronald McDonald character is used to sell the McDonald's brand, including Happy Meals, and has recently taken on a new role as a physical fitness guru. Marketers associate the products and activities they want to sell with entertaining characters to increase interest in those products.³⁷ They use the same characters in online marketing campaigns and in television advertisements. They also use premiums, such as a small toy in a McDonald's Happy Meal, to increase product purchases by children online and on television.³⁸

Celebrity endorsements. Celebrity endorsements also help sell products.³⁹ Athletes are depicted on cereal boxes and appear onscreen wearing and using specific athletic clothes and gear. Children who like those celebrities are expected to purchase these products.

Product placement. Product placement was first recognized as a successful marketing technique when the character E.T. in Steven Spielberg's 1982 movie of the same name ate Reese's Pieces, resulting in a national spike of 66 percent in product purchases.⁴⁰

In television programs or movies, brands are not only used by characters, but even become characters. For instance, Charlie the Tuna, Twinkie the Kid, and Mrs. Butterworth fight against the evil brand X products in a film titled *FoodFight!*.⁴¹ Such marketing exposure increases a consumer's familiarity with a product and can result in a favorable opinion of a brand.

Another form of product placement involves websites whose sponsors put their logo on the page. For instance, Bolt, a popular website for teens, had a Pepsi logo on its music page.⁴² Every time users go to the music page, they are spending time with Pepsi, thereby increasing their brand awareness. Corporations typically retain a product placement agency for an annual fee; they pay additional fees for each placement, with the cost dependent on whether the product simply appears or is used and labeled.⁴³

Marketers also use product placement in gaming. Traditional console games cannot be changed, making them an expensive venue for product placement.⁴⁴ But online games, which can be updated frequently, are more suited for product placement.⁴⁵ Although gaming has historically been more popular with boys than with girls,⁴⁶ many companies are now trying to get girls to play branded games as well.⁴⁷

To appeal to this now extensive gaming audience, advertisers have developed adver-games, online video games with a subtle or overt commercial message where the use of product placement is common.⁴⁸ In adver-games, marketers not only ensure that users' eyes are on the embedded advertisement, but also know how long the user is engaged with the brand and can track the user's exact behavior. For example, whenever players run

over Coke cans in an arcade-style basketball advergaming called *Live the Madness*, their performance is enhanced: they can run faster, for example, or dunk the basketball.⁴⁹ The implicit message is that Coke will make you a better athlete.

One of the most popular sites on the Web is Candystand, sponsored by Kraft Entertainment. Fruit Stripe Photo Safari, the most popular game in Candystand, allows players to take photos of wildlife as the company promotes Fruit Stripe gum. These photos go into an online album, and children gain bonus points for taking “good pictures.”⁵⁰ While fun for children, the point of the game from the marketers’ perspective is to create a website where children will continue to play the game and have extensive exposure to the products on the website. Sites like neopets.com, which are popular with preadolescent, or “tween,” girls, also let children “buy” foods, such as Uh Oh Oreo cookies, to feed their virtual pets using points that they have earned by playing games.⁵¹ All of these stealth techniques foster immersive branding, potentially creating favorable views and memories of specific products.⁵²

Marketers are increasingly building brand awareness and loyalty through video games.⁵³ A successful game means a successful product as the consumer is engaged, interested, and focused on the product.⁵⁴ Now that games can be downloaded, marketing can be transmitted by cell phones and other digital devices.⁵⁵

Viral marketing. Viral marketing is the “buzz” created when people talk about a product to one another, either in real or virtual conversation.⁵⁶ Marketers use various forms of viral marketing, including capitalizing on the spontaneous talk about a popular website. They also pay “alpha” kids to use a product

so that others will notice and want to buy it.⁵⁷ The human touch by friends also escalates sales. For instance, e-mail sent by friends forwarding information about a freebie from a website is ten times more likely to be opened than is unsolicited e-mail.⁵⁸ Online chat and other kinds of viral marketing are also used to get the trust of gamers.⁵⁹ Viral marketing is especially effective with teens, particularly if it involves big discounts, attractive products, and meaningful freebies.⁶⁰

Online interactive agents. Online interactive agents are a virtual form of stealth advertising. Marketers program robots, or bots, to reply to surfers who initiate a conversation.⁶¹ Such bots are programmed to respond to users in a one-on-one relational way that builds brand loyalty, as for instance, with virtual bartenders who “talk” to those who visit their sites.⁶² These alcohol-related websites feature humor, games, and hip language to appeal to minors.⁶³

Video news releases. Video news releases, in which companies circulate stories about their products, are a form of virtual advertising that is used on television by every single news organization.⁶⁴ For instance, General Mills will send out a news story about Cheerios featuring a factory tour and a giant Cheerio made just for the occasion.⁶⁵ Video news releases, which are cheaper than traditional advertisements, are neither presented nor labeled as advertisements, thus potentially breaking down the more critical stance that older viewers take when viewing an advertisement that they understand is trying to sell them a product.

Integrated marketing strategies. Another new marketing trend is the use of integrated marketing strategies, particularly with branded characters driving interest across media platforms.⁶⁶ Companies charge advertisers a fee

for licensing popular children's characters for multimedia applications in TV, books, CD-ROMs, games, and movies to sell products.⁶⁷ Integrated marketing will use, for example, SpongeBob the television character, who becomes a movie character who markets Burger King products with SpongeBob premiums as rewards for product purchases.⁶⁸ Toys, both large and small, are key to such marketing campaigns.⁶⁹ These strategies integrate different media, as well as different product lines by tying food to toys.

Marketers are increasingly building brand awareness and loyalty through video games. A successful game means a successful product as the consumer is engaged, interested, and focused on the product.

Tracking software and spyware. Not surprisingly, marketers want to know who is visiting their websites to find out how effective their marketing strategies are. Using so-called cookies, or electronic bits of data placed on a computer from a website, coupled with registration forms to those sites, marketers can create an extensive data file about each individual user's preferences for places and products.⁷⁰

Bolt has pioneered such activity by using communication tools to enable users to interact with others or to create content. Three million teens, 70 percent of whom live in the United States, registered with their site in just three years. Bolt uses supercomputers to analyze the data provided by users and then forecasts trends for marketers.⁷¹ Bolt also

sends information that individual teens want at their website to their wireless devices such as cell phones and pagers.⁷²

Bolt users are aware of these data collection practices, and Bolt does not sell individual data to marketers. Other companies, however, have been less scrupulous in their business practices with their online visitors. Some marketers spy on their users by tracking what they do online. Spyware is installed when files are downloaded; these files are then inserted on the user's hard drive and send information back to the marketer. In Netspeak, these are called "E.T. applications" because they "phone home" to report back what they learn about the user. Such information, which can be detailed and intrusive, includes the person's name, address, phone number, ad clicks, and buying patterns. Adam Cohen describes these applications as Trojan horses: they violate the privacy of users, commandeering their own computers to spy on them without their knowledge. Applications that spy on users include zBubbles, which helps users make consumer decisions, DoubleClick, and even SurfMonkey, a program that is supposed to protect children when they are online. A program called RealJukebox, which allowed users to transfer music from the Web and CDs to their PCs, also surreptitiously sent information back to RealNetworks about the kind of music the person liked. This practice violated the privacy of minors even though it was not technically illegal. Privacy concerns were also raised when DoubleClick purchased Abacus Direct and attempted to link online knowledge about consumers with traditional marketing techniques where targeted product offers would be delivered by the postal service.⁷³

Marketers publicly say that user information is used only in an aggregate form as supercomputers take all this data and analyze it for

consumer trends to get an advantage over the market. Nevertheless, a company can use this information to inform marketing strategies. For instance, the company can send individual users different ads rather than the same ones repeatedly, thereby avoiding overexposure and maximizing interest and potential sales. Moreover, some websites state that their privacy policies can change without notice.

In summary, although television is still the dominant venue for advertising, marketers are exploring new ways to market to children and adolescents through online media and wireless devices, often using stealth techniques whereby consumers are immersed in branded environments, frequently without knowing that they are being exposed to sophisticated marketing campaigns. Marketers carefully analyze children's and adolescents' interest patterns, focusing on games for "tweens," as well as communication software for teens. Tracking these patterns provides extensive information that marketers now analyze in aggregate form, but that can, in the future, be used for one-on-one relational marketing strategies directed at specific individuals.

Content Analyses of Advertising and Marketing Practices in Children's Media

Using content analysis, researchers examine large samples of television programs and online websites and games, focusing on the nature of the products advertised, the production techniques used, and, in the case of television advertisements, the length of the commercials.

Program Content

Content analyses of children's television programs aired by major broadcasters have

for years revealed a heavy reliance on certain key products: sugar-coated cereals, fast-food restaurants, candy, soft drinks, and toys, and even alcohol and tobacco.⁷⁴ As cable became more prevalent in U.S. households, researchers compared the kinds of products being advertised on major national broadcasts, independent stations, and cable channels. They found that 75 percent of all advertisements they examined featured sugar-coated cereals, sugared drinks and snacks, and fast foods.⁷⁵ Sugar-coated cereals, snacks, and drinks dominated advertisements on the major broadcasters; toys, those on the independent stations. The products advertised to children on cable networks varied more widely than those on the other two media and included telephone services for children to call.

Content analyses of online marketing practices reveal similar patterns. One study of children's online advergames found that sugar-coated cereals dominated those sites and that advertisers used animation to provide a perceptually interesting and enjoyable online gaming experience.⁷⁶ A study of the nutritional value of products on food websites, such as Lay's Potato Chips, found the food products high in calories and low in nutritional value.⁷⁷ In an analysis of ten popular children's websites, Lisa Alvy and Sandra Calvert found that 70 percent of the sites marketed food and that the food, including candy, sweetened breakfast cereals, snacks, and fast food, was high in calories and low in nutritional value. The sites used perceptually grabbing techniques, including animation, bold and colorful text, and branded characters.⁷⁸

Tobacco advertisements were once prevalent on radio and television. Because of the documented health hazards of smoking, the Federal Communications Commission invoked the Fairness Doctrine in 1967,

requiring one public service announcement to be run for every three tobacco ads; in 1970, a law banned tobacco advertising from radio and television. Even so, characters in television and films continue to smoke.⁷⁹ Although tobacco can no longer be advertised on television, one study found that the less strictly regulated online world features numerous tobacco and cigar sites and depicts smoking as a hip activity. Advertisers use virtual bartenders on alcohol-related sites to create one-on-one relationships with youth. The sites use games, humor, and hip language to attract children and youth.⁸⁰

Length of Commercials

The amount of time allocated to advertisements in children's programs is regulated by the Federal Communications Commission (FCC).⁸¹ The implementation of the Children's Television Act (CTA) by the FCC now limits advertisements on children's commercial television stations to 10.5 minutes an hour on weekends and 12 minutes an hour on weekdays, though these limits are frequently violated. For instance, one in four of the 900 U.S. commercial television stations showed more commercial material than allowed by the CTA from 1992 through 1994; in 2004, the FCC levied a \$1 million fine against Viacom and a \$500,000 fine against Disney for showing more commercial material than allowed by the CTA.⁸²

More than three decades ago, F. Earle Barcus examined the share of airtime devoted to commercials on two samples of children's programs, one collected in 1971 and the other in 1975. In the 1971 sample, about 20 to 25 percent of the time in children's Saturday morning cartoons was allocated to advertising. By 1975, political pressure on commercial broadcasters from advocacy groups such as Action for Children's Television led the

National Association of Broadcasters to reduce the share of commercial time on children's television programs to 15 percent. But to keep the same number of advertisements, the airtime of individual commercials was reduced from sixty to thirty seconds, with the result that more commercials could be screened in less time.⁸³ Similarly, a study by

Although tobacco can no longer be advertised on television, one study found that the less strictly regulated online world ... depicts smoking as a hip activity.

John Condry examined advertisements on children's television programs sampled in 1983, 1985, and 1987. Although the overall time allocated to advertisements remained the same, the number of ads increased because the airtime of commercials had fallen further to fifteen seconds.⁸⁴ One study found that the major national broadcasters showed the most commercials and that cable channels presented the fewest, in part reflecting the fact that cable revenues include paid subscriptions as well as advertisements.⁸⁵

Products marketed online are subject to no time limits. Indeed, some of the online children's websites are built around specific products, such as the silly rabbit from Trix cereal, which means that 100 percent of the time children play on these sites can be devoted to advertising. The advergames on these sites encourage children to play with products in a fun, enjoyable context.⁸⁶ Such marketing practices are not allowed on television.⁸⁷

In summary, content analyses of both television and websites reveal a heavy marketing focus on food products that are high in calories and low in nutritional value. Marketers use perceptually salient production techniques to attract attention and interest. Branded characters designed to promote specific products populate both television and online sites. Considerable time is allocated to advertising and marketing in children's television programming and now on children's websites, which are regulated by the Federal Communications Commission and the Federal Trade Commission though fewer regulations exist for marketing on the Internet. Products that are banned from television advertisements, such as smoking tobacco, have migrated to their new online home.

How Marketing Practices Affect Children

To explore how marketing affects children, I turn first to theories of cognitive development that address age-based differences in children's understanding of commercial content. I then examine empirical research about children's developing cognitive processes and about how exposure to advertising and marketing affects behavior. The effects of advertising and marketing depend on the attention children pay to the advertisement, how well they remember the content, and how well they comprehend the advertiser's intent, as well as on their subsequent purchasing behavior.

Developmental Differences in Children's Learning from Media

One key area in research on the effect of advertising on children has been analysis of age-based changes in children's ability to understand commercial messages, particularly their intent.⁸⁸ Before they reach the age of eight, children believe that the purpose of

commercials is to help them in their purchasing decisions; they are unaware that commercials are designed to persuade them to buy specific products.⁸⁹ The shifts that take place in children's understanding of commercial intent are best explained using theories of cognitive development.

Developmental psychologists, as well as researchers in communication and marketing, often apply three stages of Jean Piaget's theory of cognitive development—preoperational thought, concrete operational thought, and formal operational thought—to explain age-based differences in how children comprehend television content.⁹⁰ During the stage of preoperational thought, roughly from age two to age seven, young children are perceptually bound and focus on properties such as how a product looks. Young children also use animistic thinking, believing that imaginary events and characters can be real. For instance, during the Christmas season, television is flooded with commercials that foster an interest in the toys that Santa will bring in his sleigh pulled by flying reindeer. Young children “buy in” to these fantasies and the consumer culture they represent. Preoperational modes of thought put young children at a distinct disadvantage in understanding commercial intent and, thus, in being able to make informed decisions about requests and purchases of products.⁹¹

With the advent of concrete operational thought, between age seven and age eleven, children begin to understand their world more realistically. They understand, for example, that perceptual manipulations do not change the underlying properties of objects. More important, they begin to go beyond the information given in a commercial and grasp that the intent of advertisers is to sell products. By the stage of formal operational

thought, about age twelve and upward, adolescents can reason abstractly and understand the motives of advertisers even to the point of growing cynical about advertising.

Building on Piaget's theory, Deborah John constructed a three-tiered model of consumer socialization: the perceptual stage (roughly age three to seven); the analytical stage (roughly age seven to eleven); and the reflective stage (roughly age eleven to sixteen). The perceptual stage is characterized by "perceptual boundness" as children focus on single dimensions of objects and events, thereby limiting their decision-making skills as informed consumers. During the analytical stage, as children gain the ability to analyze products according to more than one dimension at a time, their knowledge of advertiser techniques and brands becomes much more sophisticated. During the reflective stage, a mature understanding of products and marketing practices results in a relatively sophisticated knowledge of products and advertiser intent. Even so, all children can be influenced to purchase certain products if the products are made attractive enough to consumers.⁹²

Integrating a variety of different theoretical perspectives, Patti Valkenburg and Joanne Cantor advanced a developmental model of how children become consumers. In the first stage (birth to two years), toddlers and infants have desires and preferences, but they are not yet true consumers because they are not yet truly goal-directed in their product choices. During the second stage (two to five years), preschoolers nag and negotiate, asking for and even demanding certain products. At this point in their development, young children do not understand the persuasive intent of commercials; they focus on the attractive qualities of products and cannot keep their

minds off the products for long. These developmental characteristics make them extremely vulnerable to commercial advertisements. By the end of this stage, children replace whining and throwing tantrums to get a desired product with more effective negotiation. In early elementary school (five to eight years), children reach the stage of adventure and first purchases. They begin to make clearer distinctions between what is real and what is imaginary, their attention spans are longer, and they make their first purchases outside the company of their parents. In the final stage (eight to twelve years), elementary school children are attuned to their peer groups' opinions. Their critical skills to assess products emerge, and their understanding of others' emotions improves considerably. In the later years of this stage, interest shifts from toys to more adult-like products, such as music and sports equipment. Although children's consumer behaviors continue to develop during the adolescent years, the foundation is laid in these early years with a progression from simple wants and desires to a search to fulfill those desires to making independent choices and purchases to evaluating the product and its competition.⁹³

Fewer theories address the ways in which commercial messages influence children in interactive media exchanges. Research on how children learn from interactive media builds on developmental theories such as those of Jean Piaget and Lev Vygotsky, both of whom argued that knowledge is constructed through interactions between the knower and the known. Although such interactions do occur as children view television and film, including advertisements, they are different in the newer interactive technologies, which allow for greater user control and interchanges. Interactive technologies are based on dialogue and turn-taking—a child takes a

turn, then a computer responds and takes a turn, then the child takes a turn again. In essence, a conversation is taking place in which each response made by a child leads to potentially different content being shared.⁹⁴ Learning takes place through contingent replies, responsiveness to the user, and turn-taking, tools that can enhance learning in any kind of interaction, whether human or simulated with intelligent artificial agents.⁹⁵ The nature of the conversation that can take place, however, depends on the child's developmental level. For instance, children under age eight may well believe that they are really interacting with branded characters while older youth understand the differences between what is real and what is imaginary.

Because interactive media incorporate and build on a child's actions, they have an edge over traditional media like television in tailoring their message. In particular, an interactive medium is "smart" and can potentially take into account each learner's knowledge base and adapt the message accordingly. In an interactive medium, advertisers can transmit their message effectively by responding explicitly to the user's developmental level and knowledge base—a distinct advantage when marketers are trying to persuade a child or adolescent to buy a product, particularly given the varying knowledge bases during the childhood years.

The surreptitious presentation of messages about products in online forums can also tap into children's implicit memory, which involves learning without conscious awareness.⁹⁶ For example, embedding a marketed product into entertaining content creates favorable attitudes about that product without the user even being aware.⁹⁷ Precisely how implicit processes influence consumer attitudes and product choices awaits further study.

The trend toward increased advertising online makes children more vulnerable to marketing. Once a television viewer watches an advertisement, that viewer must act on the message if a product purchase is to occur. That action can involve multiple steps: requesting the product from a parent, pulling it from a shelf while shopping with a parent, and making a purchase. The delay between seeing an advertisement and being in a store where the product can be purchased is also a potential disruption to a purchase. By contrast, newer interactive interfaces involve a user directly in the content; actions can range from clicking on a television icon to transport a child directly to a website where he can purchase the advertised product,⁹⁸ to having a cell phone elicit purchase-oriented behaviors.⁹⁹ In newer technologies, the distinctions between the commercial and program content can be blurred in a seamless presentation. The time between being exposed to the product and purchasing it can also be greatly diminished. These changes have major implications for children, who are more vulnerable to commercial messages than adults are.

How Children Process Advertisements

To be effective, marketing campaigns must get children to attend to the message, desire a specific product, recognize and remember that product, and purchase it.¹⁰⁰ How well children understand the persuasive intent of advertisements also affects the success of commercials.

Attention. Commercials that are designed to attract and hold children's attention are characterized by lively action, sound effects, and loud music.¹⁰¹ The animated character Tony the Tiger, for example, bursts onto the screen, proclaiming that Kellogg's Frosted Flakes are "GRRRRREAT!!" One study found that preschoolers paid more attention

Embedding a marketed product into entertaining content creates favorable attitudes about that product without the user even being aware.

to commercials full of action, sound effects, and loud music than to more low-key commercials.¹⁰² Audio features are particularly important in gaining children's attention. Another study found that children aged three to eight were more attentive to commercials that were higher in audio than in video complexity.¹⁰³ Audio features have more recruiting power than visual features because interesting sounds can get children who are not looking at the television screen to direct their visual attention to it. These findings are consistent with Piaget's insight that young children are especially focused on the attention-getting perceptual qualities of presentations.

Children's patterns of attention help reveal how well they can make distinctions between the commercial and the television program. In one study, researchers trained mothers to examine their children's visual attention to Saturday morning cartoons and advertisements. The mothers reported that the younger children (five to eight) continued to pay attention when a commercial came on but that children older than eight looked away. The older children's awareness of the break in the content suggests that they are less susceptible than the younger children to the effects of advertising.¹⁰⁴

Recognition and retention. Advertisers use visual and auditory production techniques and repetition to enhance children's memory of the content. One study found that pre-school, kindergarten, and second-grade children remembered food products that had been advertised audiovisually or visually better than they remembered products presented in an audio version only.¹⁰⁵ Advertisers use catchy auditory features, such as jingles, repetitively in commercials to reach child audiences.¹⁰⁶ Song lyrics and rhymes can replay in children's heads, leading to automatic rehearsal and memory of content.¹⁰⁷

When children are shown the same commercial repeatedly, they are more likely to remember the product advertised.¹⁰⁸ Repetition also undermines children's, even older children's, defenses against product messages.¹⁰⁹

Comprehension of commercial intent. As noted, children younger than age eight do not understand that the intent of commercials is to persuade them to buy one product over another; instead they see commercials as a means of informing them about the vast number of attractive products that they can buy.¹¹⁰ In a key study demonstrating the developmental advance during middle childhood, Thomas Robertson and John Rossiter questioned first-, third-, and fifth-grade boys about their understanding of commercials. Only half of the first-grade boys understood the persuasive intent of commercials, as against 87 percent of third graders and 99 percent of fifth graders.¹¹¹

Product requests and purchases. What aspects of exposure to commercial messages lead to product requests? Researchers have found that repetition, in particular, increases children's requests for, and purchases of, specific food, beverage, and toy products.¹¹²

One study, for example, measured three- to eleven-year-old children's overall exposure to advertisements at home and to specific advertisements in their laboratory. They then had children visit a mock grocery store with a parent. Children who were exposed to more overall advertisements at home and who were most attentive to advertisements in the laboratory setting made the most requests for the advertised products.¹¹³

Another purported, though rarely studied, outcome of children's commercial exposure is an increased emphasis on materialism among younger children.

Premiums—bonus toys and treats that accompany the product—also increase children's product requests. For instance, Charles Aitkin found that 81 percent of mothers thought that premiums influenced their children's cereal selections. The more children watched Saturday morning television programs, which are saturated with cereal commercials, the more children wanted the cereals that contained premiums.¹¹⁴ Free downloads such as screen savers serve similar functions in newer technologies, but researchers have not yet fully examined the effects of such practices.

Does Exposure to Advertising Affect Children's Behavior?

Exposing children to commercial messages can lead to negative outcomes, including parent-child conflict, cynicism, obesity, and possibly materialistic attitudes.

For both younger and older children, not every request for a product leads to a purchase. Being denied a product can lead to conflict between parent and child.¹¹⁵ For instance, Aitkin found that when parents denied children's requests for products, children who were heavy viewers argued about the purchase 21 percent of the time, while light viewers argued only 9 percent of the time.¹¹⁶ Advertisers call this the "nag factor."

In a review of research, one study found a causal relationship between children's viewing of television commercials and their pestering parents in the grocery store.¹¹⁷ As suggested by the model created by Valkenburg and Cantor, "pester power" seems to be a preferred tactic of young children.¹¹⁸ For example, four- to six-year-olds rely on nagging, crying, and whining to get their parents to buy them products.¹¹⁹

Children can also become cynical as they begin to understand the underlying persuasive messages of advertisements. For example, sixth and eighth graders who understand more about commercial practices, such as using celebrity endorsements, are more cynical about the products.¹²⁰ Even so, children who are repeatedly exposed to attractive messages about "fun" products still want them, even if they are aware of advertiser selling techniques.¹²¹ The implication is that even though children—and adults too, for that matter—may know that something is not what it seems, that does not stop them from wanting it.

Because so many advertisements targeted to children are for foods that are high in calories and low in nutritional value, concerns have been raised that food advertisements are partly to blame for children being overweight and obese.¹²² A comprehensive review of

the empirical literature on food advertising, conducted by a National Academies panel that was charged by Congress to investigate the role of marketing and advertising in childhood obesity, concluded that television food advertisements affect children's food preferences, food requests, and short-term eating patterns. The panel was unable, however, to conclude that television food advertising had causal effects on child obesity, because the data were, by necessity, correlational, not causal—one cannot ethically conduct research to cause some children to become overweight and obese.¹²³ Research on the effect of newer forms of food marketing on obesity, such as practices that take place online, is notably lacking.

Another purported, though rarely studied, outcome of children's commercial exposure is an increased emphasis on materialism among younger children. Preadolescent girls, for example, are now purchasing more and more clothing, make-up, and other products that were formerly targeted to an adolescent teen market.¹²⁴ An American Psychological Association task force has argued that heavy advertising and marketing campaigns are leading to the sexualization and exploitation of young girls.

The Potential Mediating Role of Families and Parents

Children, particularly young children, are exposed to advertising and marketing primarily within the family home. Moreover, parents provide the financial resources that allow their children to purchase products.¹²⁵ How parents handle their children's exposure to advertising and their requests for products can be influential in shaping the way their children respond to advertised products and how advertising affects children's developmental outcomes.

Parents can be involved in their children's television viewing in three ways. In *coviewing*, parents simply watch programs with their children without discussing content; in *active mediation* (also called *instructive guidance*), parents discuss the program with their children to help them understand the content or the intent of advertisements; and in *restrictive mediation*, parents control the amount or kind of content that their children view.¹²⁶

Although studies are sparse, researchers have demonstrated that both active mediation and restrictive mediation can reduce children's requests for advertised products. One study, for example, manipulated mothers' use of information to influence eight- to ten-year-old children's interest in advertised products. Mothers responded to their sons' exposure to toy commercials using power-assertion (restrictive mediation), reasoning (active mediation), and no information (*coviewing*). Mothers had little influence over boys' choices regarding highly attractive advertised products regardless of which response they made to their children's exposure to advertising. By contrast, those mothers who used reasoning techniques were able to affect whether the boys chose moderately attractive products. In short, all forms of parental mediation appear powerless in the face of a child's choice of a highly attractive product, but reasoning, an active mediation approach, can affect the choice of a moderately attractive product.¹²⁷

Restrictive mediation, in which parents enforce rules about television use, can also diminish children's requests for products. For example, Leonard Reid found that children whose parents restricted their television viewing made fewer requests at home for advertised products, presumably because they had learned that their requests would

be denied.¹²⁸ Put another way, families create tacit rules about television advertising beyond the commercial itself, and those rules influence how children behave.

Coviewing with children does not appear to be effective in countering the effect of advertising. One study explains that when parents view the content with their children, children take their parents' silence as an implicit endorsement of the content.¹²⁹ Parents thus need to influence actively how their children, particularly young children, perceive advertisements. But apathy, rather than vigilance, appears to be the norm for parents when children are viewing television commercials.¹³⁰

Marketing in Schools

Because the proliferation of media channels has reduced the average audience size for children's programs, marketers have turned to schools as a way to maximize their audience for commercial messages.¹³¹ And many financially strapped schools are open to multibillion dollar contracts with businesses.¹³² Neither schools nor states typically regulate commercial activities in schools.¹³³

Principals, who are often the gatekeepers to their schools, generally see commercialism as a way to improve their schools, as well as their students' educational outcomes. For example, one study found that high school principals in North Carolina did not believe that their students were unduly influenced by corporate advertising in their schools. Moreover, most principals said that they would continue the relationship with their corporate sponsor even if funds were available for school activities.¹³⁴

The commercialization of schools includes such practices as in-school advertisements, the sale of "competitive" foods (those

from vending machines, fast food outlets, and school fundraisers that compete with cafeteria food), and corporate-sponsored educational materials. Efforts to counter the effects of commercial messages are limited by children's age and cognitive level. Schools have used media literacy programs with some success for older children, but the messages of these programs may be muted when they are embedded in a heavily commercialized school environment.

Television and Internet Advertisements in the Classroom

Established in 1990, Channel One broadcasts ten minutes of news designed specifically for adolescents as well as two minutes of commercial messages (86 percent of the messages are for commercial products, 14 percent for public service announcements) into 370,000 classrooms every school day.¹³⁵ In exchange for a captive audience of approximately 8 million U.S. school children,¹³⁶ Channel One provides free video equipment and satellite connections to each classroom in participating schools, many of which would be unable to pay for such technology otherwise.¹³⁷ Early on, Channel One was banned by several states, including California, Massachusetts, North Carolina, and Washington, for promoting a commercial atmosphere in schools.¹³⁸ But students in some 12,000 schools, 38 percent of all U.S. middle and high schools, now view Channel One, and 1,000 more schools expect to begin airing Channel One in the next few years.¹³⁹ An associated website, Channelone.com, is also available.¹⁴⁰

An early content analysis of Channel One television advertisements, conducted by Tim Wulfemeyer and Barbara Mueller, found that the most frequently advertised products were jeans, candy, shampoo, make-up, gum, razor blades, breath mints, acne cream, deodorant,

athletic shoes, corn chips, catsup, movies, and cough drops. The food products were all low in nutritional value. Classroom observations, however, revealed that students paid little attention to the advertisements and chose instead to talk, joke, and look around the room.¹⁴¹

Because the proliferation of media channels has reduced the average audience size for children's programs, marketers have turned to schools as a way to maximize their audience for commercial messages.

Other studies, however, have found that commercials on Channel One do affect students. Bradley Greenberg and Jeffrey Brand compared high school students who had been exposed to Channel One for a year and a half with a control group who had not been so exposed. They found that the students who had viewed Channel One commercials in their classrooms evaluated the advertised products more favorably, stated that they intended to purchase them more (though they did not in reality do so), and had more materialistic attitudes than the control students who did not watch Channel One. The findings suggest that viewing Channel One commercials does influence the audience, though the effects seem to be more on student attitudes about the products than on their purchasing behaviors.¹⁴²

According to Claire Atkinson, Channel One's advertising revenue has been declining of late, dropping 11 percent in 2003 and an ad-

ditional 12 percent in 2004. The declines are attributable in part to the decision by Kraft Foods to eliminate all in-school marketing effective July 2003. In part because of the nation's obesity epidemic, food marketers such as Kraft Foods and Kellogg's are repositioning their portfolios and messages to more healthful ones, thereby undermining the financial base of Channel One. Although still profitable, Channel One faces the additional financial pressure of upgrading to digital equipment.¹⁴³

The company Zap Me offers middle schools and high schools fifteen computers plus Internet connections, printers, and access to educational websites in exchange for using the equipment for a minimum of four hours daily. In 2000, Zap Me had been installed in approximately 9 percent (1,800) of U.S. secondary schools. Advertisements are shown on the computer screen, and tracking equipment is available on the computers.¹⁴⁴ As soon as students log into the computer, the system knows the user's age, sex, and zip code.¹⁴⁵ Students' privacy is an issue as marketers are able to gather very explicit information about individual product preferences, though Zap Me claims to look at data only in an aggregate form.¹⁴⁶ Because of the commercial aspects of Zap Me, some school districts refuse the free equipment.¹⁴⁷

Competitive Foods

Competitive foods from vending machines, snack bars, and school fundraisers are available in schools but are not part of the federal school lunch, school breakfast, or after-school snack program. Although a major source of revenue for schools, competitive foods are often high in calories and low in nutritional value, thereby creating concerns that these marketing practices contribute to the current obesity epidemic.¹⁴⁸ Pouring contracts,

in which specific companies have exclusive rights to sell soda, other beverages, and snacks in vending machines, are a controversial practice in schools.¹⁴⁹

Some three-quarters of high schools, half of middle schools, and one-third of elementary schools have exclusive pouring contracts with a company. In return, the schools receive a specific share of sales or incentives such as equipment once they reach a certain level of sales. Obtaining maximum benefits from a pouring contract thereby contributes to an increasingly commercial school atmosphere.¹⁵⁰

Fast-food restaurants also negotiate contracts to sell food to youth in school. Branded fast-food restaurants such as Taco Bell, Pizza Hut, and Subway operate in about 20 percent of high schools.¹⁵¹ One study found that in addition to negotiating contracts within schools in Chicago, fast-food chains placed restaurants within easy walking distance to schools. Such placements, according to the study, expose children to foods of poor nutritional quality, because youth consume more fat, sugars, and sugared drinks and fewer fruits and vegetables on days when they eat at fast-food restaurants.¹⁵²

Fundraisers whose proceeds allow students to purchase uniforms or go on school trips are also part of the marketing landscape of everyday school life, as are the logos that companies place on uniforms, school billboards, and athletic scoreboards in exchange for donating resources to schools.

Although pouring contracts, fast-food restaurant contracts, and fundraisers generate substantial income and are common in middle and high schools, some state legislatures and school districts, such as those in California, have outlawed them or have

created nutritional standards for competitive foods.¹⁵³ Some school districts now have more stringent food standards than do federal or state laws.¹⁵⁴

Commercial Educational Classroom Materials

A final marketing practice within schools involves the content that children read. Specifically, businesses donate industry-sponsored educational materials to schools to supplement the curriculum.¹⁵⁵ For example, students may encounter industry-sponsored content such as Domino's Pizza Encounter Math or the Oreo Cookie Counting Book.¹⁵⁶ Such material often provides biased or incomplete information on a topic, making it misleading at best when presented as educational material.

Media Literacy Training Programs

Media literacy training involves school-based efforts to teach children to understand media conventions, such as advertising techniques. The programs are effective with older children, but not with children younger than age eight, who do not understand persuasive intent.¹⁵⁷

In one effective consumer education program created by Donald Roberts and several colleagues, fourth, sixth, and eighth graders viewed either *The Six Billion \$\$\$ Sell* or a control film. Children who viewed the treatment film, which taught advertising techniques, were more skeptical about advertisements immediately after viewing the film and were more sophisticated in understanding and applying advertising techniques one week later. The researchers found similar, though somewhat less strong, effects for second, third, and fifth graders who viewed *Seeing through Commercials* compared with students who viewed a control film.¹⁵⁸

Using strategies from mediation research, another study examined an alcohol-related media literacy program. Third graders who were exposed to the program understood the persuasive intent of the commercials, were less interested in imitating the characters, and had more negative views of drinking alcohol than did those in the control group.¹⁵⁹

Regulation of Marketing Practice

Because of age-based limits in children's ability to understand advertiser intent, the Federal Communications Commission has placed safeguards into the television advertising marketplace to protect young child audiences. Among the guidelines is the separation principle, which consists of three components. First, the transitions between an advertisement and the program content must be distinct; the program must use a constant production convention, such as "After these messages, we'll be right back," to separate program and commercial content. Second, "host selling" is not allowed. That is, the main characters on a television program cannot sell products during that program or during blocks of commercial time adjacent to it. And, third, products being sold cannot be integrated into program content (a practice that resembles the common practice of product placements).¹⁶⁰ In addition, the FCC has limited the time allocated to commercial content during a given hour of children's programs. It also requires "tombstone shots" that show the unadorned product in a still frame shot without all the extra toys that can be purchased with it.¹⁶¹

While the FCC is charged with regulating media, the Federal Trade Commission (FTC) is charged with regulating advertising.¹⁶² The Children's Advertising Review Unit (CARU), a voluntary regulatory organization created by the advertising industry, enforces broadcast

standards for the industry, in part to prevent governmental interference. Although CARU has made some attempt to regulate the newer interactive technology marketing practices, many of its rules have not carried over to the Internet, video games, or cell phones. For example, websites attempt to create "sticky sites" where users spend long periods of time with branded characters.¹⁶³ Such sites feature Tony the Tiger from Kellogg's Frosted Flakes or Chester the Cheetah for Frito-Lay and create content focused solely on commercially branded products.¹⁶⁴

Early studies of online marketing practices documented the use of deceptive practices that invaded the privacy of children. For instance, popular media characters, such as Batman, would ask children for personally identifying information for a census that was being taken in Gotham City.¹⁶⁵ Did children even understand that Batman was not real? No research has been conducted to answer that question, yet the developmental literature from the television area suggests that young children may not understand that such characters are not really interacting with them.

Such practices led Congress to pass the Children's Online Privacy Protection Act (COPPA) of 1998, which placed rules on online marketing techniques to protect the privacy of children under age thirteen.¹⁶⁶ The new law, which went into effect in 2000, authorized the Federal Trade Commission to create and enforce rules for data collection practices at children's websites and to disclose privacy policies about data collection techniques as well as about how that information was to be used.¹⁶⁷

After COPPA was implemented, several agencies, including the FTC, the Center for Media Education, and the Annenberg Public

Policy Center, conducted an evaluation of website practices.¹⁶⁸ All these studies found that the majority of websites linked their home page to their privacy policy. But the studies found fewer efforts to obtain parental consent or to inform parents about how the data collected on the site would be used.¹⁶⁹

Although researchers now have a reasonably good idea of what takes place on online websites, they still know little about how children perceive, understand, or participate when asked for personally identifying information. No database as yet documents such information on the part of child consumers of different ages.

Spyware in which an outside agent installs a program on a user's hard drive, collects information about that user's behaviors without his knowledge, and then sends that information back to a marketer also poses risks that may one day cause spyware to be subjected to regulation by the FTC.¹⁷⁰ Spyware invades privacy, poses security risks, including identity theft, and can cause computers to crash, be subject to barrages of pop-up ads, and run slowly.¹⁷¹

Regulators should also address the issue of whether and how to make the regulation of newer online marketing activities consistent with traditional television and film guidelines. Such existing television standards as clear separation of commercial from program content, rules about host selling, consideration of age-based skills in understanding marketer intent, tombstone shots of the unadorned product when the camera shot is still, and limits on the amount of time children can spend seeing marketed content should be considered in the context of newer media. Product placement, the emerging and perhaps preferred replacement of the fifteen- or thirty-second

commercial, is also in need of additional study and regulation. With convergence increasingly bringing the varying forms of technologies together under one umbrella, it is sensible to have uniform standards for marketing to children across varying media platforms.

Ultimately, though, all of these practices have some protection because of the First Amendment guarantee of freedom of speech. Although advertisers do not enjoy the same freedom as everyday citizens in their right to speak as they wish, they have considerable leeway to present the content that they wish, and it is up to advocacy groups to demonstrate that any regulation is necessary. Indeed, the Central Hudson Test, the primary legal argument for limiting commercial speech, has been interpreted in recent years as calling for the least amount of interference in the advertisers' right to speak as they wish.¹⁷² Moreover, in many cases the online environment is not even constrained by U.S. law. Setting up an online shop in a different country, for example, can insulate users from prosecution for violating a number of laws that they would have to follow within the United States.¹⁷³

Conclusion

Marketing to children and adolescents is a way of life in the United States. Children have both their own disposable income and influence over what their parents buy, and marketers attempt to determine how those dollars are spent. Television now reaps most of the advertising dollars, but newer technologies are providing new ways for marketers to reach children. Marketing practices such as repetition, branded environments, and free prizes are effective in attracting children's attention, making products stay in their memory, and influencing their purchasing choices. Immature cognitive development, however,

limits the ability of children younger than eight to understand the persuasive intent of commercials. Thus, public policy regulates how advertisers can interact with children via television. Online environments are now and

probably always will be less heavily regulated than more traditional media. Although marketing and advertising fuel the U.S. economy, the cost of that economic success requires considerable scrutiny.

Endnotes

1. L. Mazur, "Marketing Madness," *E Magazine: The Environmental Magazine* 7, no. 3 (1996).
2. E. Wartella and M. Robb, "The History of Media Issues," in *Blackwell Handbook of Child Development and the Media*, edited by S. L. Calvert and B. J. Wilson (Boston: Wiley-Blackwell, forthcoming).
3. American Marketing Association, www.marketingpower.com/content4620.php (retrieved March 18, 2007).
4. Institute of Medicine, *Food Marketing to Children and Youth: Threat or Opportunity?*, edited by J. M. McGinnis, J. A. Gootman, and V. I. Kraak (Washington, D.C.: National Academies Press, 2006).
5. *Ibid.*
6. D. Kunkel, "Children and Television Advertising," in *Handbook of Children and the Media*, edited by D. Singer and J. Singer (Thousand Oaks, Calif.: Sage, 2001).
7. F. E. Barcus, "The Nature of Television Advertising to Children," in *Children and the Faces of Television: Television, Violence, Selling*, edited by E. Palmer and A. Dorr (New York: Academic Press, 1980), pp. 273–85; G. Comstock, with H. Paik, *Television and the American Child* (New York: Academic Press, 1991); D. Kunkel and W. Gantz, "Children's Television Advertising in the Multi-channel Environment," *Journal of Communication* 42, no. 3 (1992): 134–52.
8. L. Alvy and S. L. Calvert, "Food Marketing on Popular Children's Websites: A Content Analysis," *Journal of the American Dietetic Association*, forthcoming; E. Moore, *It's Child's Play: Advergaming and the Online Marketing of Food to Children* (Menlo Park, Calif.: Kaiser Family Foundation, 2006); D. Siegel, T. Coffee, and G. Livingston, *The Great Tween Buying Machine: Marketing to Today's Tweens* (Ithaca, N.Y.: Paramount Market Publishing, Inc., 2001); K. Weber, M. Story, and L. Harnack, "Internet Food Marketing Strategies Aimed at Children and Adolescents: A Content Analysis of Food and Beverage Brand Web Sites," *Journal of American Dietetic Association* 106, no. 9 (2006): 463–66.
9. Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
10. Economist, "Youth, Inc.," *Economist* 357 (2001): 8202.
11. J. B. Schor, *Born to Buy: The Commercialized Child and the New Consumer Culture* (New York: Scribner, 2004).
12. Media Research, Inc., accessed at www.magazine.org/content/files/teenprofile04.pdf, October 9, 2007.
13. M. Cardona, "High School Paper Group to Take Ads," *Advertising Age* 75, no. 13 (2004).
14. R. Rubin, "Kids vs. Teens: Money and Maturity Guide to Online Behavior," *eMarketer*, May 1, 2004.
15. D. Kunkel and others, *Report of the APA Task Force on Advertising and Children: Psychological Issues in the Increasing Commercialization of Childhood* (Washington, D.C.: American Psychological Association, 2004); Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
16. Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
17. P. Wechsler, "This Lesson Is Brought to You by ... Corporations Are Flooding Schools with Teaching Aids—and Propaganda Galore," *BusinessWeek*, June 30, 1997. Retrieved September 14, 2004, from www.businessweek.com/1997/26/b35339.htm.

18. D. Roberts, U. Foehr, and V. Rideout, *Generation M: Media in the Lives of 8-18 Year-Olds* (Menlo Park, Calif.: Henry J. Kaiser Family Foundation, 2005).
19. Alvy and Calvert, "Food Marketing on Popular Children's Websites" (see note 8); Weber, Story, and Harnack, "Internet Food Marketing Strategies Aimed at Children and Adolescents" (see note 8).
20. E. Moore, *It's Child's Play* (see note 8).
21. Institute of Medicine, *Marketing Food to Children and Youth* (see note 4); Schor, *Born to Buy* (see note 11).
22. D. Eisenberg and others, "It's an Ad, Ad, Ad, Ad World," *Time* 160, no.10 (2002).
23. Ibid.
24. E. Gardner, "Understanding the Net's Toughest Customer," *Internet World* 6, no. 3 (2000).
25. Ibid.
26. A. Mack, "Gaming Scores with Advertisers," *Media Week* 14, no. 26 (2004).
27. E. Gardner, "Understanding the Net's Toughest Customer" (see note 24).
28. D. Eisenberg and others, "It's an Ad, Ad, Ad, Ad World" (see note 22).
29. Ibid.
30. Federal Communications Commission, "Children's Television Programs: Report and Policy Statement," *Federal Register* 39 (November 6, 1974), pp. 39396-39409.
31. A. Cohen, "Spies among Us," *Time Digital* 5, no. 3; E. Gardner, "Understanding the Net's Toughest Customer" (see note 24); L. Mazur, "Marketing Madness" (see note 1).
32. S. L. Calvert, "Future Faces of Selling to Children," in *The Faces of Televisual Media*, edited by E. L. Palmer and B. M. Young (Mahwah, N.J.: Erlbaum, 2003); K. Montgomery, "Digital Kids: The New On-Line Children's Consumer Culture," in *Handbook of Children and the Media*, edited by D. Singer and J. Singer (Thousand Oaks, Calif.: Sage, 2001).
33. S. Auty and C. Lewis, "The 'Delicious Paradox': Preconscious Processing of Product Placements by Children," in *The Psychology of Entertainment Media: Blurring the Lines between Entertainment and Persuasion*, edited by L. J. Shrum (Mahwah, N.J.: Lawrence Erlbaum Associates, 2004), pp.117-33.
34. A. C. Huston and J. C. Wright, "Public Policy and Children's Television," *American Psychologist* 44 (1983): 424-33.
35. D. Greer and others, "The Effects of Television Commercial Form and Commercial Placement on Children's Social Behavior and Attention," *Child Development* 53 (1982): 611-19; R. Welch and others, "Subtle Sex-Role Cues in Children's Commercials," *Journal of Communication* 29 (1979): 202-09.
36. Institute of Medicine, *Marketing Food to Children and Youth* (see note 4).
37. D. Kunkel and others, *Report of the APA Task Force on Advertising and Children* (see note 15).
38. S. L. Calvert, *Children's Journeys through the Information Age* (Boston: McGraw Hill, 1999).

39. Ibid.
40. Mazur, "Marketing Madness" (see note 1).
41. D. Eisenberg and others, "It's an Ad, Ad, Ad, Ad World" (see note 22).
42. D. Handelman, "Dan Pelson," *Brandweek* 41, no. 32 (2000).
43. L. Mazur, "Marketing Madness" (see note 1).
44. A. Mack, "Gaming Scores with Advertisers" (see note 26).
45. Ibid.
46. K. Subrahmanyam and others, "The Impact of Computer Use on Children's and Adolescents' Development," in *Children in the Digital Age: Influences of Electronic Media on Development*, edited by S. L. Calvert, A. B. Jordan, and R. R. Cocking (Westport, Conn.: Praeger, 2002), pp. 3–33.
47. Mack, "Gaming Scores with Advertisers" (see note 26).
48. D. Eisenberg and others, "It's an Ad, Ad, Ad, Ad World" (see note 22).
49. Mack, "Gaming Scores with Advertisers" (see note 26).
50. Gardner, "Understanding the Net's Toughest Customer" (see note 24).
51. D. Fonda and E. Rosten, "Pitching It to Kids," *Time* 163, no. 26 (2004).
52. Calvert, "Future Faces of Selling to Children" (see note 32).
53. L. Freeman, "Selling Kids (Building Brand Loyalty among Children)," *Food and Beverage Marketing* 17, no. 6 (1998).
54. Mack, "Gaming Scores with Advertisers" (see note 26).
55. Calvert, "Future Faces of Selling to Children" (see note 32).
56. Ecommerce-Dictionary. (n.d.). Retrieved January 7, 2005, from www.ecommerce-dictionary.com/v/viral-marketing.html (retrieved January 7, 2005).
57. Handelman, "Dan Pelson" (see note 42).
58. A. Cuneo, "Bud Uses 'Reject' Spots in Viral Play," *Advertising Age* 74, no. 29 (2003).
59. T. Elkin, "New Systems Set, Gamers Scream for Fresh Content," *Advertising Age* 73, no. 5 (2002).
60. R. Rubin, "Kids vs. Teens: Money and Maturity Guide to Online Behavior" (see note 14).
61. D. Eisenberg and others, "It's an Ad, Ad, Ad, Ad World" (see note 22).
62. W. Williams, K. Montgomery, and S. Pasnik, *Alcohol and Tobacco on the Web: New Threats to Youth* (Washington, D.C.: Center for Media Education, 1997).
63. Ibid.
64. Mazur, "Marketing Madness" (see note 1).
65. Ibid.

66. K. Kelly, "Kid Power," *U.S. News and World Report* 137, no. 8 (2004).
67. Montgomery, "Digital Kids" (see note 32); T. Tarpley, "Children, the Internet, and Other New Technologies," in *Handbook of Children and the Media*, edited by D. Singer and J. Singer (Thousand Oaks, Calif.: Sage, 2001); S. Traiman, "Kids' Multimedia Sees a Growth Spurt," *Billboard* 110, no.7 (1998).
68. Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
69. S. L. Calvert, *Interactive Advertising Strategies*, presentation to the Institute of Medicine Children's Food Marketing Panel (Washington, D.C.: National Academy of Sciences, November 2004).
70. Cohen, "Spies among Us" (see note 31).
71. Handelman, "Dan Pelson" (see note 42).
72. Ibid.
73. Cohen, "Spies among Us" (see note 31).
74. J. Condry, P. Bence, and C. Scheibe, "Nonprogram Content of Children's Television," *Journal of Broadcasting and Electronic Media* 32 (1988): 254-70; Kunkel and others, *Report of the APA Task Force on Advertising and Children* (see note 15).
75. Kunkel and Gantz, "Children's Television Advertising in the Multi-channel Environment" (see note 7).
76. Moore, *It's Child's Play* (see note 8).
77. Weber, Story, and Harnack, "Internet Food Marketing Strategies Aimed at Children and Adolescents (see note 8).
78. Alvy and Calvert, "Food Marketing on Popular Children's Websites" (see note 8).
79. D. Borzekowski and V. Strasburger, "Adolescents and Media Messages about Tobacco, Alcohol, and Drugs," in *Blackwell Handbook of Child Development and the Media*, edited by S. L. Calvert and B. Wilson (Boston: Wiley-Blackwell, forthcoming).
80. W. Williams, K. Montgomery, and S. Pasnik, *Alcohol and Tobacco on the Web: New Threats to Youth* (Washington, D.C.: Center for Media Education, 1997).
81. Federal Communications Commission, "Children's Television Programs: Report and Policy Statement" (see note 30).
82. S. L. Calvert, "The Children's Television Act," in *Blackwell Handbook of Child Development and the Media*, edited by S. L. Calvert and B. Wilson (Boston: Wiley-Blackwell, forthcoming).
83. Barcus, "The Nature of Television Advertising to Children" (see note 7).
84. J. Condry, *The Psychology of Television* (Hillsdale, N.J.: Erlbaum, 1989).
85. Kunkel and Gantz, "Children's Television Advertising in the Multi-Channel Environment" (see note 7).
86. Moore, *It's Child's Play* (see note 8).
87. Federal Communications Commission, "Children's Television Programs: Report and Policy Statement" (see note 30).

88. Kunkel and others, *Report of the APA Task Force on Advertising and Children* (see note 15).
89. D. Robertson and J. Rossiter, "Children and Commercial Persuasion: An Attribution Theory Analysis," *Journal of Consumer Research* 1 (1974): 13–20.
90. J. H. Flavell, *The Developmental Psychology of Jean Piaget* (Princeton, N.J.: Van Nostrand, 1963).
91. P. Valkenburg and J. Cantor, "The Development of a Child into a Consumer," in *Children in the Digital Age: Influences of Electronic Media on Development*, edited by S. L. Calvert, A. B. Jordan, and R. R. Cocking (Westport, Conn.: Praeger, 2002), pp. 201–14.
92. D. John, "Consumer Socialization of Children: A Retrospective Look at Twenty-Five Years of Research," *Journal of Consumer Research* 26, no. 3 (1999): 183–213.
93. Valkenburg and Cantor, "The Development of a Child into a Consumer" (see note 91).
94. E. Wartella, B. O'Keefe, and R. Scantlin, *Children and Interactive Media: A Compendium of Current Research and Directions for the Future* (New York: Markle Foundation, 2000).
95. Ibid.
96. A. S. Reber, *Implicit Learning and Tacit Knowledge: An Essay on the Cognitive Unconscious* (New York: Oxford University Press, 1993).
97. Auty and Lewis, "The 'Delicious Paradox'" (see note 33).
98. Tarpley, "Children, the Internet, and Other New Technologies" (see note 67).
99. Calvert, "Future Faces of Selling to Children" (see note 32).
100. Calvert, *Children's Journeys through the Information Age* (see note 38).
101. D. Stewart and S. Ward, "Media Effects on Advertising," in *Media Effects: Advances in Theory and Research*, edited by J. Bryant and D. Zillmann (Hillsdale, N.J.: Erlbaum, 1994); M. Stutts and G. Hunnicutt, "Can Young Children Understand Disclaimers in Television Commercials?" *Journal of Advertising* 16 (1987): 41–46.
102. Greer and others, "The Effects of Television Commercial Form and Commercial Placement" (see note 35).
103. E. Wartella and J. Ettema, "A Cognitive Developmental Study of Children's Attention to Television Commercials," *Communication Research* 1 (1974): 46–49.
104. S. Ward, D. Levinson, and D. Wackman, "Children's Attention to Television Advertisements," in *Television and Social Behavior*, vol. 4: *Television in Day-to-Day Life: Patterns of Use*, edited by E. A. Rubenstein, G. A. Comstock, and J. P. Murray (Washington, D.C.: U.S. Government Printing Office, 1972).
105. Z. Stoneman and G. Brody, "Immediate and Long-Term Recognition and Generalization of Advertised Products as a Function of Age and Presentation Mode," *Developmental Psychology* 19 (1983): 56–61.
106. Barcus, "The Nature of Television Advertising to Children" (see note 7).
107. S. L. Calvert and M. Tart, "Song versus Prose Forms for Students' Very Long-Term, Long-Term, and Short-Term Verbatim Recall," *Journal of Applied Developmental Psychology* 14 (1993): 245–60.

108. Condry, *The Psychology of Television* (see note 84); G. J. Gorn and M. E. Goldberg, "Behavioral Evidence of the Effects of Televised Food Messages on Children," *Journal of Consumer Research* 9 (1982): 200–05; J. Rossiter, "The Effects of Volume and Repetition of Television Commercials: Policy Issues, Perspectives, and the Status of Research," in *Children and the Faces of Television: Teaching, Violence, Selling*, edited by E. L. Palmer and A. Dorr (New York: Academic Press, 1980); Stewart and Ward, "Media Effects on Advertising" (see note 101).
109. J. Rossiter and D. Robertson, "Children's Television Commercials: Testing the Defenses," *Journal of Broadcasting* 23 (1974): 33–40.
110. Kunkel and others, *Report of the APA Task Force on Advertising and Children* (see note 15).
111. Robertson and Rossiter, "Children and Commercial Persuasion" (see note 89).
112. C. Aitkin, "Effects of Television Advertising on Children," in *Children and the Faces of Television: Television, Violence, Selling*, edited by E. Palmer and A. Dorr (New York: Academic Press, 1980), pp. 287–306; C. Aitkin, "Television Advertising and Socialization of Consumer Roles," in *Television and Behavior: Ten Years of Scientific Progress and Implications for the Eighties*, vol. 2: *Technical Reviews*, edited by D. Pearl, L. Bouthilet, and J. Lazar (Washington, D.C.: U.S. Government Printing Office, 1982), pp. 191–200; M. E. Goldberg, G. J. Gorn, and W. Gibson, "TV Messages for Snack and Breakfast Foods: Do They Influence Children's Preferences?" *Journal of Consumer Research* 5 (1978): 73–81; Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
113. J. P. Galst and M. A. White, "The Unhealthy Persuader: The Reinforcing Value of Television and Children's Purchase Attempts at the Supermarket," *Child Development* 47 (1976): 1089–96.
114. Aitkin, "Effects of Television Advertising on Children" (see note 112).
115. Valkenburg and Cantor, "The Development of a Child into a Consumer" (see note 91).
116. Aitkin, "Effects of Television Advertising on Children" (see note 112).
117. L. McDermott and others, "International Food Advertising, Pester Power, and Its Effects," *International Journal of Advertising* 25, no. 4 (2006): 513–39.
118. Valkenburg and Cantor, "The Development of a Child into a Consumer" (see note 91).
119. D. M. Weiss and J. Sachs, "Persuasive Strategies Used by Pre-school Children," *Discourse Processes* 14 (1991): 55–72.
120. D. M. Boush, M. Friedstad, and G. M. Rose, "Adolescent Skepticism toward TV Advertising and Knowledge of Advertiser Tactics," *Journal of Consumer Research* 21 (1994): 165–75.
121. Rossiter and Robertson, "Children's Television Commercials" (see note 109).
122. Kunkel and others, *Report of the APA Task Force on Advertising and Children* (see note 15).
123. Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
124. Zurbriggen and others, Executive Summary: APA Task Force on the Sexualization of Girls (2007). Retrieved July 25, 2007, from www.apa.org/pi/wpo/sexualization.html.
125. B. Young, "Media and Advertising Effects," in *Blackwell Handbook of Child Development and the Media*, edited by S. L. Calvert and B. Wilson (Boston: Wiley-Blackwell, forthcoming).

126. A. Nathanson and J. Chakroff, "Parent and School Interventions: Mediation and Media Literacy," in *Blackwell Handbook of Child Development and the Media*, edited by S. L. Calvert and B. Wilson (Boston: Wiley-Blackwell, forthcoming); P. Valkenburg and others, "Developing a Scale to Assess Three Styles of Television Mediation: 'Instructive Mediation,' 'Restrictive Mediation,' and 'Social Coviewing,'" *Journal of Broadcasting and Electronic Media* 43, no. 1 (1999): 52–56; Young, "Media and Advertising Effects" (see note 125).
127. V. K. Prasad, T. R. Rao, and A. A. Sheikh, "Mother vs. Commercial," *Journal of Communication* 28 (Winter 1978): 91–96.
128. L. N. Reid, "Viewing Rules as Mediating Factors of Children's Responses to Commercials," *Journal of Broadcasting* 23 (1979): 15–26.
129. Nathanson and Chakroff, "Parent and School Interventions: Mediation and Media Literacy" (see note 126).
130. Rossiter and Robertson, "Children's Television Commercials" (see note 109).
131. Wechsler, "This Lesson Is Brought to You" (see note 17).
132. Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
133. Government Accounting Office, "Public Service Announcement Campaigns: Activities and Financial Obligations for Seven Federal Departments," *United States Government Accountability Office Report to Congressional Committees* (Washington, D.C.: 2000); M. Story and S. French, "Food Advertising and Marketing Directed at Children and Adolescents in the U.S.," *International Journal of Behavioral Nutrition and Physical Activity* 1, no. 1 (2004): 3–20 [online] Available: www.ijbnpa.org/content/1/1/3 [accessed April 11, 2005].
134. J. Di Bona and others, "Commercialism in North Carolina High Schools: A Survey of Principals' Perceptions," *Peabody Journal of Education* 78, no. 2 (2003): 41–62.
135. C. Atkinson, "Channel One Hits Bump, Losing Ads and Top Exec," *Advertising Age* 76, no. 11 (2005): 3–38; Government Accounting Office, "Public Service Announcement Campaigns" (see note 133); Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
136. P. Wechsler, "This Lesson Is Brought to You" (see note 17).
137. Atkinson, "Channel One Hits Bump" (see note 135); Government Accounting Office, "Public Service Announcement Campaigns" (see note 133); Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
138. K. T. Wulfemeyer and B. Mueller, "Channel One and Commercials in Classrooms: Advertising Content Aimed at Students," *Journalism Quarterly* 69, no. 3 (1992): 724–42.
139. Government Accounting Office, "Public Service Announcement Campaigns" (see note 133); Story and French, "Food Advertising and Marketing Directed at Children and Adolescents in the U.S." (see note 133).
140. Atkinson, "Channel One Hits Bump" (see note 135).
141. Wulfemeyer and Mueller, "Channel One and Commercials in Classrooms: Advertising Content Aimed at Students" (see note 138).
142. B. S. Greenberg and J. E. Brand, "Television News and Advertising in Schools: The 'Channel One' Controversy," *Journal of Communication* 43, no. 1 (1993): 143–51.

143. Atkinson, "Channel One Hits Bump" (see note 135).
144. Government Accounting Office, "Public Service Announcement Campaigns" (see note 133).
145. M. Richtel, "Despite Privacy Concerns, Free PC's Attract Consumers and Schools," *The New York Times*, February 25, 1999, <http://query.nytimes.com/gst/fullpage.html> (retrieved July 25, 2007).
146. Government Accounting Office, "Public Service Announcement Campaigns" (see note 133).
147. M. Richtel, "Despite Privacy Concerns" (see note 145).
148. Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
149. Ibid.
150. Story and French, "Food Advertising and Marketing Directed at Children and Adolescents in the U.S." (see note 133).
151. Ibid.
152. S. B. Austin and others, "Clustering of Fast-Food Restaurants around Schools: A Novel Application of Spatial Statistics to the Study of Food Environments," *American Journal of Public Health* 95, no. 9 (2005): 1575–81.
153. Government Accounting Office, "Public Service Announcement Campaigns" (see note 133).
154. Institute of Medicine, *Food Marketing to Children and Youth* (see note 4); M. Vallianatos, *Healthy School Food Policies: A Checklist*, Working Paper (Los Angeles, Calif.: Center for Food and Justice, Urban and Environmental Policy Institute). [Online]. Available: http://departments.oxy.edu/uepi/cfj/resources/healthy_school_food_policies_05.pdf [accessed July 25, 2007].
155. Institute of Medicine, *Food Marketing to Children and Youth* (see note 4).
156. Story and French, "Food Advertising and Marketing Directed at Children and Adolescents in the U.S." (see note 133).
157. Nathanson and Chakroff, "Parent and School Interventions: Mediation and Media Literacy" (see note 126).
158. D. F. Roberts and others, "Developing Discriminating Consumers," *Journal of Communication* 30 (1980): 229–31.
159. E. W. Austin and K. K. Johnson, "Effects of General and Alcohol-Specific Media Literacy Training on Children's Decision-Making about Alcohol," *Journal of Health Communication* 2 (1997): 12–42.
160. Federal Communications Commission, "Children's Television Programs: Report and Policy Statement" (see note 30).
161. Calvert, *Children's Journeys through the Information Age* (see note 38).
162. Ibid.
163. M. Gladwell, *The Tipping Point: How Little Things Can Make a Big Difference* (New York: Little, Brown, and Company, 2000).
164. Calvert, *Children's Journeys through the Information Age* (see note 38); E. Wartella, A. G. Caplovitz, and J. H. Lee, "From Baby Einstein to Leapfrog, from Doom to the Sims, from Instant Messaging to Internet

- Chat Rooms: Public Interest in the Role of Interactive Media in Children's Lives," *Social Policy Report* 18, no. 4 (2004): 3–19.
165. K. Montgomery and A. Pasnik, *Web of Deception: Threats to Children from Online Marketing* (Washington, D.C.: Center for Media Education, 1996).
166. Montgomery, "Digital Kids" (see note 32); E. Wartella, J. Lee, and A. Caplovitz, "Children and Interactive Media: A Compendium of Current Research and Directions for the Future," Retrieved March 18, 2007, from www.digital-kids.net.
167. Wartella, Caplovitz, and Lee, "From Baby Einstein to Leapfrog" (see note 164).
168. J. Turow, "Family Boundaries, Commercialism, and the Internet: A Framework for Research," *Journal of Applied Developmental Psychology* 22, no. 1 (2001): 73–86.
169. Wartella, Lee, and Caplovitz, "Children and Interactive Media: A Compendium of Current Research and Directions for the Future" (see note 166).
170. Cohen, "Spies among Us" (see note 31); M. W. Thompson and J. H. Beales III, "Spyware." Testimony before the Subcommittee on Commerce, Trade, and Consumer Protection of the Committee on Energy and Commerce, United States House of Representatives, Washington, D.C. Retrieved February 6, 2005, from <http://ftc.gov/os/testimony/108hearings.htm>.
171. Thompson and Beales, "Spyware" (see note 170).
172. Institute of Medicine, *Food Marketing to Children and Youth* (see note 4), pp. 344–46.
173. D. Thornburgh and H. S. Lin, eds., *Youth, Pornography, and the Internet* (Washington, D.C.: National Academies Press, 2002).