# Children's Exposure to TV Advertising in 1977 and 2004

## Information for the Obesity Debate

Federal Trade Commission
Bureau of Economics Staff Report

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# Executive Summary

Obesity has become a major health concern in the U.S. and other countries as overweight and obesity rates have increased markedly since the early 1980s. The rise in children's obesity is a particular concern, because overweight children are more likely to become overweight adults, and because obese children are likely to suffer from associated medical problems earlier in life.

Food marketing is among the postulated contributors to the rise in obesity rates. Food marketing to children has come under particular scrutiny because children may be more susceptible to marketing and because early eating habits may persist. Some researchers report that children's exposure to television advertising has been increasing along with the rise in children's obesity rates.

This report presents a comprehensive analysis of the exposure of children, ages 2–11, to television advertising based on copyrighted Nielsen Monitor-Plus/Nielsen Media Research audience data from the 2004 television programming season. The detailed data covers the individual advertisements shown during four weeks of national and local ad-supported programming and includes paid commercials, public service announcements, and promotions for television programming. These data are projected to annual estimates.

Thirty years ago similar assessments of children's television advertising were done for the Federal Trade Commission's 1978 Children's Advertising Rulemaking. Since these research reports were done before the rise in children's obesity, they provide a baseline to measure changes in children's exposure to television advertising.

Since the late 1970s, other marketing has likely changed and new forms of marketing have emerged, including Internet-based advertising techniques. This report does not cover these marketing activities, but the FTC is in the process of conducting another study to attempt to gauge the extent of all forms of marketing to children.[1]

[1] **Federal Register** / Vol. 72, No. 74 / Wednesday, April 18, 2007 / Notices. See also Moore (2006) on advergaming.

This report can also be used to measure future changes in children's exposure to television advertising as industry, parents, and children react to these health concerns.

## Summary of Major Findings for 2004

**Children's Exposure to Television Advertising** In 2004 we estimate that children ages 2–11 saw about 25,600 television advertisements. In this study, advertisements include paid ads, promotions for other programming, and public service announcements. Of these 25,600 ads, approximately 18,300 were paid ads and most of the remaining 7,300 ads were promotions for other programming. The average ad seen by children was about 25 seconds long. Thus, children saw about 10,700 minutes of TV advertising in 2004. For comparison, adults saw approximately 52,500 ads and 22,300 minutes of advertising.

Our estimates differ from other published estimates of children's exposure to television advertising; one widely cited estimate, that children see around 40,000 ads per year, is more than 50 percent higher than ours. Our estimates are based on very detailed data not available to most researchers. Most published estimates are based on aggregate estimates of the amount of time children watch television, combined with counts of ads aired per hour on selected samples of TV programming. This approach can be accurate as long as the component estimates are accurate representations of children's viewing habits. But our results indicate, for instance, that ad-supported television accounts for only 70 percent of children's TV viewing in 2004, and children get much of their advertising exposure from prime time and other nonchildren's programming. These and related issues must be reflected in the component estimates for such aggregate estimates to be accurate.

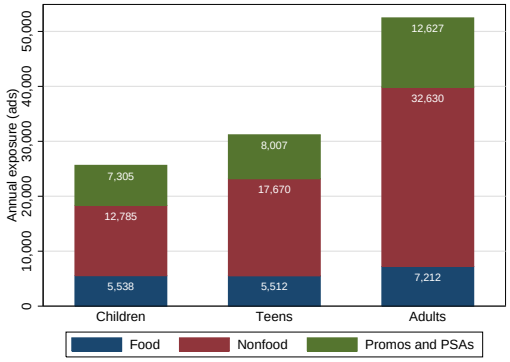



*Figure ES.1*

**Exposure to TV Advertising**

**Amount of Time Children Spend Viewing Ad-Supported Television** We estimate that in 2004 children 2–11 watched about two and one-quarter hours of ad-supported television per day, for a total of 16 hours per week, about 70 percent of their total television viewing time, about 23 hours per week. Teens, ages 12–17, watched about two and one-half hours of ad-supported television daily. Adults watched nearly four and one-quarter hours daily, almost twice as much as children, and this accounts for most of adults' greater ad exposure.

**When Children Are Exposed to Ads** We find considerable dispersion in when children accumulated their ad exposure. Saturday morning between 8 am and noon was an important contributor to children's ad exposure, but was only 4.3 percent of the total. Sunday morning contributed 2.5 percent. Evenings between 8 pm and 12 am contributed nearly 29 percent of children's total ad exposure. The time between 4 pm and 8 pm contributed another 26 percent of the total. Prime-time viewing peaked around 8 pm and was the primary time when ad exposure from broadcast programming exceeded that from cable programming. These patterns of ad exposure have important implications for studies that sample children's programming in an effort to produce broad estimates of children's ad exposure, and they help to explain some of the differing results found in the research literature.

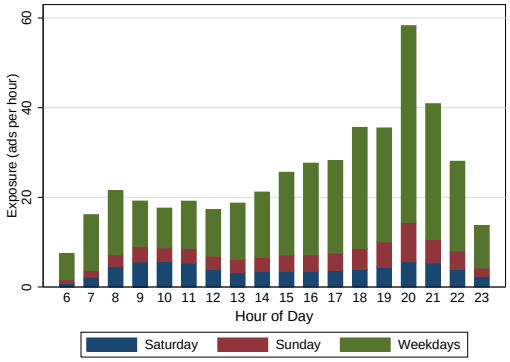



*Figure ES.2*

**Time of Children's Exposure to Advertising**

**Children's Exposure to Food Advertising** Children 2–11 saw approximately 5,500 food ads in 2004, 22 percent of all ads viewed. The leading categories of food advertising seen by children include Restaurant and Fast Food (5.3 percent of total ad exposure); Cereal (3.9 percent; Highly Sugared Cereals are 85 percent of this category); Desserts and Sweets

(3.5 percent); Snacks (1.9 percent); Sweetened Drinks (1.7 percent); Dairy (1.4 percent); and Prepared Entrees (0.9 percent). All other food categories combined are 3.1 percent of ad exposure.

We also group shows according to whether the children's share of the audience is at least 20 percent (family shows) or at least 50 percent (children's shows). Food advertising is a larger share of children's advertising exposure as child share increases — from 22 percent of ad exposures on all shows to 32 percent on children's shows. The proportion of children's ad exposure is higher on children's shows for all of the food categories listed above, except for Restaurant and Fast Food ads. Children get nearly 80 percent of their Cereal ad exposure on children's shows and about one-third of their Sweetened Drink and Restaurant and Fast Food advertising there. The other food categories are between these extremes.

**Sedentary Entertainment Dominates Other Ads Seen by Children** Seventy-eight percent of the ads children saw in 2004 were for nonfood products. The top three nonfood product categories were Promotions for television programming (28 percent), Screen/Audio Entertainment (7.8 percent), and Games, Toys and Hobbies (7.5 percent). Together these three categories of sedentary entertainment products amounted to 43 percent of children's ad exposure, approximately double the number of food ads seen by children.

Children got approximately 85 percent of their Games, Toys and Hobbies ad exposure on children's shows, as well as 44 percent of their Screen/Audio Entertainment exposure, and 33 percent of their Promotions exposure. Together these three categories constituted 85 percent of children's nonfood ad exposure from children's shows.

**Children's TV Viewing Is Concentrated on Cable** Cable programming was a major source of children's television viewing and ad exposure in 2004. Sixty-one percent of children's ad exposure and 72 percent of their food ad exposure was from cable programming. For children's programming, the concentration was even higher; 96.5 percent of all children's ad exposure from children's shows and 97.6 percent of their food ad exposure from children's

shows was from cable programming.

## Changes in Children's Exposure to Advertising Between 1977 and 2004

**Children's Exposure to Paid Advertising Has Fallen; Overall Ad Exposure Is Up** Studies from the FTC's Children's Advertising Rulemaking indicate that children 2–11 saw about 19,700 paid ads and 21,900 ads overall in 1977. When compared to our estimates of 18,300 paid ads and 25,600 ads in 2004, we find that children's exposure to paid advertising fell by about 7 percent and exposure to all advertising rose by about 17 percent since 1977. This difference reflects the substantial increase in children's exposure to promotional ads for television programming over this time period. Children saw approximately 2 percent fewer minutes of advertising and 19 percent fewer minutes of paid advertising in 2004 than in 1977. These reductions reflect the combined impact of the reduced amount of time children spend watching ad-supported television in 2004 compared to 1977 and ads that are shorter on average.

**Children's Exposure to Food Advertising Has Not Risen** The 1977 studies do not give a complete estimate of children's exposure to food ads, but using other data from the period we find that food ad exposure has not risen and is likely to have fallen modestly. In our primary scenario, we estimate that children saw 6,100 food ads in 1977. This suggests that children saw about 9 percent fewer food ads in 2004 than in 1977.

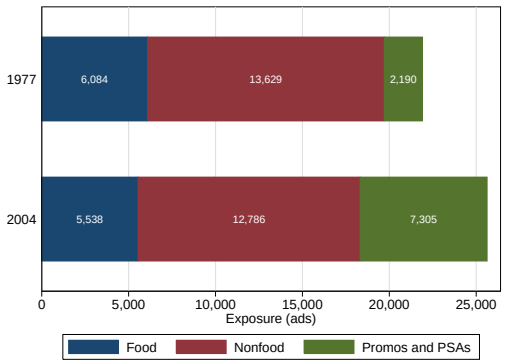



*Figure ES.3*

**Children's Exposure: 1977 and 2004**

In 1977 ads for Cereals and for Desserts and Sweets dominated children's food ad exposure, with the Restaurant and Fast Food and the

Sweetened Drinks categories also among the top categories. As seen above, in 2004 these categories were still among the top categories of food ads children saw, though Cereals and Desserts and Sweets no longer dominated. Restaurant and Fast Food ads had an increased presence, and were joined by Snacks, Dairy and Prepared Entrees as substantial sources of children's food ad exposure. Thus, the mix of food ads seen by children in 2004 is somewhat more evenly spread across these food categories than in 1977.

**Children's Exposure to Ads for Sedentary Entertainment Has Grown** The reduction in food advertisements seen by children has been more than compensated for by substantially increased Promotions for television programming and increased advertising for Screen and Audio Entertainment. These two categories are both larger than any food category in 2004 and exceed Games, Toys and Hobbies, which had been the top nonfood category in 1977.

**Children's Ad Exposure Is More Concentrated on Children's Cable Programming in 2004** Children get approximately half of their food advertising and about one-third of their total advertising exposure from programs in which children are at least 50 percent of the audience in 2004, compared to about one quarter in 1977. Ads for some food categories and for toys appear to be targeted to children.[2] Virtually all of this 2004 ad exposure on children's programming is from cable shows; in 1977, when cable programming was in its infancy, children's shows came from national broadcast and local sources.

## Discussion of Empirical Findings and Obesity

**Evidence on TV Advertising's Relation to Obesity** Many commentators have suggested that marketing to children may be a significant factor in the growth of obesity in

[2]See Gantz et al. (2007) for a recent content analysis of television advertising on children's and general interest programming. Neither this report nor Gantz et al. (2007) considers whether children may respond differently to the types of ads aired on children's programs.

U.S. children. This hypothesis is well beyond anything we could test formally with the television advertising data analyzed here. Nonetheless, our data can shed light on aspects of this hypothesized link.

First, our data do not support the view that children are exposed to more television food advertising today. Our best estimates indicate that children's exposure to food advertising on television has fallen by about 9 percent between 1977 and 2004. Children's exposure to all paid television advertising has fallen as well.

Second, our data do not support the view that children are seeing more advertising for low nutrition foods. In both years the advertised foods are concentrated in the snacking, breakfast, and restaurant product areas. While the foods advertised on children's programming in 2004 do not constitute a balanced diet, this was the case as well in 1977, before the rise in obesity.

**Evidence Related to Ad Restrictions on Children's Programming** Some have called for various restrictions on advertising to children, including a complete ban on advertising to younger children and further restrictions on the number of minutes of advertising on children's television programming. Others have called for self-regulation or legislation that would limit advertising on children's programming to foods that meet specified nutrition characteristics. Some industry members have proposed voluntary commitments along these lines. This report does not provide a basis to assess the likely effects of any of these approaches, or the substantial legal issues that would have to be addressed for regulation, but it does have several findings that relate to this discussion.

First, children today do get half of their food advertising from shows where children are at least 50 percent of the audience. Thus, changes to the mix of ads on children's shows could potentially have an effect on the mix and number of food advertisements that children see. This effect would be considerably larger than would have been the case in 1977, when programming was not as specialized and children did not get much of their advertising

exposure from children's programs. That said, children also get half of their food advertising exposure from nonchildren's shows and food ads on those shows might increase if restrictions were placed on children's programming.

Second, our study does provide some insight on another issue that has received little attention in the public discussion: what type of advertising would likely replace the restricted food advertising, if it is replaced? The hope is that advertising for better food might increase. Beyond that, the best guidance on this question is found by looking at the other products currently advertised on children's programs, since these are the products most likely to increase their advertising if food advertising is reduced. Currently, advertisements for sedentary entertainment products outnumber food advertisements by two to one and constitute most of the other advertising on children's programming. Presumably these products would expand their advertising further, if food advertising is reduced. Whether such a shift in advertising seen by children would affect obesity in U.S. children — either positively or negatively — is an open question which has received little attention.

Finally, it is worth noting that a restriction on advertising on children's programming would not fall evenly on industry participants. In 2004 broadcast networks had very few programs where children were more than 50 percent of the audience. Successful children's programming is now largely on children's cable networks. In fact, over 97 percent of food advertisements children see on children's shows are from cable programming.

## Final Notes

Our study is limited to advertising on television. Television is still the medium where food advertisers spend most of their advertising dollars. In 2004 approximately 75 percent of all food advertising spending on measured media was spent on television, down from 83 percent in 1977. Many producers are exploring other advertising media and methods as television audiences become more expensive to reach. This is true for advertising to children as well. Advergaming, child-oriented producer-sponsored websites, product placements and other tie-

ins with movies and television programming are all part of the marketing landscape, and research to quantify these efforts is only beginning.[3]

This study was conducted to provide a comprehensive assessment of the amount and type of television advertising seen by children in 2004. It has been nearly 30 years since the last evaluation of children's television ad exposure using detailed viewing data. Advertising seen by children has received considerable attention in recent years as a possible contributor to rising obesity in American children, and as a possible vehicle to help reverse that trend. Hopefully, this report will provide useful information to guide discussion of the issues. The report also provides a baseline against which to measure future changes in children's exposure to television advertising as parents, firms and children react to obesity concerns.

[3]The FTC is beginning a study to attempt to gauge the extent of these other forms of marketing to children. **Federal Register** / Vol. 72, No. 74 / Wednesday, April 18, 2007 / Notices.

# 1 Introduction

Obesity has become a major health concern in the U.S. and other countries. As Table 1.1 shows, the fraction of the population that is overweight has increased markedly since the early 1980s. The rise in children's obesity is a particular concern, because overweight children are more likely to become overweight adults, and because obese children are likely to suffer from associated medical problems such as diabetes earlier in life.

*Table 1.1*
**Trends in Overweight Among Children, Adolescents, and Adults**
*Percent of population*

| Age | NHANES I 1971–1974 | NHANES II 1976–1980 | NHANES III 1988–1994 | NHANES 1999–2000 | NHANES 2001–2002 | NHANES 2003–2004 |
|---|---|---|---|---|---|---|
| 2–5 | 5 | 5 | 7 | 10 | 11 | 14 |
| 6–11 | 4 | 7 | 11 | 15 | 16 | 19 |
| 12–19 | 6 | 5 | 11 | 16 | 17 | 17 |
| 20+ | — | 47 | 56 | 64 | 66 | 66 |

*Source.* Ogden et al. (2006) for NHANES 1999–2004; Ogden et al. (2002) for NHANES I–III for children and adolescents; and CDC (2005) for NHANES I–III for adults.
*Notes.* Overweight defined as BMI for age at $95^{th}$ percentile or higher on standard sex- and age-specific CDC growth charts for children and adolescents and BMI $\geq$ 25.0 for adults.

Food marketing is among the postulated contributors to the rise in obesity rates. Food marketing to children has come under particular scrutiny because children may be more susceptible to marketing and because early eating habits may persist. Some researchers report that children's exposure to television advertising has been increasing along with the rise in children's obesity (*e.g.*, IOM 2005; Hastings et al. 2003).

This report undertakes a comprehensive analysis of children's exposure to television advertising in 2004. We estimate that, on average, children 2–11 viewed 25,629 television ads annually. Of these 5,538 were food ads (food ads constituted 21.6 percent of all children's television ad exposure). The largest categories of food ads viewed were Restaurants and Fast Food (5.3 percent of all ads viewed), Cereal (3.9 percent), Desserts and Sweets (3.5 percent), and Snacks (1.9 percent). Children's nonfood advertising exposure was concentrated in Promotions for television programs (27.7 percent of all ads viewed), Games, Toys and Hobbies

(7.5 percent), and Screen/Audio Entertainment (7.8 percent).[4]

We also examine the sources of children's advertising exposure. We find that 41.2 percent of their exposure to TV advertising comes from shows with a relatively small children's audience (fewer than one percent of the child population watching) *and* for which the show's audience had a small percentage of children (less than 20 percent).[5] A substantial amount of their advertising exposure, 31.3 percent, comes from shows with larger children's audiences (greater than one percent of the child population) and for which the show's audience was largely made up of children (greater than 50 percent).[6] Thus, children view 72.5 percent of their ads on two distinct types of programming — general interest or adult-oriented programming with small child audiences and programming apparently (successfully) targeted to children with a large child share and audience.

We find that 61.4 percent of children's television advertising exposure comes from cable programming. Of the cable ads children see, 35.5 percent come from general interest or adult shows with a small children's audience (less than 1 percent of the child population) while 49.0 percent come from children's programming (children are at least 50 percent of the audience) with a large child audience (greater than 1 percent of the population).

We also examine when children receive their advertising exposures. Over the average week, children are exposed to 103.5 ads during Monday through Friday prime time television viewing (8 p.m. until midnight). This results in an average of 20.7 ads per weekday viewed during prime time. In comparison, on Saturday mornings (8 a.m. until noon) children see an average of 21.1 ads.

These findings have implications for both policy and research. First, we see that changes in advertising practices on shows for which children are disproportionately represented in

[4]Promotions are ads for other television shows or networks and will often be referred to as 'Promos' in this report. Screen/Audio Entertainment includes ads for movies, computer games, video games, DVDs and CDs.

[5]96 percent of all ads aired had a children's viewership of less than one percent of the child population. Approximately half of their ad exposure comes from these shows.

[6]None of the shows in our data had a child audience larger than 10 percent of the child population. Very few had a child audience greater than five percent of the child population. Only 19 percent of children's ad exposure came from shows with a child audience greater than three percent of the child population.

the audience could have a significant impact on the mix of ads that children see. Overall, 46.9 percent of children's TV ad exposure comes from shows in which at least 20 percent of the audience is children; 33.8 percent comes from shows in which at least 50 percent of the audience is children.[7]

Second, content analysis that focuses on children's programming, defined by the time of day and day of the week, is missing a significant portion of children's advertising exposure. Over an entire week children receive 28.7 percent of their exposures during prime time and only 6.8 percent on weekend mornings.

We also review and summarize reports submitted by John Abel and J. Howard Beales to the Federal Trade Commission's 1978 Children's Advertising Rulemaking (Abel 1978; Beales 1978). Since these research reports were done in 1978, before children's obesity became a serious health problem, they provide a baseline to measure changes in children's advertising exposure on TV.

We find that children's exposure to television advertising has increased somewhat (21,904 in 1977 to 25,629 in 2004) while exposure to TV food ads has not increased and has likely decreased some since 1977. Not all food categories saw a decrease in children's viewing; we find that children's exposure to ads for Restaurants, Fast Food and Snacks has increased. On the other hand, their exposure to ads for Cereal, Desserts and Sweets has declined. Exposure to ads for Games, Toys and Hobbies also fell. The categories for which exposure has increased the most are Screen/Audio Entertainment and Promotions. Children saw very few ads encouraging active pursuits, such as ads for bicycles or other sporting goods, in either period.

[7]In 2004 children were 14.3 percent of the population of those two and older – the potential viewing audience.

# 2 Television Landscape in 1977 and 2004

Before proceeding with our analysis of advertising data, we briefly describe some of the major changes in television viewing options between 1977 and 2004. These changes shape advertising viewing patterns in our data.

## 2.1 Broadcast Networks Dominated in 1977

In 1977, three national broadcast networks — ABC, CBS, and NBC — and their affiliated stations dominated television advertising. According to the *Economist* (1981), network affiliates accounted for 93 percent of all TV viewing in 1975. A. C. Nielsen Co. (1977, p. 12) reported that 728 commercial stations and 256 public stations were in operation at the beginning of 1977. Of the commercial stations, 83 percent were affiliated with ABC (195), CBS (198), or NBC (209). The remaining commercial stations were independent or had some affiliation with more than one network (Abel 1978, p. 1–2). According to A. C. Nielsen Co. (1977), 96 percent of households could receive four or more stations and 66 percent of households could receive seven or more stations. Only 14 percent of households were wired for cable (A. C. Nielsen Co. 1977, p. 6).

## 2.2 Cable and Broadcast Networks Share the 2004 Market

These three national broadcast networks remain significant players in 2004, but they compete with an increasing number of other television programming providers. ABC, CBS, and NBC affiliates captured just 28.1 percent of prime time viewing and 28.4 percent of total day viewing in 2004, down from 93 percent in 1977. Seven other national broadcast networks were monitored by Nielsen in 2004 — FOX, PAX, United Paramount Network (UPN), Warner Brothers (WB), Telemundo (TEL), TeleFutura (TF), and Univision (UNI). In addition, Nielsen monitors 10 independent broadcast TV stations in the top 75 local markets.

Cable television has grown significantly in the intervening years. The Cabletelevision

Advertising Bureau (CAB) reports 65 national cable networks. Cable reaches approximately 85 percent of households in the U.S. Of the 65 national cable networks in operation during 2004, 36 reached at least 70 percent of the national market (Cabletelevision Advertising Bureau 2006b,a,d). Cable attracted about one-third of all television advertising dollars.[8] Cable captured 43.9 percent of prime time and 46.5 percent of total daily viewing during the 2003–2004 programming season (Cabletelevision Advertising Bureau 2006c). While cable's overall share continues to increase, no single cable network is viewed by more than 40 percent of the population in an average week. In contrast, ABC, CBS, FOX, and NBC are all viewed by at least 70 percent of the population in an average week.[9]

## 2.3 Increasing Specialization and Segmentation

The growth in television providers has coincided with increasing specialization and market segmentation. More networks produce and distribute television programming; however, people are not watching more television. Adults spent about the same amount of time watching TV in 2004 as in 1977, about four hours per day, while children reduced their TV watching, from about four hours per day to about three and a quarter hours per day (of which two and a quarter hours was ad-supported TV).[10] Thus, networks face increased competition for viewers. Some networks have responded by offering programming content narrowly targeted to certain populations — "Animal Planet" and "Cartoon Network," for example.

Part of the specialization in children's programming may be related to the fact that children had a greater opportunity to watch TV independently from their parents in 2004 than in 1977. The Kaiser Family Foundation found that 73 percent of 8–18 year olds and 67 percent of 8–10 year olds live in households with three or more TVs. Also, 84 percent of children 6 months to 6 years old live in households with two or more television sets (Roberts

[8]According to the CAB, cable attracted about 33 percent of television advertising dollars in the fourth quarter of 2003 and 36 percent in the fourth quarter of 2004 Cabletelevision Advertising Bureau (2006e).

[9]See Television Bureau of Advertising (2006a), which is based on data from the first quarter of 2006.

[10]TV viewing in 1977 from A. C. Nielsen Co. (1977); in 2004, ad-supported figure from staff analysis of Nielsen data. Total 2004 children's figure from Television Bureau of Advertising (2006b). Teens' television watching also declined but not as steeply as children's.

et al. 2005). Approximately 33 percent of children 6 months to 6 years old have a television in their bedroom, and for 33 percent of these, at least half of total television viewing occurs in their bedroom (Rideout and Hamel 2006). In comparison, only 45 percent of households owned more than one TV in 1977 (A. C. Nielsen Co. 1977).

With the three major networks dominating the television landscape in 1977, less specialization or market segmentation was possible. These changes as they relate to children's viewing can be seen from the relative numbers of children watching specific programs in the two periods. In 1977 more than 24 percent of all children watched the top nine network programs; more than 10 percent of all children watched the top 60 network programs (Abel 1978, Appendix C). In contrast, in 2004 no program had 10 percent of children watching. The top ranked show by child audience size in our 2004 data drew approximately 8 percent of all children ("American Idol"). Only 11 shows in our data were watched by more than 5 percent of the 2–11 population. Few shows — 7 percent — were watched by more than one percent of the 2–11 population.

While relatively few shows had large child audiences in 2004, many shows successfully specialized in entertaining children. We will explore these issues in detail later, but a few points are appropriate here. Many shows in 2004 had audiences where children constituted a high share of the audience. Moreover, those 2004 shows with a predominantly child audience often also had a high (for 2004) child audience size. For example, about half of the top fifty shows each month ranked by size of the child audience also had a child share greater than 50 percent. Finally, this overlap occurred primarily on cable; children constituted a large share of the audience for few broadcast programs.

So overall, the TV world of 1977, with fewer programs aimed at broad audiences, has shifted to a world with many more program choices, smaller audiences for those programs, and more specialized programming appealing to narrower segments of the audience, including the children of interest in this study.

# 3 Television Advertising in 2004

Children are exposed to advertisements as they watch television. The question of how many advertisements children see, and whether that number has increased substantially over time, has been a topic of considerable interest as investigators attempt to identify the major factors potentially contributing to the rise in childhood obesity in America. Thus, one of the first issues we examine for 2004 is the total number of advertisements that children see. In subsequent sections we examine when and where children get their advertising exposure in 2004, what products are featured in that advertising, and how much of that advertising comes from "children's programming." We also present some information on advertising to young children.

We investigate exposure to television advertising using a comprehensive database of advertising aired during four weeks in the 2003–2004 programming season.[11] We use copyrighted Nielsen Monitor-Plus/Nielsen Media Research data linking Nielsen audience estimates to the television advertising aired on ad-supported television during the 2003–2004 programming season. The data covers advertising aired during the four weeks beginning November 2, 2003, February 8, 2004, May 2, 2004, and July 4, 2004.[12] We chose these weeks in order to match the Abel and Beales 1978 studies of children's exposure to television advertising and because they occur during sweeps periods, the only times detailed local data is available. We do not know how viewing and advertising patterns in these weeks may differ from the rest of the year. However, sweeps periods are used to determine pricing for local spot ads and thus should only affect network affiliate programming, advertising, and promotions; as we will see later in this section, less than 40 percent of children's advertising exposure is from network affiliates.

The data includes all television advertisements aired during the monitored ad-supported programs. These include paid commercial advertisements, public service announcements

[11] See Appendix A for a detailed description of the data and methods we used in our analysis.

[12] For brevity, we will refer to the 2003–2004 programming season as 2004.

(PSAs), and Promotions for a network's own or affiliated programming. Networks that are not ad-supported are not included in our data. Therefore we have no information on Promotions on pay cable networks or sponsorship messages such as those aired on Disney and PBS.[13] The data covers both national advertising and local spot advertising and includes nearly one million national ads and nearly five million local spot ads.[14] In addition to audience estimates for children, younger children, teens, and adults, the data includes, for each ad, information on the advertiser, the brand, the television network, the program, the time the ad aired, the ad's length, and a product code.

We use Gross Rating Points (GRPs), which represent the percentage of a given population that is estimated to be in the audience of a program or commercial, to estimate children's average exposure to advertising.[15] Multiplying the child GRP for an ad by the 2–11 population yields an estimate of the number of children who viewed that ad.

To illustrate the process of estimating annual ad exposure, consider calculating the "average" child's exposure for one day in our data. First, calculate the estimated number of children who saw each ad, as described above. Then sum over all the ads aired on all television programming over that day. The resulting figure is the total number of ads seen by all children in the U.S. that day. Finally, dividing by the 2–11 population gives the estimated number of ads the average child saw that day.[16]

To estimate the average annual exposure to television advertising, we follow the above procedure using all four weeks of our data and multiply the result by 365/28.

[13]Gantz et al. (2007) examined sponsorship messages on Disney and PBS along with standard advertising; they found a very limited number of ad-like sponsorship messages, less than half of which related to food. However, the omission of these networks and pay cable networks from our data clearly causes an underestimate of exposure to Promotions.

[14]National advertising refers to advertising purchased from national networks or through national syndication that airs nationally. In contrast, local spot (spot) advertising is purchased from a single station and airs only on that station.

[15]A children's GRP of 2 means that 2 percent of the 2–11 population is estimated to be watching a given program.

[16]Note we first multiplied each ad's GRP by the population and then divided by the population again at the end. Equivalently, one can calculate the day's exposure by just summing the GRPs (and dividing by 100 since GRPs are expressed as whole numbers rather than percents).

## 3.1 Children's Exposure to Advertising

Table 3.1 presents our estimates of children's exposure to TV advertising. We estimate that children ages 2–11 saw, on average, 25,629 television ads per year in 2004. This figure includes paid ads as well as Promos (promotions for other television programming) and PSAs (public service announcements). Young children 2–5 saw 24,939 ads per year, while older children in the group ages 6–11 saw 26,079 ads per year.[17] Average exposure to TV ads in 2004 continues to rise with age — those 12–17 saw 31,188 ads per year, while those 18 years of age and over saw 52,469 ads per year. Thus adults saw more than twice as many ads as children. We will see later in this section that much of the exposure differences between age groups can be traced to differences in time spent watching television.

Table 3.1 also provides data on exposure to minutes of television advertising, in addition to numbers of ads. The two together imply that the average television ad viewed is around 25 seconds long, for all age groups.[18] We find considerable variation in ad length in 2004. Many ads are 15 second (and shorter) in length, but a considerable number of ads are longer than 30 seconds — particularly one minute ads.[19]

*How Much Ad-Supported TV Do People Watch?*

Our data allows us to estimate the hours per day that children, and other age groups, watch Nielsen-monitored, ad-supported television.[20] For each half-hour block of time, we calculate the average number of children watching all programming (using the GRPs for

[17] From here on we will focus attention to children 2–11, teens 12–17, and adults. The appendices include analogous results for younger children 2–5.

[18] The average is 25.1 for children and 25.5 for adults.

[19] Our estimates differ from other published estimates of children's exposure to television advertising; a widely cited estimate is more than 50 percent higher than ours (Kunkel and Gantz 1992). Why are these estimates so far apart? First, we have more detailed data than other researchers have used over the past three decades. Most researchers have relied on aggregate estimates of the amount of time that children watch television each day, combined with counts of ads aired per hour on selected samples of TV programming. These methods can be accurate so long as the component pieces are accurate representations of children's viewing habits. For example, in our 2004 data, an average of 30 ads were aired per hour and children watched an average of 2.3 hours of *ad-supported* television per day. A "back of the envelope" calculation yields an estimate that children saw 25,185 ads per year, which compares quite well with our direct GRP estimate. ($30 \times 2.3 \times 365 = 25,185$) See Section 6.3 for a further discussion of research implications.

[20] According to Kimmelman (2004), the "top 10 cable networks account for 50 percent of all viewing, and the top 20 channels account for 75 percent of all viewing." Our Nielsen data includes 50 ad-supported cable networks, 7 broadcast networks, and nationally syndicated programming.

*Table 3.1*
**Annual Exposure to TV Advertising by Children, Teens, and Adults**

| | All advertising | | Paid advertising | | Food advertising | |
|---|---|---|---|---|---|---|
| | Ads | Minutes | Ads | Minutes | Ads | Minutes |
| Children (ages 2-11) | 25,629 | 10,717 | 18,324 | 7,987 | 5,538 | 2,202 |
| Younger children (ages 2 – 5) | 24,939 | 10,425 | 17,669 | 7,678 | 5,390 | 2,140 |
| Older children (ages 6 – 11) | 26,079 | 10,908 | 18,750 | 8,189 | 5,635 | 2,242 |
| Teens (ages 12 – 17) | 31,188 | 13,127 | 23,181 | 10,306 | 5,512 | 2,193 |
| Adults (ages 18 and over) | 52,469 | 22,271 | 39,842 | 18,043 | 7,212 | 2,834 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Paid advertising excludes promotional advertising for a network's own or affiliated shows and public service announcements.

each ad in that time block). Then we can calculate the number of children-hours of TV watching over a 24-hour period by summing the number of children watching in each time block over the day. Then we divide by the population of children 2–11 to obtain the number of hours the average child watched television in that 24-hour period. This method is extended to all 4 weeks of data and averaged.

Compare this to the more common method of estimating the average amount of children's daily television viewing. Typically a sample of children (or their parents) are each asked about the number of hours per day that they watch television. Those numbers are summed and then divided by the number of children in the sample. We instead "sample" hours and check for the number of children watching in those time blocks. Note that before the final step — dividing by the number of children — both methods obtain comparable figures: the total number of hours that all the children watched television.[21]

As shown in Table 3.2 we find that, on average, children 2–11 watch just over two and one-quarter hours (2:17) of ad-supported TV per day. Teenagers (ages 12–17) watch just over two and one-half hours (2:31) per day, and adults watch nearly four and one-quarter hours (4:10) of ad-supported television per day. Our estimates for children's viewing time

[21]See Appendix A for a detailed description of our method.

*Table 3.2*
**Daily Ad-Supported TV Viewing**

| | Overall | Cable | | Broadcast | |
|---|---|---|---|---|---|
| | Hours | Hours | % | Hours | % |
| Children (ages 2–11) | 2:17 | 1:31 | 66.5 | 0:46 | 33.5 |
| Younger children (ages 2–5) | 2:19 | 1:35 | 68.5 | 0:44 | 31.5 |
| Older children (ages 6–11) | 2:16 | 1:29 | 65.1 | 0:47 | 34.9 |
| Teens (ages 12–17) | 2:31 | 1:27 | 57.3 | 1:04 | 42.7 |
| Adults (ages 18 and over) | 4:10 | 1:49 | 43.6 | 2:21 | 56.4 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

are roughly consistent with other estimates of children's viewing, given that some TV time is spent watching shows without ads, such as on public television stations or premium cable channels.[22] We find that adults watch nearly twice as much ad-supported television as children; this accounts for most of their greater exposure to television ads with the remainder due to their seeing four more ads each hour than children.[23]

## 3.2 Time of Children's Viewing

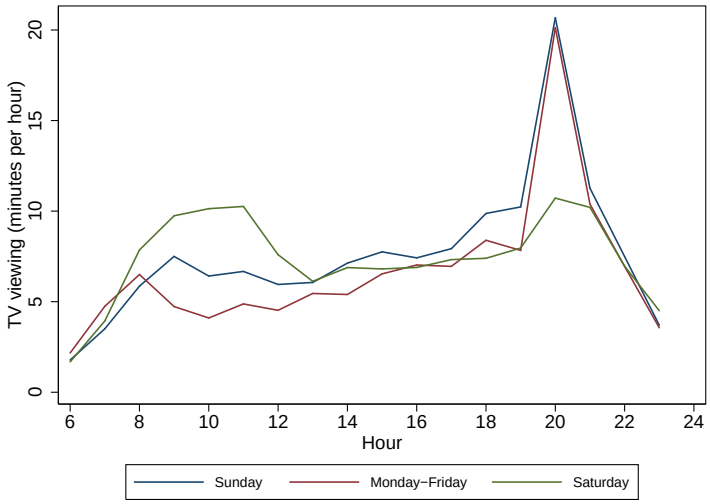
As discussed in the previous section, children watch 2 hours and 17 minutes of ad-supported television each day on average, or about 16 hours each week (15:59). But children's viewing time, or minutes viewed per hour, varies considerably by the time of day and day of the week.

Figure 3.1 shows that for Sunday and the average weekday, there is a large spike in

[22]There are more sources of television programming presented without advertisements now than in 1977. Numerous cable channels as well as public television channels are not supported by advertising. We estimate that in 2004, viewing of ad-supported television accounted for about 70 percent of children's overall TV viewing. Nielsen analysis of television viewing in 2006 finds that around 73 percent of children's viewing was on ad-supported programming — a difference of about 5 minutes per day from our 2004 estimate based on 4 weeks of data. In 1977, ad-free programming was generally limited to, at most, one public television channel per market.

[23]We find an average of about 30 ads aired per hour in our data. The frequency of ads on shows with the largest child (and adult) audiences is, unsurprisingly, higher than on the average show aired. Accounting for viewing habits, we find that children on average see about 31 ads per hour (22.0 paid ads per hour), teenagers see about 34 ads per hour, and adults see about 35 ads per hour.

*Figure 3.1*
**TV Viewing Over the Day**
*Children ages 2–11*



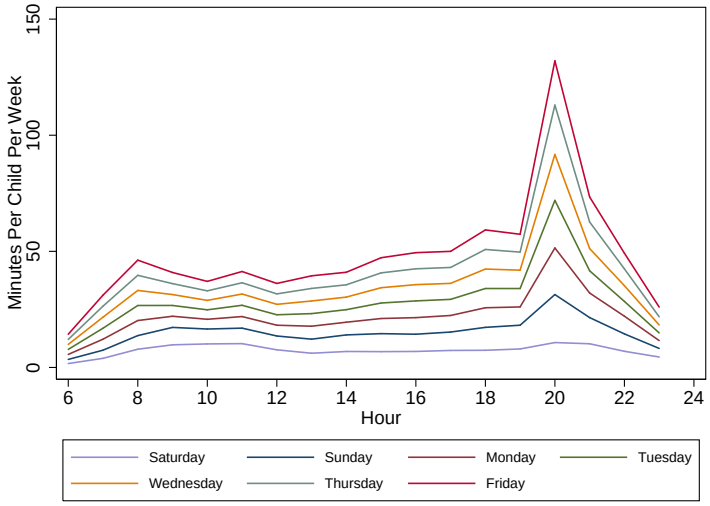

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Ad-supported TV viewing averaged across weekdays.

viewing between around 7 p.m. and 9 p.m. that peaks around 8 p.m. There is also a noticeable increase in viewing on Saturday mornings; however, minutes viewed per hour at around 8 p.m. on weeknights and Sunday is approximately twice the viewing per hour on Saturday mornings. Saturday evening viewing is comparable to Saturday morning viewing.

Figure 3.2 gives comparable information but breaks out the contribution of each weekday and stacks the time of day viewing pattern, thus showing the contribution of each hour of each day to the total week's viewing time. Over the week as a whole, children view nearly three times as much TV in the peak evening hours as in the mornings.

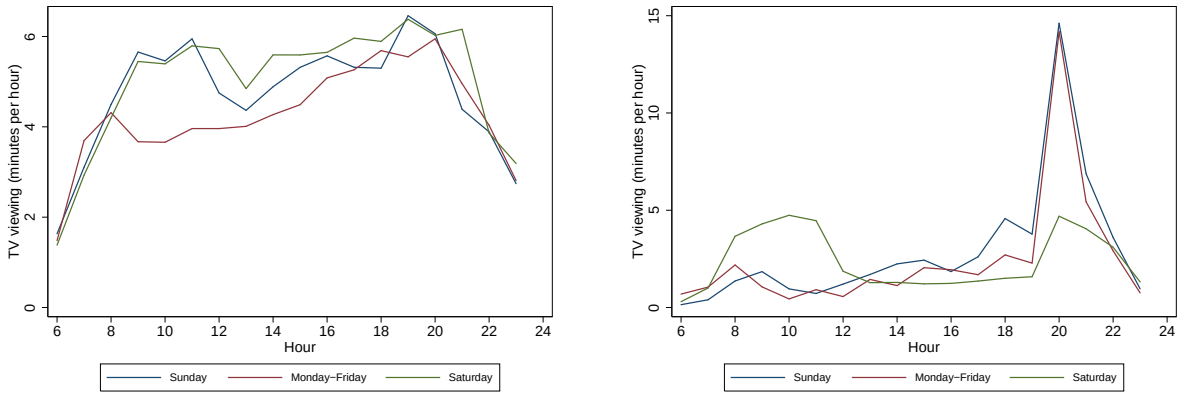
As Table 3.2 indicates, 66.5 percent of children's television viewing is of cable programming. Figure 3.3 indicates that the time of viewing analysis is markedly different for cable and broadcast networks. (Note vertical scales are different.) Broadcast network viewing is responsible for virtually all the prime time peak and contributes about half of the Saturday morning peak. Except for these times, broadcast viewing is lower than cable viewing. Chil-

*Figure 3.2*
**Cumulative TV Viewing Per Hour Over the Week**
*Children ages 2–11*




*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Ad-supported TV viewing.

*Figure 3.3*
**TV Viewing Over the Day**
*Children ages 2–11, cable (a) and broadcast (b)*




(a) (b)

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Ad-supported TV viewing averaged across weekdays.

*Table 3.3*
**Percent of Advertising Exposure By Time Of Day**
*Children ages 2–11*

| Time period | Overall | | | |
|---|---|---|---|---|
| | Sunday | Weekdays | Saturday | Total |
| 12 am – 4 am | 1.0 | 4.5 | 1.1 | 6.5 |
| 4 am – 8 am | 0.7 | 4.8 | 0.8 | 6.4 |
| 8 am – 12 pm | 2.5 | 8.9 | 4.3 | 15.7 |
| 12 pm – 4 pm | 2.6 | 11.4 | 2.9 | 16.8 |
| 4 pm – 8 pm | 3.7 | 19.0 | 3.1 | 25.8 |
| 8 pm – 12 am | 4.1 | 21.1 | 3.5 | 28.7 |
| Daily total | 14.5 | 69.7 | 15.8 | 100.0 |
| Weekly exposure (ads per child) | | | | 491 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

dren's viewing of cable programming is much more stable across hours of the day and days of the week. Throughout the week, except for very early morning and very late evening hours, children view cable programming approximately as much as they view broadcast networks on Saturday mornings.

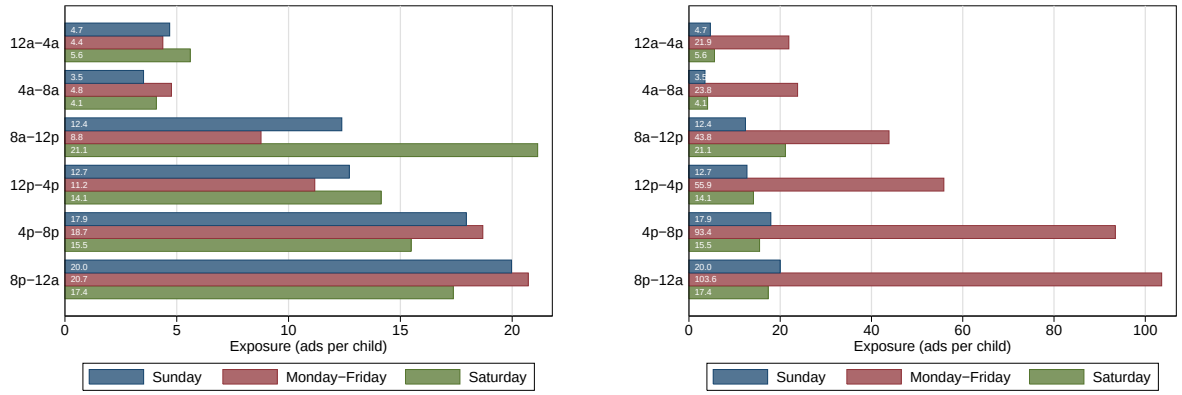
*Time of Advertising Exposure*

We also look at children's exposure to advertising over the day and by days of the week.[24] Table 3.3 gives exposure to advertising over four-hour blocks of the day for weekdays, Saturday, and Sunday. We see that the largest share of children's daily exposure, 21.1 ads per week or 4.3 percent of weekly exposure, comes from viewing between 8 a.m. and noon on Saturdays. However, they get approximately the same share of their advertising exposure, 20.7 ads per week or 4.2 percent of weekly exposure, on the average weekday night between 8 p.m. and midnight. The same time slot on Sunday nights is also a prominent contributor — children on average see 19.9 ads per week or 4.1 percent of weekly advertising exposure.

Figure 3.4 graphically presents the information in Table 3.3. It is evident that overall,

[24]There are also changes in children's exposure to advertising over the seasons; they see fewer food ads in November, for example. See Appendix G for details.

*Figure 3.4*
**Average (a) and Total (b) Exposure to TV Advertising Over the Day**
*Children ages 2–11*




*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Average exposure represents exposure on the average weekday; total exposure represents total exposure across all weekdays. Figures on different scales.

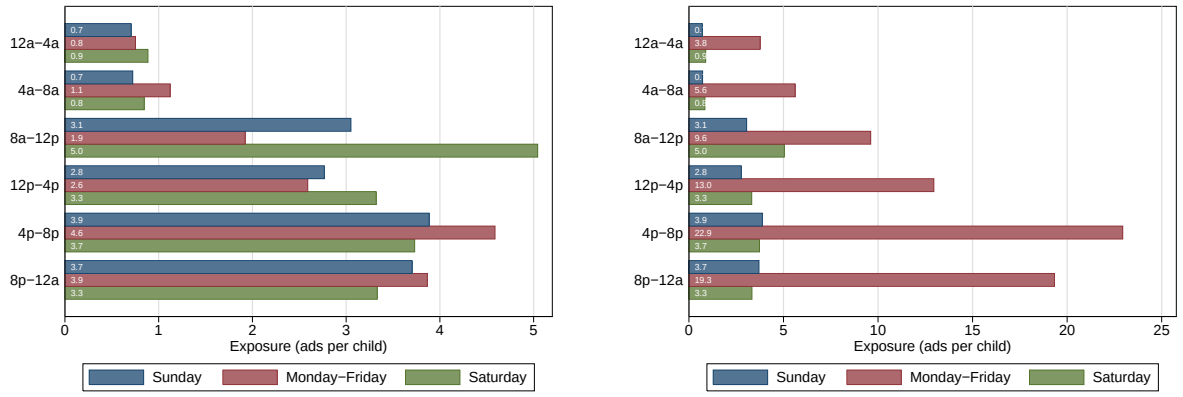
weekday programming dominates children's total exposure to television advertising. Children get 21.1 percent of their ad exposure Monday through Friday between 8 p.m. and midnight; 19.0 percent of their exposure on weekdays between 4 p.m. and 8 p.m.; 11.4 percent of their exposure on weekdays between noon and 4 p.m.; and 8.9 percent of their exposure between on weekdays between 8 a.m. and noon. In total, children get 69.7 percent of their ad exposure on Monday through Friday programming.

Figure 3.4 indicates that Sunday is also a big day for ad exposure. Other than the Saturday morning 8 a.m. to noon block of time, Sunday, Saturday, and the average week day make comparable contributions to children's ad exposure. Sunday dominates Saturday in ad exposure from 4 p.m. until midnight and is close to Saturday's exposure for the noon to 4 p.m. period. Children also see more ads per time block on Sunday than the average weekday from 8 a.m. to 4 p.m. and close to the same ad exposure from 4 p.m. to midnight.

Table 3.3 and Figure 3.4 illustrate that evening programming is an important contributor to children's advertising exposure throughout the week. Children get 28.7 percent of their

weekly ad exposure between 8 p.m. and midnight; they get another 25.8 percent of their exposure between 4 p.m. and 8 p.m. Despite the high level of exposure to advertising on Saturday mornings, over the entire week the 8 a.m. to noon time period contributes only 15.7 percent of children's weekly advertising exposure. The afternoon time period contributes a similar amount, 16.8 percent of weekly ad exposure.

*Figure 3.5*
**Average (a) and Total (b) Exposure to Food Advertising Over the Day**
*Children ages 2–11*

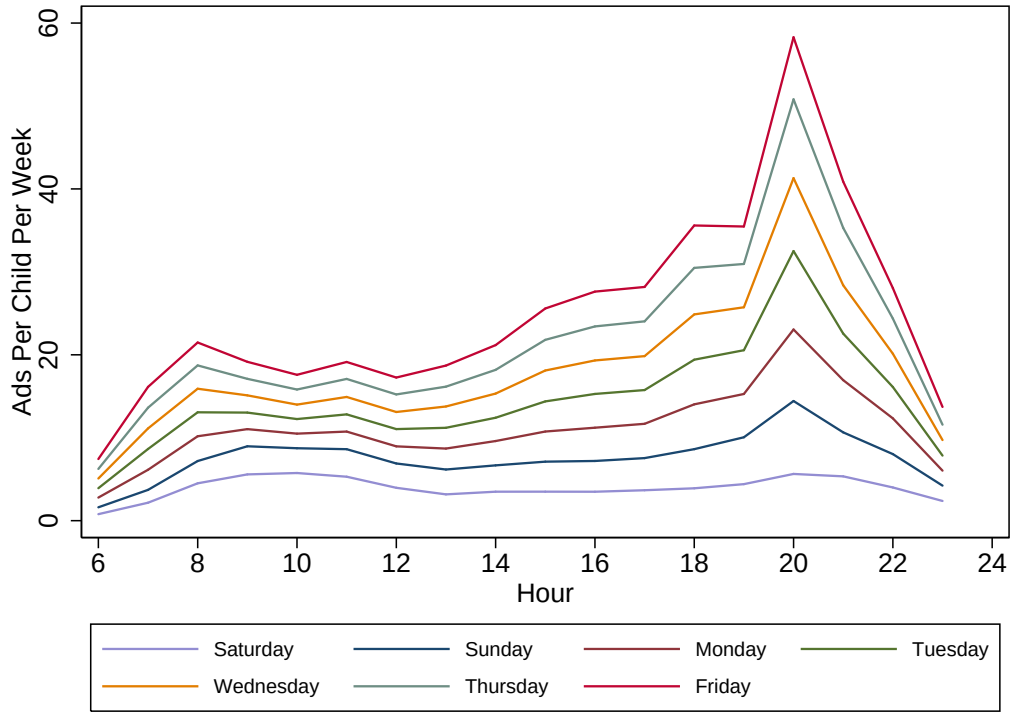



*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Average exposure represents exposure on the average weekday; total exposure represents total exposure across all weekdays. Figures on different scales.

Figure 3.5 shows that food advertising follows a similar pattern, though with some move away from evening programming. Children see 4.8 percent of their food ads on Saturday mornings between 8 a.m. and noon. They get 18.2 percent of their food ad exposure between 8 p.m. and midnight throughout the week, or 3.6 percent on an average week night.

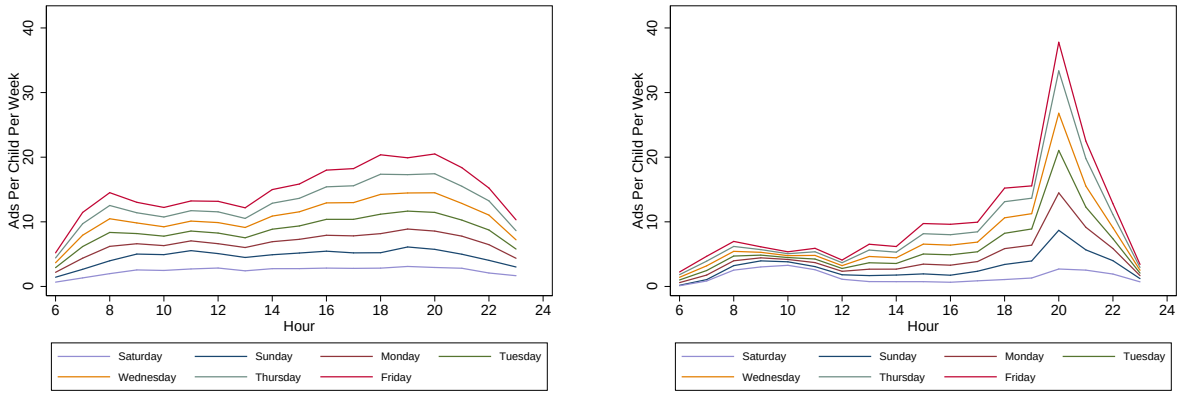
Figure 3.6 gives children's overall (food and nonfood) average ad exposure by hour for each day of the week, with the days stacked to show the cumulative contribution to overall ad exposure. The pattern is similar to that for television viewing by hour and by day of the week; however, one can see that the contribution of morning viewing to ad exposure is lower relative to that of prime time viewing; this illustrates that advertising exposure is relatively

*Figure 3.6*
**Cumulative Exposure to TV Advertising Per Hour Over the Week**
*Children ages 2–11*




*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Figure 3.7*
**Cumulative Exposure to TV Advertising Per Hour Over the Week**
*Children ages 2–11, cable (a) and broadcast (b)*




*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

higher in prime time viewing.

As with children's television viewing over the day and the days of the week, their exposure to television advertising follows different patterns on cable and broadcast networks. Figure 3.7 illustrates how each hour of each day contributes to the average child's total exposure to advertising on cable and broadcast programming. It is only during the evening hours of peak viewing that weekly exposure from broadcast programming surpasses exposure from cable programming.

We see that conclusions about the nature of children's exposure to television advertising based on analyses of Saturday morning programming may be misleading, as they get only 4.3 percent of their weekly ad exposure from that time/day slot. Adding weekday after-school programming to the analysis gives a broader picture of children's exposure — together, weekdays between 4 p.m. and 6 p.m. contribute 8.4 percent of children's ad exposure. However, nearly 30 percent of children's exposure to television advertising comes on programming aired between 8 p.m. and midnight, nearly double the exposure from programming in time periods often treated as representative of children's viewing. Further, we see that patterns of

viewing and ad exposure on cable networks, where 66.5 percent of their viewing takes place, are considerably different than on broadcast networks.

## 3.3 Product Advertising Seen by Children

The types of products advertised to children are not randomly chosen. From an economic point of view, we would expect producers to advertise products on children's programs that they believe children will either buy themselves or will have a role in choosing in the family. Moreover, children do not watch only children's programs. So their exposure to product advertising is also shaped by the mix of other programming they view.

A number of studies from the past have found that the foods advertised on children's programs have been heavily concentrated in the sweetened cereal, candy, snacks, and beverage categories (Kunkel and Gantz 1992; Kotz and Story 1994; Byrd-Bredbenner 2002). Toys have also been consistently found to be heavily advertised to children.

In this section, we provide a detailed examination of the types of product ads seen by children in 2004. We also examine how much of the advertising in various categories comes from children's programming as opposed to other types of programming.

We specifically examined 41 product categories — 28 food categories and 13 nonfood categories.[25] In order to simplify our analysis, we aggregate some of these detailed categories into fewer, and broader, product categories. After the initial presentation of the results we will use these broader product categories.

We estimate that in 2004 children ages 2–11 saw 5,538 food ads per year and 20,091 ads for other products. Table 3.4 shows, in the three left-most columns, children's average annual ad exposure in each category along with the percentage of total ad exposure that category contributes. We also show, in the three right columns, children's average annual

[25]Appendix A discusses the choice of product categories. Appendix B describes how we define each of our categories. In most cases, that simply involves associating one or more product category codes in the Nielsen data with one of our categories. In some cases, our categories include only part of a Nielsen product category. For example, our juice category includes only 100 percent juice while the juice product category code includes juice drinks that are not pure juice.

*Table 3.4*
**Annual Exposure to TV Advertising By Product Categories**
*Children 2–11*

| Category | Ads | % | Detailed category | Ads | % |
|---|---|---|---|---|---|
| Cereal | 993 | 3.9 | Regular Cereal | 157 | 0.6 |
| | | | Highly Sugared Cereal | 836 | 3.3 |
| Desserts and Sweets | 898 | 3.5 | Candy | 468 | 1.8 |
| | | | Desserts and Dessert Ingredients | 52 | 0.2 |
| | | | Cakes, Pies and Pastries | 94 | 0.4 |
| | | | Regular Gum | 104 | 0.4 |
| | | | Cookies | 166 | 0.6 |
| | | | Ice Cream | 15 | 0.1 |
| Restaurants and Fast Food | 1,367 | 5.3 | Restaurants and Fast Food | 1,367 | 5.3 |
| Snacks | 490 | 1.9 | Appetizers, Snacks and Nuts | 343 | 1.3 |
| | | | Crackers | 99 | 0.4 |
| | | | Snack, Granola and Cereal Bars | 48 | 0.2 |
| Dairy Products | 353 | 1.4 | Dairy Products and Substitutes | 353 | 1.4 |
| Sweetened Drinks | 430 | 1.7 | Regular Carbonated Beverages | 147 | 0.6 |
| | | | Regular Non-carbonated Beverages | 283 | 1.1 |
| Prepared Entrees | 222 | 0.9 | Prepared Entrees | 205 | 0.8 |
| | | | Frozen Pizza | 17 | 0.1 |
| Other Food | 786 | 3.1 | Beer, Wine and Mixers | 132 | 0.5 |
| | | | Diet Carbonated Beverages | 20 | 0.1 |
| | | | Diet Non-carbonated Beverages | 17 | 0.1 |
| | | | Fruit Juices | 51 | 0.2 |
| | | | Sugarless Gum | 25 | 0.1 |
| | | | Canned Fruit | 0 | 0.0 |
| | | | Raisins and Other Dried Fruit | 0 | 0.0 |
| | | | Fresh Fruit | 0 | 0.0 |
| | | | Vegetables and Legumes | 16 | 0.1 |
| | | | Meat, Poultry and Fish | 48 | 0.2 |
| | | | Bread, Rolls, Waffles and Pancakes | 155 | 0.6 |
| | | | Other Food and Beverage | 322 | 1.3 |
| All Food Products | 5,538 | 21.6 | All Food Products | 5,538 | 21.6 |
| Games, Toys and Hobbies | 1,909 | 7.5 | Games, Toys and Hobbies | 1,909 | 7.5 |
| Screen / Audio Entertainment | 2,010 | 7.8 | Screen / Audio Entertainment | 2,010 | 7.8 |
| Sports and Exercise | 24 | 0.1 | Sporting Goods | 23 | 0.1 |
| | | | Exercise Equipment | 1 | 0.0 |
| Promos and PSAs | 7,305 | 28.5 | Promos | 7,097 | 27.7 |
| | | | PSAs | 208 | 0.8 |
| Other Nonfood | 8,842 | 34.5 | Dental Supplies | 220 | 0.9 |
| | | | Diets and Diet Aids | 64 | 0.2 |
| | | | Footwear | 111 | 0.4 |
| | | | Computer Hardware and Internet Services | 230 | 0.9 |
| | | | Computer Software (Non-game) | 13 | 0.0 |
| | | | Over-the-counter Medication | 648 | 2.5 |
| | | | Prescription Medication | 312 | 1.2 |
| | | | Other Nonfood Advertising | 7,244 | 28.3 |
| All Nonfood Products | 20,091 | 78.4 | All Nonfood Products | 20,091 | 78.4 |
| Total | 25,629 | | Total | 25,629 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

ad exposure in each of the *detailed* categories.[26] This illustrates the relative contribution of each of the detailed categories. For example, Highly Sugared Cereal accounts for 84 percent of children's exposure to ads for Cereal (3.3 of the 3.9 percent total) and Candy accounts for 52 percent of children's exposure to ads for Desserts and Sweets (1.8 of the 3.5 total for the category).

The largest categories of food ads viewed by children are: Restaurants and Fast Food (5.3 percent of all ad exposure); Cereal (3.9 percent); Desserts and Sweets (3.5 percent); Snacks (1.9 percent); Sweetened Drinks (1.7 percent); and Dairy Products (1.4 percent). All other itemized (detailed) food categories contribute less than one percent of ad exposure each.

The largest nonfood categories we examined are: Promos and PSAs (28.5 percent of all ad exposure; of this Promos contribute 27.7 percentage points, or 97 percent of the category); Games, Toys and Hobbies (7.5 percent); and, Screen/Audio Entertainment (7.8 percent). Over-the-Counter Medications (2.5 percent) and Prescription Medications (1.2 percent) are the only other categories that contribute more than one percent of children's total advertising exposure.[27]

The Sports and Exercise category makes up only 0.1 percent of all ad exposures. In contrast, the largely sedentary product categories — Games, Toys and Hobbies, Screen/Audio entertainment, and Promos — make up 43.0 percent of all children's advertising exposure.[28] Note that this is approximately double the number of food ads seen by children; food ads constitute 21.6 percent of ad exposure.

[26]The remainder of the results in the body of the report are presented in terms of the broader categories. Appendix C presents more results at the detailed level.

[27]These two categories are now in Other Nonfood Advertising.

[28]The Games, Toys, and Hobbies category does have a few items that are not sedentary — small riding toys, for instance. But most of the items are associated with relatively quiet, if not completely sedentary, pastimes. Bicycles and skateboards are not included; they are in Sports and Exercise.

## 3.4 Product Ads Viewed Vary by Type of Show

We also look at how children's exposure to product ads varies over different types of shows, where shows are grouped by the proportion of children in the shows' audience.[29] This is of interest for several reasons. First, we can determine whether the product mix of ads changes as the proportion of children in the audience increases. Second, we can provide information on the potential impact of any proposed advertising restrictions that are based on the proportion of children in the audience. For example, restricted advertising on children's shows would have little impact if the children are watching general interest or adult-oriented programming in larger numbers. In the next section we examine the relationship between shows' child audience size and the proportion, or share, of children in the shows' audience.[30]

We refer to the proportion of a show's audience that is children as the child audience share. For example, a child audience share of 20 percent indicates that at least 20 percent of that show's total audience is made up of children ages 2–11.[31] We group shows according to whether the children's share of the audience is at least 20 percent (referred to as *family shows*) or at least 50 percent (referred to as *children's shows*).[32] We find that 87.7 percent of all shows have a children's audience share of less than 20 percent. Nevertheless, 47.0 percent of children's advertising exposure comes from the 12.3 percent of shows that have a children's audience share of 20 percent or more.

As shown in Table 3.5, as the share of children in the audience increases, food advertising exposure increases — from 21.6 percent on all shows, to 32.2 percent on children's shows. The proportion of ad exposure from Cereal; Desserts and Sweets; Snacks; Dairy Products; Prepared Entrees; Games, Toys and Hobbies; and Screen/Audio Entertainment all increase

[29] More precisely, we are grouping ads based on the share of children in the audience of a particular episode at the time the ad was aired.

[30] We also looked at how exposure to different product categories changed as the child audience size changed. We found little in the way of systematic patterns. That analysis is described in Appendix E.

[31] Note our use of the term is different than the industry standard. "Share" is generally used to refer to the percent of people watching television who are tuned to a given show.

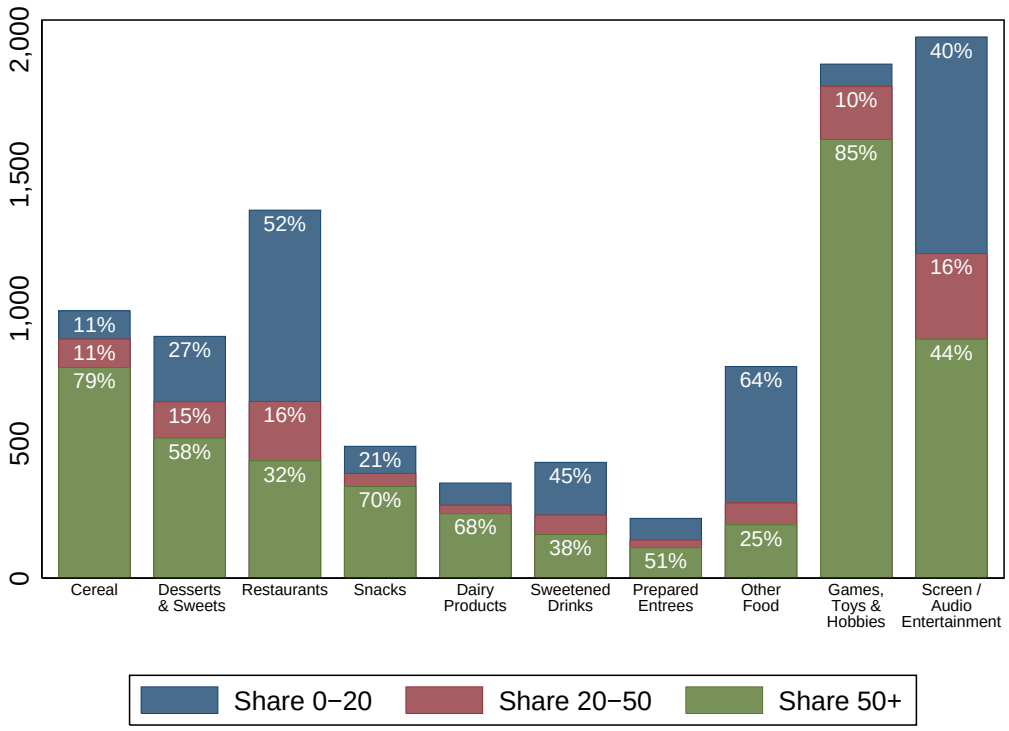
[32] In some tables and figures, we examine ad exposure on shows with a child share between 20 and 50 percent and refer to that grouping as family shows as well. Labels will clearly indicate whether we are talking about the 20 to 50 percent range or all shows with a child share greater than 20 percent.

*Table 3.5*
**Annual Exposure to TV Advertising By Child Share of Audience**
*Children ages 2–11*

| Category | All ads | | Share ≥ 20% | | Share ≥ 50% | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| Cereal | 993 | 3.9 | 888 | 7.4 | 782 | 9.0 |
| Desserts and Sweets | 898 | 3.5 | 655 | 5.4 | 520 | 6.0 |
| Restaurants and Fast Food | 1,367 | 5.3 | 656 | 5.5 | 436 | 5.0 |
| Snacks | 490 | 1.9 | 389 | 3.2 | 341 | 3.9 |
| Dairy Products | 353 | 1.4 | 271 | 2.3 | 239 | 2.8 |
| Sweetened Drinks | 430 | 1.7 | 234 | 1.9 | 162 | 1.9 |
| Prepared Entrees | 222 | 0.9 | 141 | 1.2 | 113 | 1.3 |
| Other Food | 786 | 3.1 | 280 | 2.3 | 198 | 2.3 |
| All Food Products | 5,538 | 21.6 | 3,515 | 29.2 | 2,792 | 32.2 |
| Games, Toys and Hobbies | 1,909 | 7.5 | 1,827 | 15.2 | 1,629 | 18.8 |
| Screen / Audio Entertainment | 2,010 | 7.8 | 1,205 | 10.0 | 888 | 10.2 |
| Sports and Exercise | 24 | 0.1 | 16 | 0.1 | 12 | 0.1 |
| Promos and PSAs | 7,305 | 28.5 | 3,552 | 29.5 | 2,474 | 28.5 |
| Other Nonfood | 8,842 | 34.5 | 1,923 | 16.0 | 877 | 10.1 |
| All Nonfood Products | 20,091 | 78.4 | 8,523 | 70.8 | 5,881 | 67.8 |
| Total | 25,629 | | 12,038 | | 8,673 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Figure 3.8*
**Annual Exposure to TV Advertising, Selected Categories**
*Children ages 2–11*




*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Promos and PSAs and Other Nonfood Advertising omitted because they obscure differences of interest.

as the share of children in the audience increases. The contribution of Restaurants and Fast Food to ad exposure rises and then falls slightly as children's audience share increases.

Figure 3.8 further illustrates these findings.[33] It shows the estimated exposures in each depicted category along with the fraction that comes from programs with different shares of children in the audience. For instance, of the estimated 1,909 ads that children saw for Games, Toys and Hobbies, 85 percent were seen on programs where children are more than 50 percent of the audience, and only four percent are from shows where children are less

[33] All figures omit Sports and Exercise, Promos and PSAs, and Other Nonfood. Exposure to advertising in the Sports and Exercise category is such a small percentage of total exposure that it would be barely visible in graphs. Exposure to advertising in both Promos and PSAs and Other Nonfood is more than three times as large as any other category; their inclusion would alter the scale and obscure differences in other categories of interest.

*Table 3.6*
**Percent of Ad Viewing from Children's and Family Shows**

| | Children | | | Teens | Adults |
|---|---|---|---|---|---|
| | 2–11 | 2–5 | 6–11 | 12–17 | 18 and over |
| Child 2–11 audience share ≥ 50% | | | | | |
| Food | 50.4 | 55.1 | 47.5 | 15.4 | 3.1 |
| Promos and PSAs | 33.9 | 36.8 | 32.0 | 9.6 | 1.6 |
| Other Nonfood | 26.6 | 31.0 | 24.0 | 5.8 | 0.8 |
| Total | 33.8 | 37.9 | 31.3 | 8.5 | 1.3 |
| Child 2–11 audience share ≥ 20% | | | | | |
| Food | 63.5 | 66.1 | 61.8 | 26.7 | 6.1 |
| Promos and PSAs | 48.6 | 49.9 | 47.8 | 20.2 | 4.2 |
| Other Nonfood | 38.9 | 41.2 | 37.5 | 13.5 | 2.5 |
| Total | 47.0 | 49.1 | 45.6 | 17.6 | 3.4 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

than 20 percent of the audience. This data suggests that toy ads are highly targeted to children. Similar patterns are seen for Cereal and Snacks, also suggesting that ads in these categories are targeted to children. In contrast, of the 1,367 ads children saw for Restaurants and Fast Food, 32 percent are seen on children's shows while 52 percent are seen on shows where children are less than 20 percent of the audience, suggesting that children are less targeted for these products. The Sweetened Drinks category has a similar ad distribution, suggesting that children are not the primary targets for this advertising. Overall, 50 percent of children's exposure to food advertising comes from children's shows.

We have seen that children's ad exposure comes from all types of programming; Table 3.6 shows that the same is not true for teens and adults. Children get 50.4 percent of their food ad exposure from children's shows. In contrast, teens and adults get very little of their food ad exposure from children's shows — 15.4 and 3.1 percent. While not quite as pronounced, a similar pattern holds on family shows. Children get 63.5 percent of their food ad exposure, and 47.0 percent of all ad exposure, from these shows. Teens get 26.7 percent of their food

ad exposure from these shows and just 17.6 percent of overall ad exposure. Adults still get a very small fraction of their ad exposure on shows where the audience is more than 20 percent children; only 6.1 percent of their food ads and 3.4 of their overall exposure is from these shows. Therefore, changes in advertising on children's shows, or even family shows, would have little effect on the advertising adults see and a moderate impact on teens' advertising exposure.

## 3.5 How Are Children's Audience Size and Share Related?

Examining ad exposure based on the children's audience share of programming suggests that children are being targeted with advertising for specific categories of products. This is not surprising given the number of television channels with specialized programming content that is intended to appeal to children and the types of products children are likely to purchase or influence. But the shows with a large share of children in the audience are not necessarily the shows that have the largest number of children watching. And the relationship between child audience share and child audience size, or the number of children watching, may vary across the different sources of programming. This section examines these issues.

We group shows by size according to whether they are watched by fewer than 1 percent of children, between 1 and 3 percent of children, or more than 3 percent of children. We find that, in our data, there are no shows watched by more than 10 percent of children and few (less than 1 percent) watched by more than 5 percent of children. In contrast, 86 percent of shows are watched by fewer than 0.2 percent of children and 96 percent are watched by fewer than 1 percent of children. As indicated in Table 3.7, about half of children's ad exposure comes from shows with fewer than 1 percent of children watching and less than 20 percent of exposure comes from shows watched by more than 3 percent of children.

Table 3.7 presents the distribution of ad exposure for ads by child audience size, as measured by Gross Rating Points (GRPs), and child audience share for our data. The top panel illustrates this distribution for all ads. Each cell in the central box represents the

*Table 3.7*
**Percent of Ad Exposure By Audience Size (GRP) and Audience Share**
*Children ages 2–11*

ALL ADS 25,629 ads

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 41.2 | 5.3 | 2.5 | 49.1 |
| 1.0 – 3.0 | 8.6 | 5.9 | 17.9 | 32.4 |
| ≥ 3.0 | 3.2 | 1.9 | 13.4 | 18.5 |
| Total | 53.0 | 13.1 | 33.8 | 100.0 |

ADS ON CABLE 61.4% exposure

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 35.5 | 6.1 | 3.9 | 45.5 |
| 1.0 – 3.0 | 0.3 | 5.2 | 28.7 | 34.2 |
| ≥ 3.0 | 0.0 | 0.0 | 20.3 | 20.3 |
| Total | 35.8 | 11.3 | 52.9 | 100.0 |

ADS ON BROADCAST 38.6% exposure

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 50.4 | 4.2 | 0.3 | 54.9 |
| 1.0 – 3.0 | 21.8 | 7.0 | 0.9 | 29.6 |
| ≥ 3.0 | 8.3 | 4.9 | 2.3 | 15.5 |
| Total | 80.4 | 16.1 | 3.5 | 100.0 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

percentage of ad exposure that comes from shows with a given size and share combination. We see that 13.4 percent of all child ad exposures come from programs for which at least 50 percent of the audience is children and which are seen by more than 3 percent of the child population. In contrast, only 3.2 percent of the ads are seen on programs with a small share of children in the audience but more than three percent of children watching. There is a distinct pattern observable in this table — 41.2 percent of exposure comes from shows with a small children's share and a small number of children watching (GRP less than one), while 31.3 percent comes from shows with a high children's share, at least 50 percent, and with at least 1 percent of children watching.[34]

The second panel summarizes the data on cable ads. We see that the pattern of cable ads is similar to that for all national ads. This is to be expected since children get 61.4 percent of their ad exposure from cable television. However, on cable, 49 percent of exposure comes from shows with a high children's share, at least 50 percent, and at least one percent of the child population watching. Also, all the cable shows with a viewership greater than 3 percent of the child population also have a children's audience share greater than 50 percent. The bulk of children's remaining ad exposure from cable channels, 35.5 percent, comes from shows with fewer children in the audience and with a children's audience share of less than 20 percent.

The third panel summarizes the data on broadcast ads. Broadcast advertising accounts for 38.6 percent of children's exposure to ads. This panel indicates that very few broadcast shows have a high children's audience share; these shows provide 3.5 percent of children's broadcast ad exposure. Those broadcast shows with children's audience share of less than 20 percent account for 80.4 percent of children's exposure to broadcast advertising.

Thus, this evidence indicates that any advertising restrictions based on children's share of a show's audience would primarily affect cable programming; the vast majority of advertising exposure on broadcast programming is from shows with a child audience share of less than

[34]Appendix F gives more information on the relationship between size and share.

*Table 3.8*
**Percent of Food Ad Exposure By Audience Size (GRP) and Audience Share**
*Children ages 2–11*

ALL ADS 5,538 ads

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 27.1 | 4.7 | 3.0 | 34.8 |
| 1.0 – 3.0 | 7.0 | 6.6 | 25.4 | 39.0 |
| ≥ 3.0 | 2.5 | 1.8 | 22.0 | 26.3 |
| Total | 36.5 | 13.0 | 50.4 | 100.0 |

ADS ON CABLE 72.0% exposure

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 21.6 | 4.9 | 4.1 | 30.6 |
| 1.0 – 3.0 | 0.2 | 4.8 | 34.9 | 39.9 |
| ≥ 3.0 | 0.0 | 0.0 | 29.4 | 29.4 |
| Total | 21.8 | 9.8 | 68.4 | 100.0 |

ADS ON BROADCAST 28.0% exposure

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 41.1 | 4.1 | 0.3 | 45.5 |
| 1.0 – 3.0 | 24.3 | 11.1 | 1.0 | 36.4 |
| ≥ 3.0 | 8.8 | 6.3 | 3.0 | 18.1 |
| Total | 74.3 | 21.5 | 4.2 | 100.0 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

20 percent.

*Food Advertising*

Table 3.8 presents the comparable child audience distribution data as Table 3.7, but restricted to food advertising. The audience pattern is similar to the overall distribution, with children's food ad exposure somewhat more concentrated on cable programming and on children's programming on cable networks.

In this case we find that, for all food ads, 47.4 percent of children's exposure comes from programming with a high children's share and with a children's audience of at least one percent of the child population. A much smaller fraction of their food ad exposure, 27.2 percent, comes from shows with a low children's share and a small children's audience. Overall, children's exposure to food ads is more concentrated in children's programming than exposure to ads for other products; 50.4 percent of exposure to food ads comes from shows with a children's share of at least 50 percent, compared to 33.8 percent of exposure to ads for all products.

We also see that children's exposure to food ads is somewhat more concentrated on cable programming — 72.0 percent of children's food ad exposure comes from cable, compared to 61.4 of all ad exposure. On cable programming 68.4 percent of food ad exposure comes from shows with a children's share of at least 50 percent, compared to 52.9 percent of exposure to ads for all products. While 35.5 percent of cable ads are seen on programs with an audience that has a small child share (less than 20 percent) and size (less than 1 percent of all children), only 21.6 percent of the cable food ad exposures occur on these programs.

Thus, as with children's exposure to advertising generally, any restrictions on food advertising based on children's audience share would primarily affect cable programming.

## 3.6 Younger Children

Some research points to particular effects of advertising on younger children who may not comprehend the intent of advertisers. The position of the American Academy of Pediatrics

*Table 3.9*
**Annual Exposure to TV Advertising**
*Younger children ages 2–5, older children ages 6–11, and children ages 2–11*

| Category | 2–5 | | 6–11 | | 2–11 | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| Cereal | 1,031 | 4.1 | 968 | 3.7 | 993 | 3.9 |
| Desserts and Sweets | 857 | 3.4 | 925 | 3.5 | 898 | 3.5 |
| Restaurants and Fast Food | 1,252 | 5.0 | 1,442 | 5.5 | 1,367 | 5.3 |
| Snacks | 499 | 2.0 | 484 | 1.9 | 490 | 1.9 |
| Dairy Products | 370 | 1.5 | 342 | 1.3 | 353 | 1.4 |
| Sweetened Drinks | 388 | 1.6 | 457 | 1.8 | 430 | 1.7 |
| Prepared Entrees | 218 | 0.9 | 224 | 0.9 | 222 | 0.9 |
| Other Food | 776 | 3.1 | 793 | 3.0 | 786 | 3.1 |
| All Food Products | 5,390 | 21.6 | 5,635 | 21.6 | 5,538 | 21.6 |
| Games, Toys and Hobbies | 2,092 | 8.4 | 1,791 | 6.9 | 1,909 | 7.5 |
| Screen / Audio Entertainment | 1,853 | 7.4 | 2,113 | 8.1 | 2,010 | 7.8 |
| Sports and Exercise | 21 | 0.1 | 25 | 0.1 | 24 | 0.1 |
| Promos and PSAs | 7,270 | 29.2 | 7,328 | 28.1 | 7,305 | 28.5 |
| Other Nonfood | 8,314 | 33.3 | 9,186 | 35.2 | 8,842 | 34.5 |
| All Nonfood Products | 19,549 | 78.4 | 20,443 | 78.4 | 20,091 | 78.4 |
| Total | 24,939 | | 26,079 | | 25,629 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

is that advertising directed to young children is inherently deceptive and exploits children younger than eight (Shifrin 2005). While our evidence does not address young children's ability to understand the selling intent of advertising, we can provide some data on whether the mix of product advertising seen by younger children is different from that of older children in the larger group analyzed in the report so far. Our data allow us to look at the standard industry age groups 2–5, 6–11, and 2–11.

Children ages 2–5 see, on average, 5,390 food ads per year and 19,549 ads for other products — a total of 24,939 ads per year. The first two columns of Table 3.9 show younger

children's average annual ad exposure in each product category along with the percentage contribution of that category to total ad exposure. Younger children's television ad exposure is very similar to that of children ages 6–11, shown in the second set of columns. The younger children see 1,140 fewer ads per year than 6–11 year olds, on average, primarily because they are watching slightly less television than older children. However, the mix of products they view in ads is strikingly similar to that viewed by children 6–11. The largest differences are in Games, Toys and Hobbies which contribute 1.5 percentage points more to younger children's exposure and Other Nonfood which contributes 1.9 percentage points less to their exposure. Within the food categories, the largest differences are that younger children see more Cereal ads and fewer ads for Restaurants and Fast Food, but both differences are smaller than one percentage point.

Unlike children 2–11, younger children get only a small percentage of their television ad exposure from shows in which they make up at least a 50 percent share of the audience.[35] Table 3.10 presents the number of ads and percent of ad exposure from shows categorized by their share of children 2–5 years of age. The table shows that younger children get only 4.2 percent of their food ad exposure, and 3.8 percent of total exposure, on shows in which they are at least half of the audience. Younger children get 51.3 percent of their food ad exposure on shows in which they make up at least 20 percent of the audience; they get 36.0 percent of total ad exposure from those shows.

Table 3.11 presents the distribution of the audience of younger children (2–5) by young child audience size and audience share. Younger children get 64.0 percent of their exposure to ads from shows with a 2–5 audience share less than 20 percent. Nearly half their ad exposure is on shows with a small 2–5 audience size, that is, less than one percent of the 2–5 population. Younger children get 64.2 percent of their annual advertising exposure from cable programming, compared to 61.4 percent for children 2–11. They get 38.6 percent of

[35]Because of their smaller proportion in the population, it is, of course, more difficult for younger children to constitute 50 percent of any audience. Children 2–5 are 5.6 percent of the two and over U.S. population; children 2–11 are 14.3 percent of the two and over U.S. population.

*Table 3.10*
**Annual Exposure to TV Advertising By Younger Children's Share of Audience**
*Younger children ages 2–5*

| Category | All ads | | Share ≥ 20% | | Share ≥ 50% | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| Cereal | 1,031 | 4.1 | 770 | 8.6 | 79 | 8.3 |
| Desserts and Sweets | 857 | 3.4 | 477 | 5.3 | 6 | 0.7 |
| Restaurants and Fast Food | 1,252 | 5.0 | 456 | 5.1 | 50 | 5.2 |
| Snacks | 499 | 2.0 | 331 | 3.7 | 18 | 1.9 |
| Dairy Products | 370 | 1.5 | 251 | 2.8 | 28 | 2.9 |
| Sweetened Drinks | 388 | 1.6 | 147 | 1.6 | 0 | 0.0 |
| Prepared Entrees | 218 | 0.9 | 106 | 1.2 | 5 | 0.6 |
| Other Food | 776 | 3.1 | 226 | 2.5 | 41 | 4.2 |
| All Food Products | 5,390 | 21.6 | 2,764 | 30.8 | 227 | 23.8 |
| Games, Toys and Hobbies | 2,092 | 8.4 | 1,710 | 19.0 | 217 | 22.8 |
| Screen / Audio Entertainment | 1,853 | 7.4 | 846 | 9.4 | 38 | 4.0 |
| Sports and Exercise | 21 | 0.1 | 11 | 0.1 | 0 | 0.0 |
| Promos and PSAs | 7,270 | 29.2 | 2,575 | 28.7 | 214 | 22.4 |
| Other Nonfood | 8,314 | 33.3 | 1,078 | 12.0 | 258 | 27.0 |
| All Nonfood Products | 19,549 | 78.4 | 6,220 | 69.2 | 727 | 76.2 |
| Total | 24,939 | | 8,985 | | 954 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Table 3.11*
**Percent of Ad Exposure By Audience Size (GRP) and Audience Share**
*Younger children ages 2–5*

ALL ADS — 24,939 ads

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 45.3 | 3.3 | 0.1 | 48.6 |
| 1.0 – 3.0 | 15.0 | 13.8 | 0.0 | 28.8 |
| ≥ 3.0 | 3.8 | 15.1 | 3.7 | 22.6 |
| Total | 64.0 | 32.2 | 3.8 | 100.0 |

ADS ON CABLE — 64.2% exposure

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 38.2 | 4.9 | 0.1 | 43.2 |
| 1.0 – 3.0 | 7.3 | 20.9 | 0.0 | 28.2 |
| ≥ 3.0 | 0.3 | 22.6 | 5.7 | 28.6 |
| Total | 45.8 | 48.4 | 5.8 | 100.0 |

ADS ON BROADCAST — 35.8% exposure

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 57.8 | 0.5 | 0.0 | 58.3 |
| 1.0 – 3.0 | 28.7 | 1.1 | 0.1 | 29.8 |
| ≥ 3.0 | 10.0 | 1.7 | 0.2 | 11.9 |
| Total | 96.5 | 3.2 | 0.3 | 100.0 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

their exposure from broadcast programming. But virtually all of that broadcast exposure (96.5 percent) is from shows in which younger children make up less than 20 percent of the audience.

Taken together, this evidence indicates that any restrictions on advertising based on audience share for younger children (2–5) would affect only cable programming. And if restricted to programs with more than a 50 percent share of younger children, these restrictions would affect few programs and few of the ads that these children see.

## 3.7 Teenagers and Adults

Table 3.12 presents estimated annual ad exposure for teenagers and adults, as well as children, to allow us to compare ad exposures across the three age groups.

Teenagers (those ages 12–17) see, on average, 31,188 ads per year — 5,512 food ads and 25,677 ads for other goods. Food ads constitute 17.7 percent of all the ads teens saw in 2004, a somewhat smaller proportion than that for children. The largest categories of food ads viewed are Restaurants and Fast Food (5.9 percent of all ad exposure), Desserts and Sweets (2.6 percent), and Sweetened Drinks (1.9 percent).

The largest nonfood categories are Promos and PSAs (25.7 percent of all advertising exposure) and Screen/Audio Entertainment (8.4 percent). Games, Toys and Hobbies contribute only 2.5 percent to teenagers' ad exposure.

Adults, on average, see 52,469 ads per year — 7,212 food ads and 45,257 ads for other products. Food ads constitute 13.7 percent of all the ads adults saw in 2004. The only sizeable food category in adults' ad exposure is Restaurants and Fast Food, at 4.9 percent. Promos and PSAs make up 24.1 percent of their overall exposure to advertising.

The Other Nonfood category contributes the most to overall advertising exposure for all age groups. It is 34.5 percent of children's overall exposure, 45.6 percent of teenager's overall exposure, and 56.9 percent of adults overall advertising exposure. Services and products in Other Nonfood include clothing and accessories, prescription and OTC drugs, professional

*Table 3.12*
**Annual Exposure to TV Advertising**
*Children ages 2–11, teens ages 12–17 and adults ages 18 and over*

| Category | Children | | Teens | | Adults | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| Cereal | 993 | 3.9 | 492 | 1.6 | 477 | 0.9 |
| Desserts and Sweets | 898 | 3.5 | 806 | 2.6 | 754 | 1.4 |
| Restaurants and Fast Food | 1,367 | 5.3 | 1,836 | 5.9 | 2,546 | 4.9 |
| Snacks | 490 | 1.9 | 332 | 1.1 | 356 | 0.7 |
| Dairy Products | 353 | 1.4 | 260 | 0.8 | 338 | 0.6 |
| Sweetened Drinks | 430 | 1.7 | 584 | 1.9 | 479 | 0.9 |
| Prepared Entrees | 222 | 0.9 | 180 | 0.6 | 323 | 0.6 |
| Other Food | 786 | 3.1 | 1,021 | 3.3 | 1,939 | 3.7 |
| All Food Products | 5,538 | 21.6 | 5,512 | 17.7 | 7,212 | 13.7 |
| Games, Toys and Hobbies | 1,909 | 7.5 | 778 | 2.5 | 414 | 0.8 |
| Screen / Audio Entertainment | 2,010 | 7.8 | 2,633 | 8.4 | 2,323 | 4.4 |
| Sports and Exercise | 24 | 0.1 | 24 | 0.1 | 47 | 0.1 |
| Promos and PSAs | 7,305 | 28.5 | 8,007 | 25.7 | 12,627 | 24.1 |
| Other Nonfood | 8,842 | 34.5 | 14,235 | 45.6 | 29,846 | 56.9 |
| All Nonfood Products | 20,091 | 78.4 | 25,677 | 82.3 | 45,257 | 86.3 |
| Total | 25,629 | | 31,188 | | 52,469 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

services, schools and camps, utilities, communication services, financial services, insurance, realtors, books, and personal hygiene products.[36]

The overall differences in total advertising exposures across these groups primarily reflect differences in television viewing time. Estimates based on our Nielsen data indicate that adults watch nearly twice as much commercially-sponsored television as children (4 hours 10 minutes versus 2 hours 17 minutes, or 82 percent more than children), and teenagers watch 10 percent more than children. The differences in ad exposure are, to a lesser degree, a result of the different number of ads per hour viewed by the different age groups. Children see about 31 ads per hour, teenagers see about 34 ads per hour, and adults see about 35 ads per hour. Advertising exposures for adults and teenagers, compared to children, are only slightly larger than viewing differences would suggest; the remaining difference is due to adults and teenagers viewing more ads per hour.

[36] A complete list of PCC codes assigned to this category can be found in Appendix B.

# 4 Television Advertising in 1977

Two studies were done in 1978 for the FTC Children's Advertising Rulemaking.[37] Both examined the products featured in television advertising seen by children and others. Abel (1978) focused on a subset of nationally aired ads, and Beales (1978) focused on locally generated spot ads. These studies were completed before children's obesity and overweight began rising. Therefore, they provide a good baseline as we attempt to assess whether changes in television advertising may have contributed to the increase in overweight and obesity in children.

Table 4.1 details the data analyzed by each of the reports. Abel did not analyze the national ads aired on all network shows. His analysis was restricted to shows with at least a 20 percent child audience share or at least 3.5 million child viewers. He also analyzed the subsets with at least a 30 percent child audience share, a 50 percent audience share, a 5 million child audience size, and an 8 million child audience size. The local spot ads in the Beales' study could not be analyzed at the show level, because different shows were being aired in different locations. Therefore, Beales analyzed shows based on dayparts — the time of day and day of the week the ads were seen. (Table 4.5 gives the definitions of these dayparts.) Beales analyzed ads aired on all dayparts, as well as three subsets of those dayparts — those with at least a 20 percent child audience share, a 30 percent audience share, and a 50 percent audience share.

## 4.1 Abel's Study of National Advertising

Abel's research examined children's exposure to national network television advertising and compared it to overall audience exposure. Specifically, he considers two questions: "(1) to what products and product categories are children exposed in network advertising? and (2) what percentage of the total amount of network advertising of these products is contained

[37]The concern at that time was television advertising of food products that contribute to tooth decay.

*Table 4.1*
**Coverage of the Abel and Beales Reports**

| | Abel | Beales |
|---|---|---|
| Source of advertising | Network | Non-network |
| Unit of analysis | Shows | Dayparts |
| Data coverage | | |
| All programming | — | Yes |
| Child share $\geq$ 20% | Yes | Yes |
| Child share $\geq$ 30% | Yes | Yes |
| Child share $\geq$ 50% | Yes | Yes |
| Child audience $\geq$ 3.5 million | Yes | — |
| Child audience $\geq$ 5 million | Yes | — |
| Child audience $\geq$ 8 million | Yes | — |

*Source.* Abel (1978); Beales (1978).
*Note.* Child refers to a child ages 2–11.

in programs that children watch?" (Abel 1978, pp. 5). Abel used network audience data from Arbitron and advertising data from Broadcast Advertisers Reports.[38] The data were from February, May, and November 1977. The analysis is focused on two groups of television programs: those with the largest share of children in the audience, and those with the largest numbers of children in the audience. Specifically, Abel analyzed advertising on the 50 shows with the largest children's audience *share* for each of the three months in his data, along with advertising on the 50 shows with the largest *number* of children in the audience for each of the three months. His analysis of exposure to advertising — combining information on ads aired with data on the audience ratings — was further restricted to those shows with at least a 20 percent child audience share or at least 3.5 million children in the audience.

[38]At the time of this report, there were no detailed studies on how much of children's viewing time was devoted to network programs. The *Economist* (1981) reports that, in 1975, 93 percent of television viewing was captured by network affiliates. According to Adler, networks supplied approximately 70 percent of their affiliates programming. (The remainder was either locally produced or syndicated programming.) Another study, discussed below, analyzed exposure to spot ads. Spot ads include all ads on non-network shows as well as local or regional ads aired during network programs. Approximately two-thirds of available ad time during network programs (in the late 1970s) was taken by network supplied advertising; the remaining was available for station identification, public service announcements, and local or regional advertising.

### 4.1.1 Overview of National Network Television Landscape in the Late 1970s

The three network shows with the largest share of children in the audience for February and May were "Jabberjaw," "Captain Kangaroo," and "Tom-Jerry-Mumbly Show;" children made up between 72 and 76 percent of their audiences. In November, the three shows with the largest children's audience share were "All New Superfriends Hour," "Captain Kangaroo," and "C B Bears;" children made up between 69 and 71 percent of their audiences. Children made up between 15 and 19 percent of the audience for shows at the bottom of the list of the 50 shows with the highest children's audience share. Examples of shows in this range include "Gong Show," "The Price is Right," "Good Times," and "Family Feud." Overall, in 1977 there were fewer than 25 shows with a child audience share greater than 50 percent.

The two shows with the largest number of children in the audience for all three months were "Happy Days" and "Laverne and Shirley." "Happy Days" had between 10 and 16 million children in the audience in these three months. Shows with the fiftieth largest children's audience ("Charlie's Angels," "Tom-Jerry-Mumbly Show," and "Superwitch") had between 2 and 3 million children in the audience, audiences comparable in size to the leading children's shows by audience share. The population aged 2 through 11 was approximately 33.6 million in early 1977 in America, so the highest rated shows by child audience size were being watched by close to half of all children in some months, but these shows did not have high child audience shares. Thus, the shows that reached most children in 1977 were not children's shows.

### 4.1.2 Analysis of Products Advertised

Abel analyzed exposure to advertising in 26 product categories.[39] Table 4.2 lists those categories. As before, we simplify by aggregating some of his detailed categories into fewer categories.

In analyzing the programs with the largest children's audience share, Abel separately looked at programs with more than 20 percent, 30 percent, and 50 percent children in the audience.[40][41] In the analysis of programs with the largest number of children viewers, he separately looked at shows with more than 3.5 million, 5 million, and 8 million children in the audience.[42] These numbers of viewers correspond to approximately 10.7 percent, 15.2 percent, and 24.4 percent of the U.S. population of children in 1977.

Table 4.3 summarizes Abel's findings regarding children's exposure to national advertising on programs in which children make up a significant share of the audience. Consider advertising on programs for which at least 50 percent of the audience was children. Nearly 62 percent of the ads were for food or beverages and more than half of those, 32 percent of the total, were for cereals. In the nonfood arena, advertising for Games, Toys and Hobbies constitutes 90 percent of the ads (34.3 out of 38.1 percentage points). The three categories of Cereal, Desserts and Sweets, and Games, Toys and Hobbies constitute 83 percent of all ads children saw on these shows. Thus, on these shows with child audience shares of at least 50 percent national advertising was very highly concentrated to these "big three" categories,

[39]The results reported in this section are based on Abel's Tables XVI through XXI (pp. 64–70). Those Tables report estimated Gross Impressions for children 2–11 in each of the product categories. "Gross impressions" are defined by Abel as "an estimate of the probable number of exposures for advertising messages. It is obtained by multiplying the number of 30-second advertisements for a brand product by the audience for the program in which the advertisement appeared. In this study, these gross impressions were then summed across all brand products within a product category" (62) We convert gross impressions into an exposure measure comparable to that used in analyzing the 2004 data. Exposures are gross impressions divided by the child population figures from Abel's Appendix B and multiplied by 100. Exposures are annualized by multiplying by 365/89 where 89 is the number of days in his three months of data.

[40]Children 2–11 were 16.5 percent of the potential viewing audience — the population of those two and over.

[41]There were 46 shows with at least a 20 percent child audience share in February, 44 in May, and 41 in November.

[42]There were 40 shows with at least 3.5 million children in the audience in February, 16 in May, and 27 in November.

*Table 4.2*
**Composition of Summary Categories in 1977**

| Categories | Abel's Detailed Categories |
|---|---|
| Cereal | Regular Cereal |
| | Highly Sugared Cereal |
| Desserts and Sweets | Candy |
| | Desserts and Dessert Ingredients |
| | Cakes, Pies and Pastries |
| | Regular Gum |
| | Cookies |
| | Ice Cream |
| Snacks | Appetizers, Snacks and Nuts |
| | Crackers |
| Sweetened Drinks | Regular Carbonated Beverages |
| | Non-carbonated Beverages |
| Restaurants and Fast Food | Restaurants and Drive-ins |
| Other Food Products | Beer, Wine and Mixers |
| | Diet Carbonated Beverages |
| | Fruit Juices |
| | Sugarless Gum |
| | Canned Fruit |
| | Raisins |
| | Fresh Fruit |
| | Other Food and Beverages |
| Games, Toys and Hobbies | Games, Toys and Hobbies |
| Bicycles | Bicycles |
| Other Nonfood Prodcuts | Dental Supplies |
| | Footwear |
| | Other Nonfood Advertising |

*Source.* Abel (1978).
*Note.* Beales (1978) used the same categories as Abel (1978).

*Table 4.3*
**Annual Exposure to National Advertising in 1977 By Audience Share**
*Children ages 2–11, national advertising*

| Category | Share ≥ 20% | | Share ≥ 30% | | Share ≥ 50% | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| Cereal | 595 | 21.8 | 548 | 29.7 | 513 | 32.0 |
| Desserts and Sweets | 373 | 13.7 | 302 | 16.3 | 271 | 16.9 |
| Restaurants and Fast Food | 113 | 4.1 | 58 | 3.1 | 52 | 3.3 |
| Snacks | 35 | 1.3 | 20 | 1.1 | 13 | 0.8 |
| Sweetened Drinks | 62 | 2.3 | 33 | 1.8 | 25 | 1.6 |
| Other Food | 401 | 14.7 | 145 | 7.8 | 118 | 7.4 |
| All Food Products | 1,579 | 57.7 | 1,105 | 59.9 | 993 | 61.9 |
| Games, Toys and Hobbies | 610 | 22.3 | 593 | 32.1 | 551 | 34.3 |
| Sports and Exercise | 0 | 0.0 | 0 | 0.0 | 8 | 0.5 |
| Other Nonfood | 546 | 20.0 | 148 | 8.0 | 52 | 3.3 |
| All Nonfood Products | 1,156 | 42.3 | 741 | 40.1 | 611 | 38.1 |
| Total | 2,735 | | 1,846 | | 1,604 | |

*Source.* Abel (1978, Tables XVI, XVII and XVIII).
*Notes.* Share refers to the average child share of the audience for each show. Abel (1978) did not report exposure to advertising on all shows.

as reported by other studies of the time in the literature, using different approaches. On shows with 20 percent or more of children in the audience, these three categories are still important, but their share has dropped to 58 percent of ads.

For programs with 20 percent or more children in the audience, food's share of children's advertising exposure dropped to around 58 percent, but this is only a four percentage point drop from the 50 percent share shows. Advertising for Other Food and Beverages increased, primarily drawing share away from Cereal and Desserts and Sweets, but Food is a major portion of national advertising on all these show types in 1977.

The next table provides advertising exposure based on the numbers of children watching particular shows. Table 4.4 gives children's exposure to national advertising on shows with

*Table 4.4*
**Annual Exposure to National Advertising in 1977 By Audience Size**
*Children ages 2–11, national advertising*

| Category | Size ≥ 3.5 million | | Size ≥ 5 million | | Share ≥ 8 million | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| Cereal | 303 | 10.5 | 189 | 9.1 | 78 | 6.4 |
| Desserts and Sweets | 273 | 9.5 | 166 | 8.0 | 50 | 4.2 |
| Restaurants and Fast Food | 116 | 4.0 | 84 | 4.0 | 53 | 4.4 |
| Snacks | 127 | 4.4 | 113 | 5.4 | 8 | 0.7 |
| Sweetened Drinks | 53 | 1.8 | 37 | 1.8 | 17 | 1.4 |
| Other Food | 483 | 16.8 | 373 | 17.9 | 271 | 22.4 |
| All Food Products | 1,355 | 47.1 | 961 | 46.1 | 477 | 39.5 |
| Games, Toys and Hobbies | 313 | 10.9 | 179 | 8.6 | 127 | 10.6 |
| Sports and Exercise | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Other Nonfood | 1,209 | 42.0 | 945 | 45.3 | 602 | 49.9 |
| All Nonfood Products | 1,522 | 52.9 | 1,124 | 53.9 | 730 | 60.5 |
| Total | 2,877 | | 2,086 | | 1,207 | |

*Source.* Abel (1978, Tables XIX, XX and XI).
*Notes.* Audience size refers to the average number of child viewers for each show. Abel (1978) did not report exposure to advertising on all shows.

at least 3.5 million children viewers, 5 million children viewers, and 8 million viewing.

Thus, on the shows with large child audiences, food advertising is still substantial, but no longer the majority of the ads seen. Also the big three categories (Cereal, Games, Toys and Hobbies, and Desserts and Sweets) are no longer dominant, constituting only 31 percent of ads seen for shows with more than 3.5 million children in the audience, and only 21 percent of ads for shows with more than eight million children. Thus, the Abel study shows that the standard finding in the literature — that children's advertising was highly concentrated to the big three categories — is dependent on measuring shows where children are a large share of the audience, but in 1977 these were not shows which were seen by the largest numbers of children.

## 4.2 Beales' Study of Spot Ads

Beales' 1978 research examined the patterns of children's and adults' exposure to spot television advertising.[43] Spot television is defined as non-network advertising that local network affiliates and independent stations carry for local, regional or national advertisers (Abel 1978). Advertising data were obtained from Broadcast Advertiser's Reports, Inc., and covered approximately 267 television stations located in 75 of the largest US television markets. Each station was monitored for one week in each of four months — February, May, July, and November of 1977. These data were matched with audience data from Arbitron Television Daypart Audience Summary to capture exposure to advertising. Data were accumulated separately for each of 17 dayparts. Dayparts are defined as a specified period of time, on a specified day (or days) of the week, on a specified station. Table 4.5 lists these dayparts. This is the unit of analysis for this research, which is similar to the concept of a program, though a daypart typically contains more than one program and is thus not directly comparable to Abel's program analysis or our 2004 analysis.[44]

The Beales advertising data were categorized into the same 26 product categories used by Abel (see Table 4.2). In analyzing exposure to advertising, Beales looked at the distribution of advertising across all product classes, for all dayparts, and those dayparts with 20 percent, 30 percent and 50 percent children in the audience. Table 4.6 shows the estimated annual exposure to local ads by category from all dayparts (all programming), and dayparts for

[43]The results reported in this section are based on Table 1 (page 5), Table B-3 (page 46), Table B-6 (page 49), and Table B-9 (page 52) from Beales' report. The audience was measured by gross impressions, which Beales defined as the minutes of advertising times the number of people in the audience. According to Arbitron Television estimates, there were 159,928,100 persons two years old and older in television households in these 75 markets, and 24,798,200 children 2–11, in 1977. Thus, children were 15.51 percent of the potential audience in these cities (Beales 1978, *vi*). We convert gross impressions into an exposure measure comparable to that used in analyzing the 2004 data. Exposures are gross impressions divided by the child population figures above and multiplied by 100. We then divide by 2 to get exposure to ads instead of minutes (Abel's definition of gross impression was based on 30 seconds, which was the length of nearly all ads in 1977). Exposures are annualized by multiplying by 365/28 where 28 is the number of days in his four weeks of data.

[44]Audience estimates were not available for some of the dayparts in each of the months; these dayparts were excluded from the analysis. According to Beales, advertising in those dayparts accounted for approximately 16 percent of total advertising minutes. Therefore, his estimates understate exposure to spot advertising. We do not know whether advertising in the omitted dayparts had a product mix similar to those analyzed.

*Table 4.5*
**Dayparts Used in Beales' Analysis**

| | Eastern & Pacific | Central & Mountain |
|---|---|---|
| Monday – Friday | 7:00 am – 9:00 am | 7:00 am – 9:00 am |
| | 9:00 am – Noon | 9:00 am – Noon |
| | Noon – 4:30 pm | Noon – 3:30 pm |
| | 4:30 pm – 6:00 pm | 3:30 pm – 5:00 pm |
| | 6:00 pm – 7:30 pm | 5:00 pm – 6:30 pm |
| | 7:30 pm – 8:00 pm | 6:30 pm – 7:00 pm |
| | 11:00 pm – 11:30 pm | 10:00 pm – 10:30 pm |
| | 11:30 pm – 1:00 am | 10:30 pm – Midnight |
| Saturday | 8:30 am – 1:00 pm | 8:30 am – 1:00 pm |
| Saturday & Sunday | 1:00 pm – 5:00 pm | 1:00 pm – 4:00 pm |
| Sunday – Saturday | 8:00 pm – 11:00 pm | 7:00 pm – 10:00 pm |

*Source.* Beales (1978, Table A2).

which children make up at least 20 percent, 30 percent, and 50 percent of the audience. This table shows that toy advertising dominates on local advertising. Children are exposed to about three times as much advertising for Games, Toys and Hobbies as for Cereal, the largest category of food advertising exposure. Over all dayparts, food advertising makes up 26 percent of all children's advertising exposure on local ads. When restricted to dayparts where at least 50 percent of the audience is children, food advertising is nearly 27 percent of all local advertising seen by children; in these shows, 29 percent of ad exposure is from toy advertising.

The share of food ad exposures is fairly steady between 25 and 27 percent as the fraction of children in the audience increases. Cereal ads contribute an increasing portion of advertising exposure as the share of children in the audience increases — from four percent in all programming to 10 percent in dayparts with 50 percent or more children. Dessert and Sweets ads increase slightly in prevalence as the share of children grows, as do ads for Restaurants and Fast Food. Ads for Sweetened Drinks and Other Food decline in prevalence as the share of children increases. Ads for Games, Toys and Hobbies increase more

*Table 4.6*
**Annual Exposure to Local Advertising in 1977 By Daypart Audience Share**
*Children ages 2–11, local advertising*

| Category | All dayparts | | Share ≥ 20% | | Share ≥ 30% | | Share ≥ 50% | |
|---|---|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % | Ads | % |
| Cereal | 469 | 4.2 | 433 | 6.3 | 405 | 7.4 | 282 | 10.3 |
| Desserts and Sweets | 546 | 4.9 | 420 | 6.1 | 346 | 6.4 | 176 | 6.4 |
| Restaurants and Fast Food | 632 | 5.6 | 379 | 5.5 | 305 | 5.6 | 169 | 6.1 |
| Snacks | 38 | 0.3 | 14 | 0.2 | 8 | 0.1 | 2 | 0.1 |
| Sweetened Drinks | 273 | 2.4 | 146 | 2.1 | 101 | 1.9 | 36 | 1.3 |
| Other Food | 984 | 8.8 | 380 | 5.5 | 241 | 4.4 | 70 | 2.5 |
| All Food Products | 2,941 | 26.3 | 1,774 | 25.7 | 1,406 | 25.8 | 735 | 26.7 |
| Games, Toys and Hobbies | 1,359 | 12.1 | 1,305 | 18.9 | 1,199 | 22.0 | 793 | 28.8 |
| Sports and Exercise | 30 | 0.3 | 28 | 0.4 | 25 | 0.5 | 12 | 0.4 |
| Other Nonfood | 6,864 | 61.3 | 3,793 | 55.0 | 2,813 | 51.7 | 1,211 | 44.0 |
| All Nonfood Products | 8,253 | 73.7 | 5,125 | 74.3 | 4,037 | 74.2 | 2,015 | 73.3 |
| Total | 11,194 | | 6,899 | | 5,443 | | 2,751 | |

*Source.* Beales (1978, Tables 1, B-3, B-6 and B-9).
*Note.* Columns reflect exposure to advertising when children constitute at least 20%, 30%, and 50% of the average audience for a daypart.

substantially as children's share of audience increases — these are 12 percent of exposure on all programming and 29 percent of exposure in dayparts in which children have at least a 50 percent share.

Food advertising was a far smaller portion of children's exposure from local advertising in 1977 than from national advertising on shows with a children's share of at least 20 percent. However, ads for Restaurants and Fast Food made up a slightly larger fraction of exposure to spot ads, 5.6 percent, than of exposure to national network ads on these shows, 5.2 percent. Toy advertising was also a much more substantial part of local advertising than in national advertising in 1977.

# 5 What Can We Say About 1977 and 2004?

One of our goals in this study is to examine how children's exposure to television advertising has changed from 1977 to 2004. We use Abel (1978), Beales (1978), and an NSF study, Adler et al. (1977), to assess how children's exposure has changed. Children's exposure to television advertising rose slightly from 1977 to 2004, due to increased exposure to Promos. Children's exposure to food advertising almost certainly declined, in our estimate by about 9 percent.

## 5.1 Children's Overall Ad Exposure: 1977 and 2004

We cannot compute children's overall exposure to television advertising directly from Abel (1978) and Beales (1978) because Abel did not analyze children's exposure to advertising on all network shows. Instead, we turn to other publicly available information for children's exposure to advertising in 1977.

A 1977 National Science Foundation study headed by Richard Adler examined children's exposure to television advertising from all programming. The study estimated that children ages 2–11 saw, on average, 21,904 ads per year, 19,714 of which were paid ads (Adler et al. 1977). Throughout this section, we use the Adler et al. (1977) estimate for children's overall exposure to advertising in 1977.[45]

Table 5.1 presents our 2004 estimates, as well as those based on the Adler study. Note that, in 2004, children, ages 2–11, are estimated to have seen 18,324 paid ads — 7 percent fewer paid ads than in the late 1970s. However, the large increase in Promos and PSAs seen by children led to a 17 percent increase in overall ad exposure; in 2004, children, on average, saw 25,629 ads, up from 21,904 in 1977. Two countervailing factors contributed to these changes. First, children, on average, watched fewer hours of TV per day in 2004 than in

[45]The Adler et al. (1977) estimate is consistent with other publicly available information from the period. For example, according to *Economist* (1981), network affiliates accounted for 93 percent of all TV viewing in 1975. Suppose this also held in 1977. In 1977, networks supplied about 70 percent of affiliates' programming and about two-thirds of ads on network programming (Abel 1978). These figures, combined with Beales' non-network exposure estimate implies children saw, on average, 21,948 ads.

*Table 5.1*
**Estimated TV Advertising Viewed by Children: 1977 and 2004**

| Type of ad | Ads viewed | | | Ad minutes viewed | | |
|---|---|---|---|---|---|---|
| | 1977 | 2004 | % change | 1977 | 2004 | % change |
| Children ages 2–11 | 21,904 | 25,629 | 17% | 10,952 | 10,717 | -2% |
| Paid advertisements | 19,714 | 18,324 | -7% | 9,857 | 7,987 | -19% |
| Promos[a] and PSAs[b] | 2,190 | 7,305 | 234% | 1,095 | 2,730 | 149% |
| Younger children ages 2–5 | 22,571 | 24,939 | 10% | 11,376 | 10,425 | -8% |
| Paid advertisements | 20,476 | 17,669 | -14% | 10,238 | 7,678 | -25% |
| Promos[a] and PSAs[b] | 2,275 | 7,270 | 220% | 1,138 | 2,747 | 141% |
| Older children ages 6–11 | 21,373 | 26,079 | 22% | 10,687 | 10,908 | 2% |
| Paid advertisements | 19,236 | 18,750 | -3% | 9,618 | 8,189 | -15% |
| Promos[a] and PSAs[b] | 2,137 | 7,328 | 243% | 1,069 | 2,719 | 154% |

*Source.* Staff estimates based on Adler et al. (1977) for 1977. Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually for 2004.
*Notes.* [a]Promotional advertisements for an outlet's own or affiliated shows. [b]Public Service Announcements.

1977; they watched even fewer hours of ad-supported TV. Second, the number of ads aired per hour increased from 19 in 1977 to 30 in 2004 (Adler et al. 1977).

The table also provides data on exposure to minutes of television advertising, in addition to numbers of ads. Because the average length of television ads has declined since 1977 (from approximately 30 seconds to 25 seconds), children's exposure to minutes of advertising has declined, both for paid ads and for all advertising.[46] Minutes of paid ad exposure for children declined from 9,857 in 1977 to 7,987 in 2004. Minutes of overall ad exposure fell from 10,952 to 10,717, a smaller percentage decline than the exposure to paid ads, again due to the marked increase in minutes of Promos and PSAs.

The table also provides analogous information for children 2–5 and 6–11. The patterns are similar to those for children 2–11, except that exposure to paid ads fell more for the 2–5 year-olds and exposure to overall ads grew less for these younger children.

[46]A very high percentage of ads in 1977 were 30 seconds long; Adler et al. (1977, citing Barcus (1975)), reports that 98 percent of commercials monitored in his studies were 30 seconds in length. In 2004, the average television ad is 25 seconds long.

## 5.2 Exposure to Food Advertising: 1977 and 2004

The two reports by Abel and Beales are, to date, the most comprehensive analyses of children's exposure to television advertising. Since they look at children's ad exposure in 1977 prior to the rise in children's obesity rates, these reports provide a baseline against which to compare recent exposure to television advertising. However, some limitations should be noted in comparing the 1977 and 2004 results.

First, the two 1977 reports are not directly comparable to each other. Abel had ratings data and advertisement descriptions at the TV program level. Because Beales was examining local spot ads, and programming varies by locality, his units of observation were dayparts. Therefore, Beales' dayparts with a particular child audience share are not directly comparable to Abel's shows with such a share. Of course, it would be legitimate to compare, and combine, children's exposure on *all* shows and *all* dayparts. This brings us to the second limitation.

Abel did not analyze exposure to advertising on all network shows, only those for which children were at least 20 percent of the audience.[47] Thus, we do not have a direct measure of the pattern of children's *overall* exposure to ads in the various product categories; the ads from network shows with less than 20 percent child audience share are missing. Despite these limitations, together with other information from the period — including Adler et al. (1977) — much can be learned from the comparisons that can be made.

To assess whether children are seeing more or less food advertising in 2004 compared to 1977, we begin by using the Adler et al. (1977) estimate of children's overall exposure to advertising to obtain an estimate of the amount of network advertising exposure that is missing from Abel's analysis. Adler et al. (1977) estimated that children saw 21,904 ads, 2,190 (10 percent of the total) of which were Promos and PSAs. Recall that neither Abel nor Beales had estimates of exposure to Promos or PSAs. Table 5.2 summarizes the data we have from various studies under the assumption that the percentage of Promos and PSAs was

[47] Abel also analyzed shows watched by at least 3.5 million children. However, in assessing children's food ad exposure in 1977 we will focus on his sample selected by the child audience share.

distributed evenly across the types of programming,[48] and shows that an estimated 6,427 ad exposures must have come from the missing network programs with a child audience share of less than 20 percent.[49]

*Table 5.2*
**Children's Exposure Estimates From Available Studies: 1977 and 2004**

| | Paid Advertising | | | Promos & | |
|---|---|---|---|---|---|
| | Food | Nonfood | Total | PSAs | Total |
| 1977 | | | | | |
| Adler | | | 19,714 | 2,190 | 21,904 |
| Abel | 1,579 | 1,156 | 2,735 | 304[b] | 3,039[a] |
| Beales | 2,941 | 8,253 | 11,194 | 1,244[b] | 12,438[a] |
| Missing | 1,564[d] | 4,221[d] | 5,785 | 643[b] | 6,427[c] |
| 2004 | | | | | |
| FTC | 5,538 | 12,786 | 18,324 | 7,305 | 25,629 |

*Source.* Staff estimates based on Abel (1978), Beales (1978), and Adler et al. (1977) for 1977. Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually for 2004.
*Note.* [a]Estimated assuming Promos and PSAs constitute 10 percent of advertising. [b]Estimated assuming Promos and PSAs constitute 10 percent of advertising. [c]Total advertising from Adler less local advertising from Beales and national advertising on shows with child audience share at least 20% from Abel. [d]Estimated assuming that national food advertising constitutes 33.2 percent of all national advertising, as discussed below.

We do not know the composition of the ads in the missing data. However, by using other information from 1977, we can establish that children's food advertising exposure has almost certainly declined overall, and we can gauge the approximate size of the decrease.

We look at the issue in two ways. Table 5.3 summarizes food advertising as a percent of all advertising on shows with various child audience shares in 1977 and 2004. In both years, the share of food advertising falls somewhat for network and non-network programming as the programming becomes more general (that is, as child audience share falls). For national network ads in 2004, children's food ad exposure on all shows was 22.6 percent, compared to 32.6 percent on shows with a 50 percent child share; thus the percentage of food ads on all

[48]In our 2004 data, Promos and PSAs make up a similar fraction of ad exposure on all types of programming.

[49]We estimate Promos and PSAs to be in Abel's network shows by $2,735/0.9 - 2,735 = 304$, and in Beales' dayparts by $11,194/0.9 - 11,194 = 1,244$. Then the new estimated totals for Abel and Beales are $2,735 + 304 = 3,039$ and $11,194 + 1,244 = 12,438$. We subtract these Abel and Beales totals from the NSF (Adler) estimates to find the exposure missing from Abel's network study, $21,904 - 3,039 - 12,438 = 6,427$.

*Table 5.3*
**Children's Exposure to Food Ads As a Percent of All Exposure By Show Type: 1977 and 2004**

| | All Shows | 20%+ Share | 50%+ Share |
|---|---|---|---|
| 1977 | | | |
| Network Ads (Abel)[a] | — | 57.7 | 61.9 |
| Non-network Ads (Beales)[b] | 26.3 | 25.7 | 26.7 |
| 2004 | | | |
| Network Ads[a] | 22.6 | 30.2 | 32.6 |
| Non-network Ads[b] | 16.8 | 19.5 | 20.1 |

*Source.* Staff estimates based on Abel (1978, Tables XVI, XVII and XVIII) and Beales (1978, Tables 1, B-3, B-6 and B-9), for 1977. Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually for 2004.
*Notes.* Data from 1977 were adjusted to include 10 percent promos and PSAs in all categories to be comparable to the 2004 data. [a]Network ads include cable network and broadcast network ads. [b]Non-network ads include syndicated ads and local spots.

shows was 30.7 percent less than that on the 50 percent share shows.[50] If the reduction for all shows compared to children's shows was of a similar magnitude in 1977, the percentage of food ads on all national shows in 1977 would be approximately 42.9 percent.[51]

As a second approach to assess children's food ad exposure on all national shows, Table 5.4 presents the percent of advertising expenditures for food, along with children's food ad exposures for various types of shows available in the Abel study for 1977. Abel estimated national food advertising expenditures on all shows at 24.4 percent of all expenditures, as shown at the bottom of the table.[52] As can be seen from this data, children's food ad exposure is always a considerably higher percentage of the total than the comparable food ad spending percentage on all types of shows. Presumably, this is because the advertising time on shows more popular with children is less expensive on average than time on other shows. For instance, on shows with a 20 percent child audience share, 39.1 percent of ad expenditures are for food, but 57.7 percent of children's ad exposures are for food. The

[50]That is, $(32.6 - 22.6)/32.6 = 0.307$.
[51]That is, $(1 - .307) \times 61.9 = 42.9$.
[52]This estimate parallels standard industry data on ad expenditures which shows that 26.4 percent of national TV ad spending was for food in 1977. In 2004, food ad spending on national TV had dropped to 17.1 percent (BAR/LNA 1977, 2004).

*Table 5.4*
**Percent Food Ad Expenditure versus Percent Children's Food Ad Exposure By Type of Show, Abel Study 1977**

| Type of Show | Percent Food Ad Expenditures | Percent Food Ad Exposure (2–11) | Ratio of Food Ad Exposures (2–11) to Expenditures |
|---|---|---|---|
| By Child Share | | | |
| 20% Child Share | 39.1 | 57.7 | 1.48 |
| 30% Child Share | 54.1 | 59.9 | 1.11 |
| 50% Child Share | 55.4 | 61.9 | 1.12 |
| By Child Size | | | |
| $\geq$ 3.5 million | 30.1 | 47.1 | 1.56 |
| $\geq$ 5.0 million | 30.5 | 46.1 | 1.51 |
| $\geq$ 8.0 million | 29.2 | 39.5 | 1.36 |
| All Shows | 24.4 | | |

*Source.* Abel (1978, Tables I, II, IV, VI, IX, XI, XIII, XVI, XVII, XVIII, XIX, and XX)

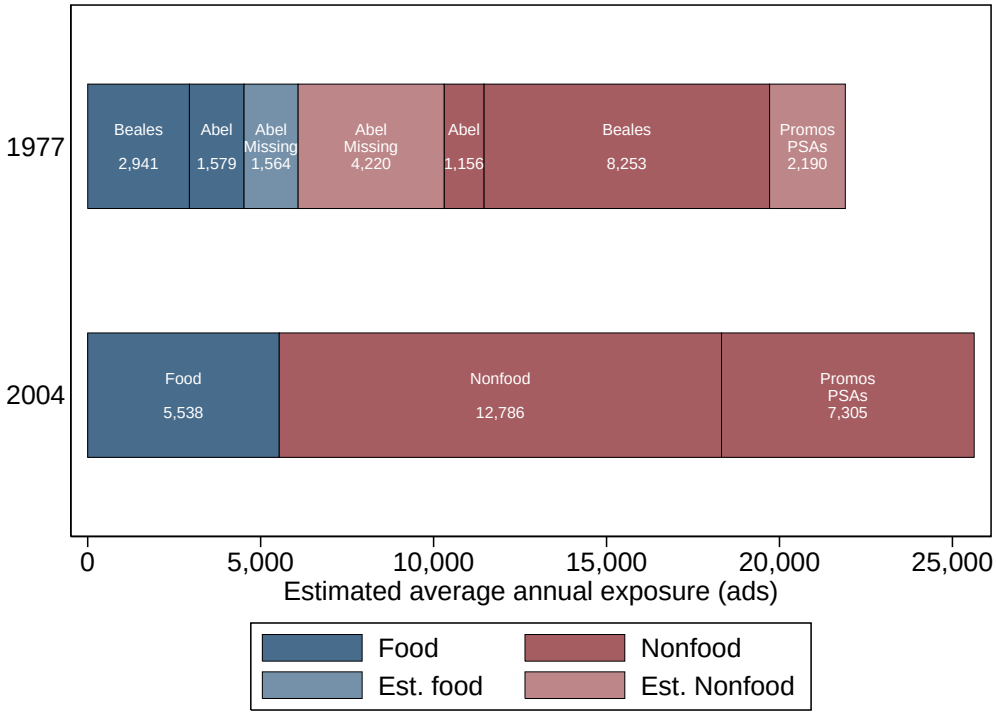
third column presents the ratio of children's food ad exposure percentages and food ad expenditures percentages for each type of show. The smallest differences are for the high child share shows (30 percent and 50 percent or more children in the audience), where the food ad exposure percentages are approximately 11 percent higher than the food ad expenditure percentages.

If we assume, conservatively, that the ratio of child ad exposure to ad expenditures on all national shows is equal to the lowest ratio found for the more general audience shows in the Abel data, that is, 1.36, we estimate that children's food ad exposure on all national shows is approximately 33.2 percent.[53]

These two approaches give us relatively similar measures of the potential magnitude of children's exposure to national food ads in 1977. To be conservative, we focus on the smaller of the two to draw out the implications for children's ad exposure; that is, we assume that

[53]That is, applying this ratio to Abel's estimate of the percent of expenditures that are food, shown in Table 5.4, we get $1.36 \times 24.4 = 33.2$.

*Figure 5.1*
**Annual Exposure to TV Advertising: 1977 versus 2004**
*Children ages 2–11*




*Source.* Staff estimates based on Abel (1978, Tables XVI, XVII and XVIII), Beales (1978, Tables 1, B-3, B-6 and B-9), and Adler et al. (1977) for 1977. Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually for 2004.

approximately 33.2 percent of children's exposures from national ads were for food products, or 3,143 national food ads.[54] When added to the Beales estimate for local ads, this implies that children would have been exposed to 6,084 food ads overall in 1977.[55] Figure 5.1 illustrates.

The lower bar of Figure 5.1 shows children's estimated exposure to food ads, paid nonfood ads, and Promos and PSAs in 2004 — the horizontal width of the bar represents average

[54]That is, from Table 5.2 we know that children saw 9,466 national ads $(6,427 + 3,039)$. Thus children's exposure to national food ads would be $0.332 \times 9,466 = 3,143$.

[55]For comparison, we present the calculation based on the other approach. As discussed above, Table 5.3 suggests the percentage of food ads on all national shows in 1977 was 42.9 percent. Thus children's exposure to national food ads would be $0.429 \times (6,427 + 3,039) = 4,061$ and overall exposure to food ads would be $4,061 + 2,941 = 7,002$.

annual exposure of 25,629 ads per year. The upper bar shows, from left to right, children's estimated food ad exposure from spot ads (Beales' data) and then their estimated food ad exposure from the subset of network shows analyzed by Abel. The third segment represents our estimate of children's exposure to food ads from the network shows excluded from Abel's analysis (1,564 food ads). The next segment represents the estimated exposure to nonfood ads from the excluded network shows (4,220 nonfood ads). The remaining segments show Abel's and Beales' estimates of children's exposure to nonfood ads and the Adler et al. (1977) estimate of exposure to Promos and PSAs. The overall horizontal width of the bar represents the Adler et al. (1977) estimate of the 1977 average annual exposure of 21,904 ads per year.

Thus, under this scenario, children's exposure to food ads would have fallen modestly since 1977, from 6,084 to 5,538 food ads, or by about 9 percent.[56]

While we believe this is a conservative and reasonable estimate of children's exposure to food ads in 1977, we also recognize that it is based on less detailed and specific data than the other estimates and analyses in this report. As a check on the core finding that children's exposure to food ads has not increased, we note from Table 5.4 that food ad spending on national network television is 24.4 percent of total ad spending on that medium in 1977. Note also from the table that for all the show groupings analyzed by Abel, the percent of children's food ad exposure is greater than the percent of food ad expenditure. We also see this pattern in the 2004 data, where food ad spending on network shows is 17.1 percent, while children's exposure to food ads on those shows is 22.6 percent. Together this evidence suggests, without any additional assumptions, that the proportion of children's national food ad exposure on all shows in 1977 should be greater than 24.4 percent, the percent of expenditure on food ads. Further, we can determine that children's national food ad exposure at any level above 27.4 percent of their total national ad exposure would imply a decrease in their exposure to food ads.[57] Therefore, it is only in the range where food

[56]The other approach finds a decline of about 21 percent. $((7,002 - 5,538)/7,002 = 0.21)$

[57]For children's food ad exposure in 2004 to be at the same level as in 1977, children would have to have seen 2,597 national network food ads in 1977 (that is, 5,538 (2004 level) - 2,941 (Beales 1977), or 27.4 percent of their national ad exposure (that is, $2,597/(6,427 + 3,039) = 27.4\%$.

ad exposure is between 24.4 percent and 27.4 percent that children's exposure to food ads could have plausibly increased since 1977. If food ad exposure were 27.4 percent of total ad exposure, the ratio of food ad exposure to food ad expenditure would have been 1.12, a ratio only seen on largely children's shows and greatly exceeded for all other show groupings.[58]

Thus, the available evidence indicates that children's exposure to food advertising has almost certainly declined since 1977, in our estimate by about 9 percent.

## 5.3 Changes in Exposure by Product Category

While coverage of the Abel data limits our ability to get precise estimates of children's ad exposure at the product category level in 1977, for most categories we can reasonably assess whether exposure has decreased or increased since 1977. For some categories, the exposure measured by Abel and Beales is greater than measured exposure for 2004 — clearly showing that if we had exposure for the "missing" shows, total exposure in 1977 must be greater than in 2004. For other categories, the exposure measured in 1977 is so much lower than that measured in 2004 that it is very likely that exposure was higher in 2004 than in 1977 — that is, the number of ads in that product category would have to be implausibly high in the "missing" shows for this not to be the case.

Table 5.5 gives children's ad exposure by product category from the various studies. The data indicates that children's exposure to TV ads for Cereal and Desserts and Sweets was lower in 2004 than in 1977. Children's 1977 exposure to Cereal ads on the programming analyzed by Abel and Beales was 1,064, while their exposure (on all shows) was 993 in 2004. Thus, even though we do not know the total exposure in 1977, it clearly has declined. We can apply similar reasoning to determine that children's exposure to ads for Desserts and Sweets

[58]Moreover, note that if we suppose there were no food advertisements at all on any of the programs with a child audience share less than 20 percent we can determine an absolute upper limit on any potential increase in children's food ad exposure. In that case, children would have seen 4,520 food ads in 1977 (the sum of the Abel and Beales estimates), compared to 5,538 food ads in 2004, a 23 percent increase. Obviously, this is an unreasonable scenario, because food was advertised on general audience shows in 1977, but it sets an absolute upper limit on how much food advertising could have increased, and it requires a clearly unreasonable assumption to get to that level.

*Table 5.5*

**Children's Exposure to Advertising Product Categories: 1977 and 2004**

| Category | 1977 | | | | | | 2004 | |
|---|---|---|---|---|---|---|---|---|
| | Abel | | Missing | | Beales | | FTC | |
| | 20%+ Share | | Estimated[d] | | All Dayparts | | All Ads | |
| | *Ads* | % | *Ads* | % | *Ads* | % | *Ads* | % |
| Cereal | 595 | 19.6 | | | 469 | 3.8 | 993 | 3.9 |
| Desserts and Sweets | 373 | 12.3 | | | 546 | 4.4 | 898 | 3.5 |
| Restaurants and Fast Food | 113 | 3.7 | | | 632 | 5.1 | 1,367 | 5.3 |
| Snacks | 35 | 1.2 | | | 38 | 0.3 | 490 | 1.9 |
| Dairy Products | | | | | | | 353 | 1.4 |
| Sweetened Drinks | 62 | 2.0 | | | 273 | 2.2 | 430 | 1.7 |
| Prepared Entrees | | | | | | | 222 | 0.9 |
| Other Food | 401 | 13.2 | | | 984 | 7.9 | 786 | 3.1 |
| All Food Products[a] | 1,579 | 52.0 | 1,564 | 26.8 | 2,941 | 23.7 | 5,539 | 21.6 |
| Games, Toys and Hobbies | 610 | 20.1 | | | 1,359 | 10.9 | 1,909 | 7.4 |
| Screen/Audio Entertainment | | | | | | | 2,010 | 7.8 |
| Bicycles; Sports and Exercise[b] | | | | | 30 | 0.2 | 24 | 0.1 |
| Promos and PSAs[c] | 304 | 10.0 | 643 | 10.0 | 1,244 | 10.0 | 7,305 | 28.5 |
| Other Non-food | 546 | 18.0 | | | 6,864 | 55.2 | 8,842 | 34.5 |
| All Non-food Products | 1,460 | 48.0 | 4,863 | 73.2 | 9,497 | 76.3 | 20,090 | 78.4 |
| Total | 3,039 | | 6,427 | | 12,438 | | 25,629 | |

*Source.* Staff estimates based on Abel (1978, Tables XVI, XVII, and XVIII), Beales (1978, Tables 1, B-3, B-6, B-9), and Adler et al. (1977) for 1977. Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually for 2004.

*Notes.* [a]As a percentage of all ads (including Promos and PSAs), All Food Products in 1977 accounted for 52 percent in Abel's programs, 33 percent in the missing programs, and 24 percent in Beales' dayparts. [b]Bicycles for 1977, Sports and Exercise for 2004. [c]Promos and PSAs for 1977 estimated by Adler. [d]Estimated assuming that national food advertising constitutes 33.2 percent of all national advertising, as described in text.

has also declined. Children's 1977 exposure to ads for Desserts and Sweets on measured programming was 919, while their exposure on all shows was 898 in 2004.

Exposure to ads for Restaurants and Fast Food almost certainly increased. The 1977 exposure to Restaurants and Fast Food ads on this subset of shows was 745, compared to 1,367 on all shows in 2004. For exposure to have *not* increased, there must have been 622 ads in this category in the missing data, or 9.7 percent of all ad exposure on those programs. This seems unlikely given the percentage contribution of Restaurants and Fast Food in the data analyzed by Abel and Beales. We can apply similar reasoning to conclude that exposure to ads for Snacks has likely increased since 1977. The 1977 exposure to ads for Snacks on this subset of shows was 73, while the 2004 exposure on all shows was 490. If it were true that exposure to ads for Snacks had not increased, exposure on the missing shows must have been at least 417, or 6.5 percent of total exposure on those shows. Given their shares in the measured subset, this is implausible.

Abel (1978) and Beales (1978) provide insufficient information to determine how children's exposure to advertising in other food categories changed between 1977 and 2004.

Overall, it appears that the food ads children viewed in 2004 are more evenly spread over these food categories than in 1977. In 1977, ads for Cereal and Desserts and Sweets dominated children's food ad exposure. While these categories are relatively large in 2004, they are not nearly as dominant as in 1977.

Children's exposure to TV ads for Games, Toys and Hobbies was lower in 2004 than in 1977. Their 1977 exposure on measured shows was 1,969 while their total exposure to these ads was 1,909 in 2004. Children's exposure to Screen/Audio Entertainment ads was probably greater in 2004 than 1977. The components of this category that were advertised in 1977 were included in Other Nonfood in 1977 so we do not have baseline exposure for the category. However, we know that the first national TV ad campaigns for movies aired in 1975 ("Breakout" and "Jaws") and that the primary mode of advertising for movies in

the 1970s was still newspapers.[59] Aside from Records, the other components are products that sold in small numbers, if at all, in 1977.[60] Therefore, we conclude that the exposure to ads in the Screen/Audio Entertainment category is likely substantially higher in 2004 than in 1977.

The 1977 studies examined Bicycles and found that children were exposed to few ads in that category. We chose a larger product category that includes Bicycles — Sports and Exercise — and found slightly lower exposure. Advertising for bicycles and sports equipment was a trivial part of the advertising children saw in 1977 and in 2004.

Children's exposure to Promos and PSAs was considerably higher in 2004 than in 1977. We cannot say how exposure to the PSA component changed between 1977 and 2004, because we do not have information on them separately in 1977. However, PSAs are a tiny portion of Promos and PSAs in 2004; they contribute less than 1 percent to Promos and PSAs' 28.5 percent. Thus, we can conclude that children's exposure to advertising for television programming (Promos) has increased substantially since 1977. Children's exposure to Other Nonfood ads was almost certainly greater in 2004 than in 1977. Their exposure to these ads on measured programming was 7,410 in 1977 and their exposure was 10,852 in 2004. (The 2004 number here includes the 1,922 Screen/Audio Entertainment exposures for comparability with the 1977 definition of Other Nonfood.)

## 5.4 Sources of Children's Ad Exposure in 1977 and 2004

*A greater proportion of children's ad exposure is on children's shows in 2004.* A direct comparison of our data from 2004 and the Abel and Beales analyses from 1977 makes it clear that children are getting a greater percentage of their ad exposure from children's programming in 2004. Table 5.6 summarizes our best estimates of children's ad exposures for food and nonfood products in the two years. Recall that the Beales analysis is for

[59]Biskind (1998): "But 'The Godfather's' advertising strategy was traditional: ads in newspapers. In those days, producers sometimes bought local TV time to promote regional openings of B movies, but nobody bought network time .... Besides TV was regarded as a rival medium."

[60]Computer games, video games, computer toys, and entertainment software.

*Table 5.6*
**Ad Exposure From Children's Programming: 1977 versus 2004**

| | General[a] | | Family[b] | | Children[b] | | Total |
|---|---|---|---|---|---|---|---|
| | Share 0-20% | | Share 20-50% | | Share ≥ 50% | | |
| | Ads | % | Ads | % | Ads | % | Ads |
| **1977** | | | | | | | |
| Food | | | | | | | |
| Network (Abel) | 1,564 | 49.8 | 586 | 18.6 | 993 | 31.6 | 3,143 |
| Non-network (Beales) | 1,167 | 39.7 | 1,039 | 35.3 | 735 | 25.0 | 2,941 |
| Nonfood[c] | | | | | | | |
| Network (Abel) | 4,863 | 76.9 | 671 | 10.6 | 789 | 12.5 | 6,323 |
| Non-network (Beales) | 3,605 | 38.0 | 3,571 | 37.6 | 2,321 | 24.4 | 9,497 |
| Total[c] | | | | | | | |
| Network (Abel) | 6,427 | 67.9 | 1,257 | 13.3 | 1,782 | 18.8 | 9,466 |
| Non-network (Beales) | 4,772 | 38.4 | 4,610 | 37.1 | 3,056 | 24.6 | 12,438 |
| **2004** | | | | | | | |
| Food | 2,023 | 36.5 | 723 | 13.1 | 2,792 | 50.4 | 5,538 |
| Nonfood | 11,568 | 57.6 | 2,942 | 14.6 | 5,581 | 27.8 | 20,091 |
| Total | 13,591 | 53.0 | 3,665 | 14.3 | 8,373 | 32.7 | 25,629 |

*Source.* Staff estimates based on Abel (1978, Tables XVI, XVII and XVIII), Beales (1978, Tables 1, B-3, B-6 and B-9), and Adler et al. (1977) for 1977. Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually for 2004.
*Notes.* [a]Abel's "All Shows" figures are estimated as described in the previous section for shows missing in the Abel analysis. Network (Abel) is the sum of the first and third numerical columns in Table 5.5. [b]Ads from shows with between 20 percent and 50 percent of the audience made up of children 2–11 in the Abel 1977 network analysis and in the 2004 data, and from dayparts with between a 20 percent and 50 percent share in Beales 1977 non-network analysis. Ads from shows with at least 50 percent show or daypart share are defined similarly. [c]Nonfood and Total for 1977 include Promos and PSAs estimated at ten percent of total based on Adler et al. (1977).

dayparts, rather than shows, so we cannot directly add the two 1977 analyses. Nonetheless, both parts of the 1977 analysis indicate that children were getting approximately one-quarter of their food ads from 50 percent child share shows or dayparts in 1977; in 2004, 50 percent of their food ad exposures came from 50 percent share shows.

In 1977 children got a substantial amount of their food advertising exposure on shows with between a 20 and 50 percent child audience share. As can be seen in Table 5.6 by comparing the fourth and sixth columns, adding family shows to children's shows more than doubles children's exposure to food advertising from non-network sources (60 percent versus 25 percent) and almost doubles it from network sources (50 versus 32 percent). In 2004 this

is not the case; children's food ad exposure increases only modestly (from 50.4 percent to 63.5 percent) when we add family shows to children's shows.

Children's exposure to nonfood ads in 2004 is not as concentrated on children's programming as food ads, but the level is again higher than in 1977. About one-quarter of children's nonfood ad exposure is from children's shows in 2004, compared to 13 and 24 percent in the network and non-network analyses, respectively, in 1977.

*Most children's ad exposure from children's programming was from cable shows in 2004; in 1977 most of their ad exposure was from broadcast network affiliates.* Table 5.7 breaks out children's ad exposure for food and nonfood products in 2004 on broadcast and cable network shows, and on local spot and syndicated shows. As can be seen from the table, in 2004 most children's ad exposure from children's shows is from cable network programming; 2,726 of the 2,792 food ads, and 5,601 of the 5,881 nonfood ads seen on children's shows are from cable. Thus, in 2004, 97.6 percent of the food ads on children's shows are from cable programming as are 95.2 percent of nonfood ads.[61]

In 1977, over 90 percent of TV viewing was of broadcast network affiliates. Further, the ads on these affiliates was fairly balanced between national and local ads. As seen in Table 5.6, children were exposed to 993 food ads from network advertising on children's shows; they saw 735 food ads on children's dayparts from non-network ads. While not directly comparable, because of the show/daypart difference in the Abel and Beales' methodologies, it is clear that we do not see the heavy concentration in programming sources seen in the 2004 data. Nonfood advertising on 50 percent share dayparts is more concentrated in local ads, but again not to the level seen in 2004.

Thus, the evidence indicates a greater portion of children's ad exposure is on children's programs in 2004, and most of that is on cable networks.

[61] We also find that 56% of children's exposure to all cable advertising and 70% of children's exposure to food advertising on cable comes from two cable networks.

*Table 5.7*
**Children's Ad Exposure Sources in 2004**

| | All Shows | | Share ≥ 20% | | Share ≥ 50% | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| **Food** | | | | | | |
| Cable Networks | 3,985 | 15.5 | 3,115 | 25.9 | 2,726 | 31.4 |
| Broadcast Networks | 835 | 3.3 | 185 | 1.5 | 5 | 0.1 |
| Syndicated | 147 | 0.6 | 9 | 0.1 | 0 | 0.0 |
| Local Spots | 571 | 2.2 | 206 | 1.7 | 61 | 0.7 |
| Total Food | 5,538 | 21.6 | 3,515 | 29.2 | 2,792 | 32.2 |
| **Nonfood** | | | | | | |
| Cable Networks | 11,755 | 45.9 | 6,986 | 58.0 | 5,601 | 64.6 |
| Broadcast Networks | 4,792 | 18.7 | 651 | 5.4 | 40 | 0.5 |
| Syndicated | 606 | 2.4 | 17 | 0.1 | 0 | 0.0 |
| Local Spots | 2,938 | 11.5 | 869 | 7.2 | 240 | 2.8 |
| Total Nonfood | 20,091 | 78.4 | 8,523 | 70.8 | 5,881 | 67.8 |
| Total | 25,629 | | 12,038 | | 8,673 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Cable Networks and Broadcast Networks refer to exposure to advertising that originates with the national cable and broadcast networks, respectively. Syndicated refers to exposure to advertising that originates through national syndication while Local Spots refers to advertising that originates with the local affiliate.

# 6 Concluding Remarks

This study finds that children's exposure to television advertising has increased somewhat since 1977; however, their exposure to television food advertising has not increased over the same period and is likely to have fallen modestly. We also find that, due to changes in the television landscape, children are getting a substantial portion of their ad exposure from children's shows. In particular, children see about half of their TV food ads on children's programming. In this section we first summarize these and other key findings of our empirical analysis of children's exposure to television advertising. We then discuss how these findings relate to the potential role of television marketing in the prevalence of obesity in U.S. children. Finally, we draw out a few implications of this evidence for evaluating and guiding research on marketing to children.

## 6.1 Summary of Major Findings

### 6.1.1 Exposure to Television Advertising

In 2004 we estimate that children ages 2–11 saw about 25,600 television advertisements, 17 percent more than in 1977. Children saw about 18,300 paid advertisements in 2004, 7 percent less than in 1977; paid ads exclude promotional ads for television programming (and PSAs), and promotional ads grew substantially over this period. Children saw approximately 2 percent fewer minutes of advertising and 19 percent fewer minutes of paid advertising in 2004 than in 1977. Together, this evidence indicates that in 2004 children saw a larger number of ads overall, but fewer paid ads and fewer minutes of advertising than in 1977. These reductions reflect the combined impact of the reduced amount of time children spent watching ad-supported television in 2004 compared to 1977 and ads that are shorter on average than in 1977.

### 6.1.2 Exposure to Food Ads

Our study also developed estimates of children's exposure to food advertising. Children saw approximately 5,500 food ads in 2004, 22 percent of all ads viewed. The 1977 studies do not give us a complete estimate of children's exposure to food ads, but with reasonable assumptions from other data from the period, we conclude that children's food advertising exposure has not increased, and is likely to have fallen modestly.

In 1977 ads for Cereals and for Desserts and Sweets dominated children's food ad exposure, with the Restaurant and Fast Food and the Sweetened Drinks categories also among the top categories. In 2004 these categories are still among the top categories of food ads children see, though the Cereals and the Desserts and Sweets categories no longer dominate. Restaurant and Fast Food ads are probably at a higher level, and they are joined by Snacks and Dairy as substantial sources of children's food ad exposure. Thus, the mix of food advertisements seen by children in 2004 is somewhat more evenly spread across these food categories than in 1977.

### 6.1.3 Ads for Sedentary Pursuits

The reduction in food advertisements seen by children has been more than compensated for by increased Promotions for television programming and increased advertising for Screen and Audio Entertainment. These two categories have become major categories of advertising seen by children. Screen and Audio Entertainment now rivals Games, Toys and Hobbies as one of the leading nonfood categories of paid ads seen by children, and Promotions is three times as large as either. Together these facts imply that children saw nearly twice as many ads for sedentary pursuits as for food products in 2004.

### 6.1.4 Exposure to Ads on Children's Programming

A greater proportion of children's ad exposure is from children's programming in 2004. Children got approximately half of their food ad exposure from programs in which children

are at least 50 percent of the audience in 2004, compared to about one quarter in 1977. Ads for some food categories appear to be targeted to children.[62] The relative importance of food ads on children's programming varies by food category. For instance, in 2004 children saw 80 percent of their Cereal ads on children's shows, but children saw only one-third of their Restaurant and Fast food ads there. In 2004 virtually all of the ad exposure from children's programming is from cable shows; in 1977, when cable programming was in its infancy, children's shows came from national broadcast and local sources.

### 6.1.5 When Children See Ads

Finally, our study presents evidence on when children get their television advertising exposure. Saturday morning is a popular viewing time for children, but children get almost as much advertising exposure from one weekday's primetime viewing (4.2 percent of the total) or from their Sunday primetime viewing (4.1 percent) as from Saturday morning (4.3 percent). Weekday viewing between 4 p.m. and 8 p.m. produces nearly as much advertising exposure per day as primetime (3.8 percent). Thus, children's television advertising exposure is not highly concentrated by time of day or day of the week. The viewing pattern for younger children (ages 2–5) differs from that for older children (ages 6–11) in that younger children get more of their exposure during daytime hours.

## 6.2 Discussion of Empirical Findings and Obesity

### 6.2.1 Evidence on TV Advertising's Relation to Obesity

Many commentators have suggested that marketing to children may be a significant factor in the growth of obesity in U.S. children.[63] This hypothesis is well beyond anything we could test formally with the data analyzed here, which is limited to television advertising.

[62] See Gantz et al. (2007) for a recent content analysis of television advertising on children's and general interest programming. Neither this report nor Gantz et al. (2007) considers whether children may respond differently to the types of ads aired on children's programs.

[63] See, for example, CSPI (2003), Hastings et al. (2003), IOM (2005), Rideout and Hamel (2006).

Nonetheless, our data can shed light on aspects of this hypothesized link.

First, our data do not support the view that children are exposed to more television food advertising today. Our primary scenario indicates that children's exposure to food advertising on television fell by about 9 percent between the 1977 studies and 2004. Children's exposure to all paid television advertising has fallen as well.

Second, our data do not support the view that children are seeing more advertising for low nutrition foods. In both years the food ads that children see are concentrated in the snacking, breakfast, and restaurant product areas. While the foods advertised on children's programming in 2004 do not constitute a balanced diet, this was the case as well in 1977, before the rise in obesity.

### 6.2.2 Evidence Related to Ad Restrictions on Children's Programming

Some have called for various restrictions on advertising to children, including a complete ban on advertising to younger children and further restrictions on the number of minutes of advertising on children's television programming. Others have called for self-regulation or legislation that would limit advertising on children's programming to foods that meet specified nutrition characteristics (CSPI 2005; IOM 2005; FTC/DHHS 2006). Some industry members have proposed voluntary commitments along these lines (CARU 2006). This report does not provide a basis to assess the likely effects of any of these approaches, or the substantial legal issues that would have to be addressed for regulation, but it does have several findings that relate to this discussion.

First, children today do get 50 percent of their food advertising from shows where children are at least 50 percent of the audience.[64] Thus, changes to the mix of ads on children's shows could have a nontrivial effect on the mix and number of food advertisements that children see. This effect would be considerably larger than would have been the case in 1977, when programming was not as specialized and children did not get much of their advertising

[64] See Table 3.8.

exposure from children's programs. That said, children also get half of their food advertising exposure from nonchildren's shows and food advertising on those shows might increase if restrictions were placed on children's programming.

Second, our study does provide some insight on another issue that has received little attention in the public discussion: what type of advertising would likely replace restricted food advertising, if it is replaced? The hope is that advertising for better food might increase. Beyond that, the best guidance on this question is found by looking at the other products currently advertised on children's programs, since these are the products most likely to increase their advertising if food advertising is reduced. Currently, advertisements for sedentary entertainment products outnumber food advertisements by nearly two to one and constitute most of the other advertising on children's programming. Presumably these products would expand their advertising further, if food advertising were reduced. Whether such a shift in advertising seen by children would affect obesity in U.S. children — either positively or negatively — is an open question that has received little attention.

Finally, it is worth noting that a restriction on advertising on children's programming would not fall evenly on industry participants. In 2004 broadcast networks had very few programs where children were more than 50 percent of the audience. Successful children's programming is now largely on children's cable networks. In fact, over 97 percent of food advertisements children see on children's shows are from cable programming.

Our study is limited to advertising on television. Television is still the medium where food advertisers spend most of their advertising dollars. In 2004 approximately 75 percent of all food advertising spending on measured media was spent on television, down from 83 percent in 1977 (BAR/LNA 1977, 2004). Many producers are exploring other advertising media and methods as television audiences become more expensive to reach. This is true for advertising to children as well. Advergaming, child-oriented producer-sponsored websites, product placements and other tie-ins with movies and television programming are all part of the marketing landscape, and research to quantify these efforts is only beginning (Moore

2006; FTC/DHHS 2006).[65]

## 6.3 Implications for Research on Marketing to Children

One of the key differences between this study and much of the literature is that the measured variable is *exposure to advertising*, a measure which takes account of how many children are in the audience for each ad aired on each show, based on very detailed Nielsen data. This exposure measure gives better estimates of how many and what type of ads children see on average, though obviously exposure is not the same as paying close attention to the ad. This exposure measure differs from other measures often used, such as the number of ads aired, which do not reflect the size of the audience seeing the ad.

A number of studies in the literature attempt to estimate the exposure measure from aggregate estimates, typically using measures of the number of ads on television per hour and the hours spent watching television (e.g. Adler et al. 1977; Chou et al. 2005; Kunkel and Gantz 1992; Gantz et al. 2007). As demonstrated in Section 3.1, footnote 19, these estimates can be quite close to the detailed exposure estimate *if* the component estimates are good; they can be very poor estimates if the component estimates are not appropriate for the audience of interest.

Some of the variation in estimates in the literature arises from the quality of these component estimates. For instance, we know that the amount of time children spend watching television is not the same as the amount of time spent watching ad-supported television. Public broadcasting and premium cable shows are not ad-supported television.[66] In 2004, approximately 70 percent of children's viewing was on ad-supported TV. If the total amount of television viewing time is used to estimate ad exposure, instead of the amount of ad-supported television, the estimate of exposure will be biased upward.

Also, the amount and type of advertising per hour varies by time of day, day of the

[65]The FTC is beginning a study to attempt to gauge the extent of these other forms of marketing to children. **Federal Register** / Vol. 72, No. 74 / Wednesday, April 18, 2007 / Notices.

[66]These shows do, however, contain promotions for other programming.

week, and type of show. Estimates of the amount and type of advertising per hour can vary accordingly, depending on the sample of shows used to generate the estimate. The sample of shows must reasonably correspond to the viewing patterns of the audience of interest — children in our case — and must be appropriately weighted by viewing pattern for it to provide a good estimate of the number and type of ads seen by the audience. In many studies, researchers estimate ads seen by children by monitoring television on Saturday morning and sometimes during after-school hours. But as seen from this data, children get much of their advertising exposure from prime time television (more than 6 times as much as on Saturday mornings), and a sample that ignores this prime time programming will present a skewed view of children's ad exposure. Detailed data on time of viewing by children is presented in Appendix D to help guide future researchers.

## 6.4 Final Notes

This study was conducted to provide a comprehensive assessment of the amount and type of television advertising seen by children in 2004. It has been nearly 30 years since the last detailed evaluation of children's television ad exposure. Advertising seen by children has received considerable attention in recent years as a possible contributor to rising obesity in American children, and as a possible vehicle to help reverse that trend. Hopefully, this report will provide useful information to guide discussion of the issues. The report also provides a baseline against which to measure future changes in children's exposure to television advertising.

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# A Data and Methods

## A.1 The data

We investigate exposure to television advertising using a comprehensive database of advertising aired during four weeks in the 2003–2004 programming season. This data consists of copyrighted Nielsen Monitor-Plus/Nielsen Media Research data linking Nielsen audience estimates to aired television advertising on monitored media. It covers all advertising aired on ad-supported television during the weeks of Nov. 2–8, 2003, Feb. 8–14, 2004, May 2–8, 2004, and July 4–10, 2004.[67] These weeks were chosen to match the Abel (1978) and Beales (1978) studies of children's exposure to television advertising and because they are in sweeps periods, the only time detailed local data is available.

The data include all television advertisements aired during the monitored programs, including paid advertisements, public service announcements (PSAs), and Promotions for a network's own or affiliated shows. The information provided for each ad include: the advertiser, the brand, the network, the program, the time the ad was aired, the length of the ad, the product category code, and estimates of viewership by those aged 6–11, 2–11, 12–17, and 18 and over.

We analyzed both national and local data. The national data covers advertising distributed by a national network or national syndicator and includes nearly one million ads. The local data covers spot advertising aired by broadcast network affiliates and independent stations in the 75 largest metropolitan markets and includes nearly five million spot ads. Spot ads are aired on a single affiliate or independent station (or several local stations in some cases).[68]

[67] The data cover 9 national English- and Spanish-language broadcast networks (ABC, CBS, FOX, NBC, Telefutura, Telemundo, UPN, Univision, and WB) and 50 national cable networks. UPN and WB have since merged to form the CW network.

[68] These 75 metropolitan areas include 78.6 percent of the U.S. population.

## A.2 Assigning Ads to Product Categories

We use the product classification code (PCC) and brand category information for each ad to assign the ad to one of the 41 detailed product categories (see Table 3.4). The PCC identifies a particular family of products and the brand category further specifies the product within the class. For example, PCC F122 identifies cereal products. Within cereal products, the brand category distinguishes cereal (where the brand category is "cereal") from oatmeal (where the brand category is "oatmeal"). We rely on the PCC for initial classification and use the brand category when a PCC includes products belonging to more than one study category. For example, all advertisements for products with PCC G422 (noncomputerized games) are assigned to the Games, Toys, and Hobbies category; the brand category is not needed. However, PCC F144 contains advertisements for both bean products and rice products. In this case, we assign products where the brand category is "beans" or "tofu" to Vegetables and Legumes and products where the brand category is "couscous" or "rice" to the Other Food category.

In most cases, the combination of PCC and brand category are sufficient to assign a product to one of the study categories. However, the PCC and brand category cannot distinguish between regular and highly-sugared cereals, for example. In cases such as these, we also use nutritional data collected from product labels and the USDA National Nutrient Database.[69] The use of nutritional information in assigning ads to product categories is described in the "Other Criteria" column of Table B.1. For example, the PCC and brand categories containing pure fruit juices also contain fruit drinks; an ad was assigned to Fruit Juices only if nutritional information for the product indicated it was 100 percent juice.[70]

[69] Staff collected nutritional information from the Internet and in person during the summer of 2005. (The National Nutrient Database for Standard Reference can be found at `http://www.ars.usda.gov/main/site_main.htm?modecode=12-35-45-00`, last visited April 12, 2007.)

[70] Appendix B presents a detailed list of which PCCs and brand categories were assigned to each study category.

## A.3 Estimating Exposure to Television Advertising

The audience estimates in the data are expressed as Gross Ratings Points (GRPs) — the percentage of a given population (U.S. population or population of a given metropolitan area) watching a program or advertisement. Multiplying the audience estimate in GRPs for a given ad by the appropriate population figure yields the estimated number of viewers exposed to the ad. We calculate total population exposure by summing the estimated number of viewers over all advertising. Average exposure is obtained by dividing by the population figure.[71] This process is carried out separately on the national data and each of the 75 metropolitan areas. Then we use a weighted average of the local average exposure figures as a nationally representative measure of average exposure to spot ads. This weighted average exposure is added to national exposure to obtain our final average exposure estimate. To project annually, we multiply the estimated exposure by 365/28.

We estimate exposure to television advertising for a given product category by carrying out a similar procedure, restricted to ads in that product category.

## A.4 Estimating daily television viewing habits

We also use GRPs to calculate the average amount time children spend watching ad-supported TV each day. We divide each day into 30 minute blocks of time and calculate the average audience in each block for each network, as described above. We use 30 minute blocks of time since many programs air for a multiple of 30 minutes. We multiply the average audience for each 30 minute block by 30 minutes to estimate the total number of person-minutes in each block. We then aggregate over the day to get the total number of person-minutes viewed per day and divide by the appropriate population estimate to compute the average number of minutes viewed by a person in that age group. We combine national and local data as in the procedure used to calculate exposure to advertising.

[71] Note this is equivalent to simply summing the GRPs; however, there are programming advantages to following the two-step procedure.

# B Definition of Categories

Table B.1 details the product classification codes (PCCs) and Nielsen brand categories assigned to each FTC product category. The table omits the PCCs and brand categories assigned to Other Nonfood; any PCC or brand category not otherwise assigned is assigned to Other Nonfood.[72] The most prevalent advertisements assigned to Other NonFood include those for department stores, automobiles, telecommunications services, and financial services. Other prominent examples include household cleaning supplies, travel services, and toiletries.

When we require information in addition to the PCC and brand category to distinguish between one or more FTC study categories, the extra criteria are listed in parenthesis in the "Other criteria" column. Brand categories in *italics* indicate those categories actually present in the data; brand categories not so emphasized come from Nielsen's master list, but do not appear in our data. PCCs marked with a '$\star$' represent PCCs in which brand categories are split between one or more FTC product categories. Sometimes the brand category in the data does not exactly match the brand category in the Nielsen master list (*e.g.* PCC code F212 contains a product category 'SNACK BAR' in the data, but 'SNACK BARS' in the Nielsen master list). In these situations, the table lists the brand category present in the data followed by the brand category from the master list in brackets.

[72] 239 PCCs were assigned to Other Nonfood.

*Table B.1*

**FTC product categories**

| FTC Category | Nielsen PCC | Nielsen brand category | Other criteria |
|---|---|---|---|
| Regular Cereal | F122* | *CEREAL*, FIBER TOPPING, *OATMEAL*, *WEBSITE-CEREAL* | ($\leq$ 30% sugar by weight) |
| Highly Sugared Cereal | F122* | *CEREAL*, *OATMEAL* | ($>$ 30% sugar by weight) |
| Beer, Wine and Mixers | F310 | *BEER*, BEER PDTS, BEER-NON ALCOHOLIC, *WEBSITE-BEER*, WEBSITE-BEER PDTS | |
| | F320 | *CHAMPAGNE*, *WINE*, WINE COOLER | |
| | F330 | *BEVERAGES-ALCOHOLIC*, *BOURBON WHISKEY*, BRANDY-COGNAC, *CANADIAN WHISKEY*, *GIN*, IRISH WHISKEY, *LIQUEUR*, LIQUOR, *RUM*, *SCOTCH WHISKEY*, *TEQUILA*, *VODKA*, WEBSITE-LIQUOR, WEBSITE-RETAIL LIQUOR, WEBSITE-WINE, WHISKEY | |
| | F340 | COCKTAIL MIXES | |
| Desserts and Dessert Ingredients | F113* | *BAKING CHOCOLATE*, *BAKING MIX*, BROWNIE MIX, BUTTERSCOTCH MORSELS, CAKE DECORATIONS, *CAKE MIX*, CANDY APPLE KIT, CHEESECAKE MIX, CHOCOLATE MORSELS, *COOKIE DOUGH*, COOKIE MIX, FOOD COLORING, FROSTING, MINT MORSELS, MORSELS, PEANUT BUTTER MORSELS, PIE CRUST, PIE FILLLING, PIE MIX, SHREDDED COCONUT, VANILLA MORSELS | |
| | F115 | *GELATIN-MIX*, *GELATIN-PREPARED*, MOUSSE DESSERT, *PUDDING-MIX*, *PUDDING-PREPARED* | |
| | F129 | FRUIT TOPPINGS, ICE CREAM TOPPINGS, *WHIPPED TOPPING* | |
| Candy | F211* | *CANDY*, *CANDY BAR*, CANDY PDTS, MARSHMALOWS, WEBSITE-CANDY | |
| | G719* | *STORE-CANDY* | |
| Appetizers, Snacks and Nuts | F212* | CORN CHIPS, *NUTS*, POPCORN, *POPPING CORN*, *POTATO CHIPS*, PRETZELS, *SNACKS*, *TORTILLA CHIPS*, WEBSITE-NUTS, WEBSITE-SNACKS | |
| Regular Non-carbonated Beverages | F171* | *ICED COFFEE*, *ICED TEA* | (Non-carbonated drink not advertised as diet or reduced calorie nor 100% juice.) |
| | F172* | *DRINK MIX*, DRINK MIX-ISOTONIC, *DRINK PDTS*, *DRINKS-ISOTONIC*, FRUIT DRINK PDTS, *FRUIT DRINKS*, *FRUIT JUICES*, WEBSITE-DRINK PDTS, WEBSITE-FRUIT JUICES | |
| | F173* | *VEGETABLE JUICE* | |

Brand categories in *italics* are present in the data. PCC codes and brand categories in brackets list the corresponding entry from the master list when there is a discrepancy. *At least one of the brand categories associated with the PCC is assigned to another study category.

(Continued on next page . . .)

*Table B.1*

**FTC product categories (continued)**

| FTC Category | Nielsen PCC | Nielsen brand category | Other criteria |
|---|---|---|---|
| | F223* | *DRINKS-NON CARBONATED*, *MILK SHAKE* | |
| Diet Non-carbonated Beverages | F172* | *FRUIT JUICES* | (Advertised as diet or reduced calorie, generally artificially sweetened) |
| | F223* | *DRINKS-NON CARBONATED* | |
| Fruit Juices | F172* | *FRUIT DRINKS*, *FRUIT JUICES* | (100% juice) |
| | F173* | *VEGETABLE JUICE* | |
| Cakes, Pies and Pastries | F162 | BROWNIES, CAKES, CHEESECAKE, *CUPCAKES*, DESSERTS, DOUGHNUTS, *PASTRY*, *PIES*, *SNACK CAKES* | |
| Crackers | F163* | *CRACKERS*, POPCORN CAKES, *RICE CAKES* | |
| Snack, Granola and Cereal Bars | F212* | *SNACK BAR* [SNACK BARS] | |
| Regular Gum | F211* | *CHEWING GUM*, WEBSITE-CHEWING GUM | (All other gums.) |
| Sugarless Gum | F211* | *CHEWING GUM* | (Sugarless according to product label.) |
| Cookies | F163* | *COOKIES* | |
| Regular Carbonated Beverages | F221 | CLUB SODA, *REG SOFT DRINK*, SELTZER WATER, *SOFT DRINKS*, TONIC WATER, *WEBSITE-SOFT DRINKS* | |
| Diet Carbonated Beverages | F222 | *DIET SOFT DRINK* | |
| Restaurants and Fast Food | G330* | *RESTAURANT*, *RESTAURANT-QUICK SVC*, *WEBSITE-REST-QUICK SVC* [WEBSITE-RESTAURANT-QUICK SVC], *WEBSITE-RESTAURANT* | |
| Raisins and Other Dried Fruit | F142* | RAISINS | |
| Ice Cream | F133 | CONES-ICE CREAM, FROZEN DESSERT, FROZEN DESSERT PDTS, *FROZEN JUICE NOVELTIES*, *FROZEN NOVELTIES*, *FROZEN YOGURT*, *ICE*, *ICE CREAM*, *ICE CREAM NOVELTIES*, ICE MILK, SHERBET, SORBET, WEBSITE-FROZEN NOVELTIES | |
| | G716* | *STORE-ICE CREAM* | |
| Fresh Fruit | F141 | *FRUIT-CITRUS* | |

Brand categories in *italics* are present in the data. PCC codes and brand categories in brackets list the corresponding entry from the master list when there is a discrepancy. *At least one of the brand categories associated with the PCC is assigned to another study category.

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*Table B.1*

**FTC product categories (continued)**

| FTC Category | Nielsen PCC | Nielsen brand category | Other criteria |
|---|---|---|---|
| | F142* | *FRUIT-NON CITRUS* | |
| Prepared Entrees | F125* | *PASTA DINNERS* | |
| | F126* | *CHILI*, *ENTREES-FROZEN*, *ENTREES-PREPARED*, HASH, *ORIENTAL NOODLES*, *RICE MIX*, WEBSITE-ENTREES-FROZEN | |
| Frozen Pizza | F126* | *PIZZA-FROZEN*, PIZZA-REFRIG | |
| Dairy Products and Substitutes | F131 | *BUTTER*, BUTTERMILK, *CREAM*, EGGNOG, *EGGS*, *MILK*, PROCESSED EGG | |
| | F132 | *CHEESE*, *CREAM CHEESE* | |
| | F134 | *NON-DAIRY CREAMER* | |
| | F139 | *COTTAGE CHEESE*, *DAIRY PDTS*, *SOUR CREAM*, *YOGURT* | |
| Vegetables and Legumes | F143 | *FRENCH FRIES*, HASH BROWNS, *OLIVES*, *PRODUCE*, SALADS, SAUERKRAUT, VEGETABLES, *VEGETABLES-CANNED*, *VEGETABLES-FRESH*, *VEGETABLES-FROZEN* | |
| | F144* | *BEANS*, *TOFU* | |
| Meat, Poultry and Fish | F150 | *BACON*, *BEEF*, *HOT DOGS* [HOT DOG], LAMB, *LUNCHEON MEAT*, *MEAT*, MEAT PDTS, *PORK*, *POULTRY*, *SAUSAGE*, *SEAFOOD*, WEBSITE-SEAFOOD | |
| Bread, Rolls, Waffles and Pancakes | F161 | *BAGELS*, *BREAD*, BREADSTICKS, *BUNS*, CROISSANTS, *DOUGH*, ENGLISH MUFFINS, *FRENCH TOAST-FROZEN*, MUFFINS, PANCAKES-FROZEN, ROLLS, TACO SHELLS, *TORTILLAS*, *WAFFLES-FROZEN* | |
| Other Food and Beverage | F111 | *ARTIFICIAL SWEETENER*, *HONEY*, *SUGAR*, *SYRUP* | |
| | F112 | BUTTER-MARGARINE BLEND, *COOKING OIL*, LARD, *MARGARINE*, *NON-STICK SPRAY*, SHORTENING | |
| | F113* | BREAD MIX, *CORNMEAL*, *FLOUR*, MUFFIN MIX, *PANCAKE-WAFFLE MIX*, PIZZA CRUST, WEBSITE-YEAST, YEAST | |
| | F114 | CLAM JUICE, COOKING WINE, FLAVORING, *MARINADE*, SALT, *SEASONING*, *SEASONING MIX*, VINEGAR | |

Brand categories in *italics* are present in the data. PCC codes and brand categories in brackets list the corresponding entry from the master list when there is a discrepancy. *At least one of the brand categories associated with the PCC is assigned to another study category.

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*Table B.1*

**FTC product categories (continued)**

| FTC Category | Nielsen PCC | Nielsen brand category | Other criteria |
|---|---|---|---|
| | F116 | APPLE SAUCE, HORSERADISH, *KETCHUP*, *MUSTARD*, *PICKLES*, RELISH | |
| | F117 | CRANBERRY SAUCE, *DIPS*, *GRAVY*, GRAVY MIX, *PASTA SAUCE*, *SALSA*, *SAUCE*, *SAUCE-BARBECUE*, SAUCE-COCKTAIL, *SAUCE-HOT*, *SAUCE-MIX*, *SAUCE-ORIENTAL*, SAUCE-PICANTE, SAUCE-POULTRY, *SAUCE-SOY*, *SAUCE-STEAK*, SAUCE-STIR-FRY, SAUCE-TARTAR, *SAUCE-TERIYAKI*, *SAUCE-WORCESTERSHIRE*, TOMATO PASTE | |
| | F118 | *MAYONNAISE*, SALAD DRESSINGS, *SALAD DRESSINGS-BOTTLED*, *SALAD DRESSINGS-MIX* | |
| | F119 | BACON BITS, BAKING PWDR, *BAKING SODA*, BREAD CRUMBS, COATING MIX, CORN STARCH, CROUTONS, FAT SUBSTITUE, FRUIT PECTIN, PRESERVATIVE, STUFFING MIX | |
| | F121 | SOUP, *SOUP-CONDENSED*, *SOUP-MIX*, *SOUP-RTS* | |
| | F124 | *BABY FOODS* [BABY FODS], *INFANT FORMULA*, WEBSITE-BABY FOODS | |
| | F125* | *PASTA* | |
| | F128 | FRUIT SPREADS, JAMS & JELLIES, *PEANUT BUTTER*, *PRESERVES*, SANDWICH SPREAD | |
| | F144* | COUSCOUS, *RICE*, WEBSITE-RICE | |
| | F171* | CHOCOLATE SYRUP, COCOA, *COCOA MIX*, *COFFEE*, *COFFEE-BEAN-CAF*, *COFFEE-GROUND-CAF*, COFFEE-GROUND-DECAF, *COFFEE-INSTANT-CAF*, COFFEE-INSTANT-DECAF, *HOT COCOA MIX*, *ICED TEA MIX*, *TEAS*, WEBSITE-COFFEE | |
| | F190 | *FOOD PDTS*, *WEBSITE-FOOD PDTS* | |
| | F211* | *BREATH MINTS*, *CHEWING GUM*, WEBSITE-BREATH MINTS | |
| | F224 | *BOTTLED WATER*, *MINERAL WATER*, WEBSITE-BOTTLED WATER | |
| | G716* | *BAKERY*, *FOOD DISTRIBUTOR*, *SHOP-BAGEL*, *SHOP-DOUGHNUT*, *STORE-BEVERAGES*, *STORE-COFFEE-TEA*, *STORE-FOOD*, STORE-FROZEN YOGURT, *STORE-HEALTH FOOD*, *STORE-LIQUOR*, *STORE-MEAT-SEAFOOD*, *STORE-POPCORN*, *STORE-PRODUCE*, *SUPERMARKET*, WEBSITE-BAKERY, WEBSITE-HEALTH FOODS, WEBSITE-RETAIL BEVERAGES, WEBSITE-RETAIL COFFEE-TEA, WEBSITE-RETAIL FOOD, WEBSITE-RETAIL HLTH FOOD, *WEBSITE-RETAIL MEAT-SEAFD*, WEBSITE-RETAIL PRODUCE, *WEBSITE-SUPERMARKET* | |

Brand categories in *italics* are present in the data. PCC codes and brand categories in brackets list the corresponding entry from the master list when there is a discrepancy. * At least one of the brand categories associated with the PCC is assigned to another study category.

(Continued on next page . . .)

*Table B.1*

**FTC product categories (continued)**

| FTC Category | Nielsen PCC | Nielsen brand category | Other criteria |
|---|---|---|---|
| Games, Toys and Hobbies | G422 | *CARDS-NOVELTY*, *GAME*, *GAME-BOARD*, *GAME-CARD*, PLAYING CARDS, *POOL TABLES*, PUZZLE, *SWING SETS*, WEBSITE-CARDS-NOVELTY, WEBSITE-GAME-BOARD, *WEBSITE-GAMES* | |
| | G423 | BUILDING KITS, *BUILDING SETS*, COLORING BOOKS, CRAYONS, *PLAYSETS*, *RACE SET*, *RIDEABLE TOYS*, SKATEBOARDS, *STUFFED TOYS*, *TOY ACCESS*, *TOY FIGURES-DOLLS*, TOY INSTRUMENTS, *TOY VEHICLES*, *TOY VEHICLES-RADIO CONTRL* [TOY VEHICLES-RADIO CONTROL], *TOYS*, TRAIN SET, *WEBSITE-TOYS* | |
| | G424 | CALLIGRAPHY KIT, COLORING KIT, *CRAFT SUPLS*, DRAWING KIT, *MODEL KITS*, PAINT SET | |
| | G717⋆ | *STORE-ARTS & CRAFTS*, *STORE-HOBBY*, *STORE-PLAYGROUND SETS*, *STORE-TOYS*, WEBSITE-PLAYGROUND SETS, WEBSITE-RETAIL ART & CRFT, WEBSITE-RETAIL HOBBY, WEBSITE-RETAIL TOYS | |
| Screen / Audio Entertainment | G310 | *MOTION PICTURE*, WEBSITE-MOTION PICTURE | |
| | G421 | *COMPUTER TOY*, *ENTERTAINMENT SFTWRE*, GAME-VCR, *GAME-VCR-DVD*, *GAME-VIDEO ACCESS*, *GAME-VIDEO SYS*, VIDEO GAME-CLUB, WEBSITE-ENTRTNMNT SFTWRE, WEBSITE-GAME-VIDEO ACCESS, WEBSITE-GAME-VIDEO SYS | |
| | G719⋆ | *STORE-RECORDS-TAPES-CDS*, *STORE-VIDEO*, *WEBSITE-RECORDS-TAPES-CDS*, *WEBSITE-RETAIL ENT SFTWRE*, *WEBSITE-RETAIL VIDEO* | |
| | H331 | BOOKS-RECORDINGS, RECORDINGS, *RECORDINGS-AUDIO*, WEBSITE-RECORDINGS AUDIO | |
| | H332 | *RECORDINGS-VIDEO*, WEBSITE-RECORDINGS-VIDEO | |
| | R100⋆ | *RECORDINGS-AUDIO-DIR RESP*, *RECORDINGS-DIR RESP*, *RECORDINGS-VIDEO-DIR RESP* | |
| Dental Supplies | D121 | *BREATH FRESHENER*, *DENTAL FLOSS*, *DENTAL PDTS*, DENTAL RINSE, *DENTURE ADHESIVE*, *DENTURE CLEANER*, *MOUTHWASH*, *TOOTH POLISH*, TOOTH PWDR, *TOOTHBRUSH*, *TOOTHBRUSH-ELECTRIC* [PCC originally D150], *TOOTHPASTE-GEL*, WEBSITE-MOUTHWASH, WEBSITE-TOOTHPASTE-GEL | |
| Sporting Goods | B119⋆ | *BOAT RENTAL SVCS* | |

Brand categories in *italics* are present in the data. PCC codes and brand categories in brackets list the corresponding entry from the master list when there is a discrepancy. ⋆At least one of the brand categories associated with the PCC is assigned to another study category.

(Continued on next page . . .)

*Table B.1*

**FTC product categories (continued)**

| FTC Category | Nielsen PCC | Nielsen brand category | Other criteria |
|---|---|---|---|
| | G411 | *FISH TRACKER*, *FISHING EQUIP*, *FISHING LINE*, *FISHING REEL*, *FISHING ROD*, *FISHING TACKLE*, *TACKLE BOX*, WEBSITE-FISHING EQUIP | |
| | G412 | *AMMUNITION*, *FIREARM ACCESS*, *FIREARMS*, *FIREWORKS*, *RIFLES*, *SHOTGUNS* | |
| | G413 | *BATTERIES-BOAT*, *BOAT DLRSHP*, BOAT TRAILERS, *BOATING EQUIP*, *BOATS*, INBOARD MOTOR, INFLATABLE BOATS, *MARINA*, MARINE ENGINES, *OUTBOARD MOTOR*, *SHOP-BOAT REPAIR*, *TROLLING MOTOR*, *WEBSITE-BOAT DLRSHP*, WEBSITE-BOATING EQUIP, *WEBSITE-BOATS* | |
| | G415 | BICYCLE ACCESS, *BICYCLES* | |
| | G416 | *SKIING EQUIP* [SKIING EQUIPMENT], SKIS-SNOW, SKIS-WATER, SNOWBOARD | |
| | G417 | *GOLF BAGS*, *GOLF BALLS*, *GOLF CARTS*, *GOLF CLUBS*, *GOLF EQUIP*, WEBSITE-GOLF EQUIPMENT | |
| | G418 | TENNIS BALLS, TENNIS EQUIP, TENNIS RACQUETS | |
| | G419 | *ARCHERY EQUIPMENT*, *BASEBALL EQUIP*, BASEBALL GLOVE, BASEBALLS, BASKETBALL EQUIP, *BASKETBALLS*, BOWLING BALLS, BOWLING EQUIP, *CAMPING EQUIP*, CAMPING TENTS, FOOTBALL EQUIP, FOOTBALLS, HOCKEY EQUIP, HOCKEY STICKS, *HUNTING BOWS*, *HUNTING EQUIP*, ICE CHEST, *ICE SKATES*, IN-LINE SKATES, ROLLER SKATES, SLEEPING BAGS, SNORKEL-MASK, *SPORTING EQUIP*, SURFBOARD, SWIM FINS, TRAMPOLINE, WATER SAFETY DEVICE, *WEBSITE-SPORTING GOODS* | |
| | G717⋆ | *STORE-SPORTING GOODS*, *WEBSITE-RETAIL SPRTNG GDS* | |
| | G719⋆ | *STORE-BICYCLES*, *STORE-BILLIARDS* | |
| Exercise Equipment | D242 | *EXERCISE EQUIP*, WEBSITE-EXERCISE EQUIP, WEBSITE-RETAIL EXRCSE EQP | |
| | G719⋆ | *STORE-EXERCISE EQUIP* | |
| | R100⋆ | *EXERCISE EQUIP-DIR RESP* | |
| Diets and Diet Aids | D217 | *REDUCING AIDS*, *WEBSITE-REDUCING AIDS* | |

Brand categories in *italics* are present in the data. PCC codes and brand categories in brackets list the corresponding entry from the master list when there is a discrepancy. ⋆At least one of the brand categories associated with the PCC is assigned to another study category.

(Continued on next page . . .)

*Table B.1*

**FTC product categories (continued)**

| FTC Category | Nielsen PCC | Nielsen brand category | Other criteria |
|---|---|---|---|
| | D241 | *FITNESS CTRS-CLUBS*, FITNESS PROGRAMS, *GYMNASTIC CTR*, *HEALTH CARE PROGRAM*, WEBSITE-FITNESS CTRS-CLBS, WEBSITE-WEIGHT LOSS CTR, *WEBSITE-WEIGHT LOSS PROGM*, *WEIGHT LOSS CTR*, *WEIGHT LOSS PROGRAM* | |
| Footwear | A131 | *BOOTS*, *SHOES*, SLIPPERS, WEBSITE-SHOES | |
| | A132 | *BOWLING SHOES*, *GOLF SHOES*, PROTECTIVE FOOTWEAR, SKI BOOTS, *SPORTING FOOTWEAR*, WEBSITE-SPORTING FOOTWEAR | |
| | G711* | *STORE-SHOES* | |
| Computer Hardware and Internet Service | B143* | *INTERNET SVC PROVIDER*, *INTERNET SVCS*, *WEBSITE-INTERNET SVC PRVD*, *WEBSITE-INTERNET SVCS* | |
| | B311* | *COMPUTER ACCESSORIES* [COMPUTER ACCESSSORIES], *COMPUTER HARDWARE*, COMPUTER MONITORS, *COMPUTER PERIPHERALS*, *COMPUTER SYS*, *COMPUTERS-HAND HELD*, MODEMS, OFFICE AUTOMATION SYS, *PRINTERS*, WEBSITE-COMPUTER HARDWARE, WEBSITE-COMPUTER PERPHRLS, WEBSITE-COMPUTER SYS, WEBSITE-COMPUTERS, WORD PROCESSORS | |
| | G715* | *STORE-COMPUTERS* | |
| Computer Software (Non-game) | B340 | *COMPUTER SFTWRE*, *WEBSITE-COMPUTER SFTWRE* | |
| | G715* | *STORE-COMPUTER SFTWRE* | |

Brand categories in *italics* are present in the data. PCC codes and brand categories in brackets list the corresponding entry from the master list when there is a discrepancy. * At least one of the brand categories associated with the PCC is assigned to another study category.

(Continued on next page . . .)

*Table B.1*

**FTC product categories (continued)**

| FTC Category | Nielsen PCC | Nielsen brand category | Other criteria |
|---|---|---|---|
| Promos | PXXX | PROMO, *TV PGM-MORNING-SPORTS*, *TV PGM-MORNING-TALK SHOW*, *TV PGM-MORNING-NEWS*, *TV PGM-MORNING-ENT*, TV PGM-MULTI-ENT, *TV PGM-DAYTIME-SPORTS*, *TV PGM-DAYTIME-TALK SHOW*, *TV PGM-DAYTIME-NEWS*, *TV PGM-DAYTIME-ENT*, *TV PGM-EVENING-SPORTS*, *TV PGM-EVENING-TALK SHOW*, *TV PGM-EVENING-NEWS*, *TV PGM-EVENING-ENT*, *TV PGM-PRIME-SPORTS*, *TV PGM-PRIME-TALK SHOW*, *TV PGM-PRIME-NEWS*, *TV PGM-PRIME-ENT*, *TV PGM-LATENITE-SPORTS*, *TV PGM-LATENITE-TALK SHOW*, *TV PGM-LATENITE-NEWS*, *TV PGM-LATENITE-ENT*, *TV PGM-OVERNITE-SPORTS*, *TV PGM-OVERNITE-TALK SHOW*, *TV PGM-OVERNITE-NEWS*, *TV PGM-OVERNITE-ENT*, *TV PGM-MULTI-SPORTS*, *TV PGM-MULTI-NEWS*, *TV PGM-MULTI-ENT*, *TV PGM-SYND-SPORTS*, *TV PGM-SYND-TALK SHOW*, *TV PGM-SYND-NEWS*, *TV PGM-SYND-ENT*, *TV PGM-CABLE-SPORTS*, *TV PGM-CABLE-TALK SHOW*, *TV PGM-CABLE-NEWS*, *TV PGM-CABLE-ENT*, *BROADCAST TV NETWORK*, *CABLE TV NETWORK*, *HISPANIC TV NETWORK*, *TV STATION* | (classification based on Nielsen flag identifying promos) |
| PSAs | B182 | *PSA*, WEBSITE-PSA | (classification based on Nielsen flag identifying promos) |
| | G900$^\star$ | *VIGNETTE* | |
| Over-the-counter Medication | D211 | *ASPIRIN*, *PAIN RELIEVING RUB*, *PAIN RELVR*, *SLEEPING AID*, WEBSITE-PAIN RELIEVERS | |
| | D212 | *ALLERGY REMEDY*, ASTHMA MEDICATION, *COLD REMEDIES*, *COLD REMEDIES-MULTI SYMP*, *COUGH REMEDIES*, *NASAL DECONGESTANTS*, *SINUS MEDICATIONS*, *THROAT REMEDIES* | |
| | D213 | *ANTACIDS*, *DIARRHEA MEDICATION*, *DIGESTIVE AID*, WEBSITE-ANTACIDS | |
| | D214 | *LAXATIVES* | |
| | D215 | *CALCIUM SUPPLMT*, *NUTRITIONAL PDTS*, *NUTRITIONAL SUPPLMT*, *VITAMINS*, WEBSITE-NUTRITIONAL SUPPLMT | |
| | D216 | *LIP MEDICATION*, *SKIN TREATMENTS-MED* | |
| | D219 | *EAR MEDICATION*, *EYE DROPS*, EYE MEDICATION, *FOOT CARE-MED*, *HEMORRHOIDAL REMEDY*, *INSECT REPELLENT*, MOTION SICKNESS REMEDY, *ORAL REMEDY*, *SMOKING DETERRENT*, STIMULANTS, *WART REMEDY*, WATER LOSS REMEDY, *WATER RETENTION REMEDY*, WEBSITE-FOOT CARE-MED, WEBSITE-SMOKING DETERRENT | |

Brand categories in *italics* are present in the data. PCC codes and brand categories in brackets list the corresponding entry from the master list when there is a discrepancy. $^\star$At least one of the brand categories associated with the PCC is assigned to another study category.

(Continued on next page . . .)

*Table B.1*

**FTC product categories (continued)**

| FTC Category | Nielsen PCC | Nielsen brand category | Other criteria |
|---|---|---|---|
| Prescription Medication | D218* | *PHARMACEUTICAL HOUSES*, *PRESCRIPTION DRUGS-HUMAN*, WEBSITE-PHRMCUTCL HOUSES, WEBSITE-PRSCRPTN DRG-HMN | |
| Other Nonfood Advertising | — | All product codes and product categories not categorized elsewhere | |

Brand categories in *italics* are present in the data. PCC codes and brand categories in brackets list the corresponding entry from the master list when there is a discrepancy. *At least one of the brand categories associated with the PCC is assigned to another study category.

# C What is Advertised to Children: Detailed Findings

## C.1 Children, 2–11

Table C.1 presents findings related to those presented in Section 3.3. It shows how exposure to advertising at the detailed category level changes as the share of children changes.

*Table C.1*

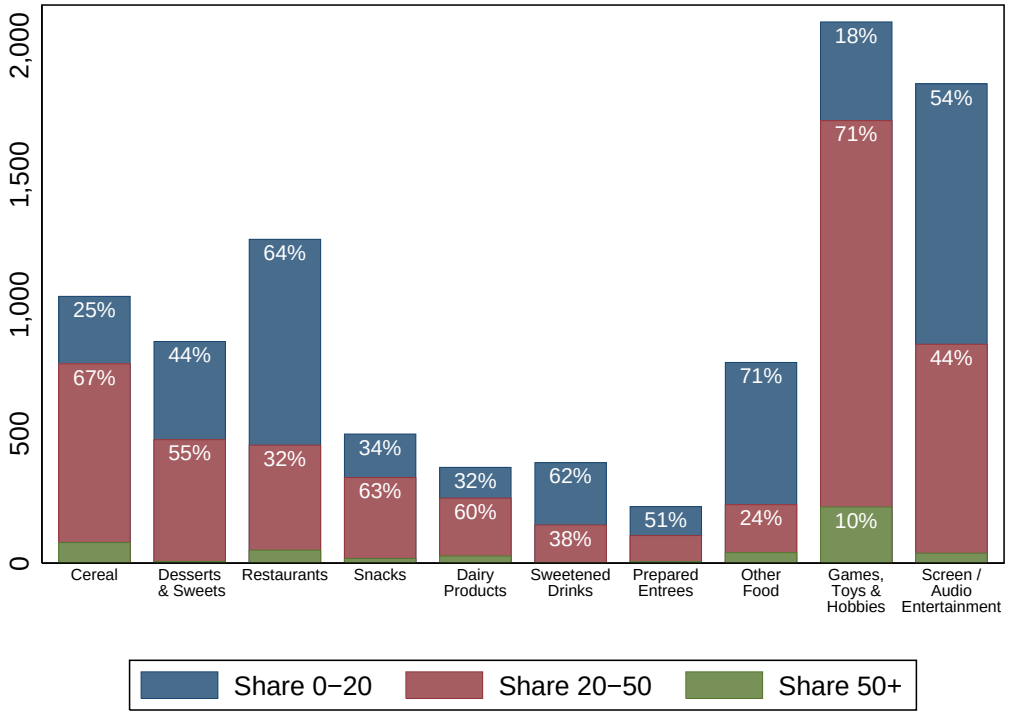
**Detailed Annual Exposure to TV Advertising by Audience Share**

*Children ages 2–11*

| Category | All ads | | Share ≥ 20% | | Share ≥ 50% | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| Regular Cereal | 157 | 0.6 | 88 | 0.7 | 70 | 0.8 |
| Highly Sugared Cereal | 836 | 3.3 | 800 | 6.6 | 712 | 8.2 |
| Candy | 468 | 1.8 | 318 | 2.6 | 244 | 2.8 |
| Desserts and Dessert Ingredients | 52 | 0.2 | 30 | 0.3 | 25 | 0.3 |
| Cakes, Pies and Pastries | 94 | 0.4 | 89 | 0.7 | 76 | 0.9 |
| Regular Gum | 104 | 0.4 | 79 | 0.7 | 59 | 0.7 |
| Cookies | 166 | 0.6 | 131 | 1.1 | 112 | 1.3 |
| Ice Cream | 15 | 0.1 | 7 | 0.1 | 4 | 0.0 |
| Restaurants and Fast Food | 1,367 | 5.3 | 656 | 5.5 | 436 | 5.0 |
| Appetizers, Snacks and Nuts | 343 | 1.3 | 290 | 2.4 | 259 | 3.0 |
| Crackers | 99 | 0.4 | 79 | 0.7 | 68 | 0.8 |
| Snack, Granola and Cereal Bars | 48 | 0.2 | 20 | 0.2 | 13 | 0.2 |
| Dairy Products and Substitutes | 353 | 1.4 | 271 | 2.3 | 239 | 2.8 |
| Regular Carbonated Beverages | 147 | 0.6 | 43 | 0.4 | 18 | 0.2 |
| Regular Non-carbonated Beverages | 283 | 1.1 | 191 | 1.6 | 144 | 1.7 |
| Prepared Entrees | 205 | 0.8 | 138 | 1.1 | 112 | 1.3 |
| Frozen Pizza | 17 | 0.1 | 3 | 0.0 | 1 | 0.0 |
| Beer, Wine and Mixers | 132 | 0.5 | 5 | 0.0 | 0 | 0.0 |
| Diet Carbonated Beverages | 20 | 0.1 | 2 | 0.0 | 0 | 0.0 |
| Diet Non-carbonated Beverages | 17 | 0.1 | 3 | 0.0 | 0 | 0.0 |
| Fruit Juices | 51 | 0.2 | 7 | 0.1 | 0 | 0.0 |
| Sugarless Gum | 25 | 0.1 | 6 | 0.1 | 4 | 0.0 |
| Canned Fruit | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Raisins and Other Dried Fruit | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Fresh Fruit | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Vegetables and Legumes | 16 | 0.1 | 3 | 0.0 | 0 | 0.0 |
| Meat, Poultry and Fish | 48 | 0.2 | 7 | 0.1 | 0 | 0.0 |
| Bread, Rolls, Waffles and Pancakes | 155 | 0.6 | 127 | 1.1 | 107 | 1.2 |
| Other Food and Beverage | 322 | 1.3 | 120 | 1.0 | 86 | 1.0 |
| All Food Products | 5,538 | 21.6 | 3,515 | 29.2 | 2,792 | 32.2 |
| Games, Toys and Hobbies | 1,909 | 7.5 | 1,827 | 15.2 | 1,629 | 18.8 |
| Screen / Audio Entertainment | 2,010 | 7.8 | 1,205 | 10.0 | 888 | 10.2 |
| Sporting Goods | 23 | 0.1 | 16 | 0.1 | 12 | 0.1 |
| Exercise Equipment | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Promos | 7,097 | 27.7 | 3,432 | 28.5 | 2,395 | 27.6 |
| PSAs | 208 | 0.8 | 120 | 1.0 | 79 | 0.9 |
| Dental Supplies | 220 | 0.9 | 55 | 0.5 | 38 | 0.4 |
| Diets and Diet Aids | 64 | 0.2 | 8 | 0.1 | 1 | 0.0 |
| Footwear | 111 | 0.4 | 54 | 0.4 | 36 | 0.4 |
| Computer Hardware and Internet Services | 230 | 0.9 | 75 | 0.6 | 49 | 0.6 |
| Computer Software (Non-game) | 13 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Over-the-counter Medication | 648 | 2.5 | 95 | 0.8 | 24 | 0.3 |
| Prescription Medication | 312 | 1.2 | 34 | 0.3 | 4 | 0.1 |
| Other Nonfood Advertising | 7,244 | 28.3 | 1,602 | 13.3 | 727 | 8.4 |
| All Nonfood Products | 20,091 | 78.4 | 8,523 | 70.8 | 5,881 | 67.8 |
| Total | 25,629 | | 12,038 | | 8,673 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Figure C.1*
**Annual Exposure to TV Advertising, Selected Categories**
*Younger children ages 2–5*




*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Promos and PSAs and Other Nonfood Advertising omitted because they dominate the graph.

## C.2 Younger Children, 2–5

This section provides additional findings related to those presented in Section 3.6. First, a graph shows exposure to selected categories of ads on general programming, family shows, and children's shows. Tables presenting findings at a more detailed category level follow.

*Table C.2*

**Annual Exposure to TV Advertising By Product Category**

*Younger children ages 2–5*

| Category | Ads | % | Detailed category | Ads | % |
|---|---|---|---|---|---|
| Cereal | 1,031 | 4.1 | Regular Cereal | 160 | 0.6 |
| | | | Highly Sugared Cereal | 871 | 3.5 |
| Desserts and Sweets | 857 | 3.4 | Candy | 441 | 1.8 |
| | | | Desserts and Dessert Ingredients | 51 | 0.2 |
| | | | Cakes, Pies and Pastries | 95 | 0.4 |
| | | | Regular Gum | 96 | 0.4 |
| | | | Cookies | 160 | 0.6 |
| | | | Ice Cream | 14 | 0.1 |
| Restaurants and Fast Food | 1,252 | 5.0 | Restaurants and Fast Food | 1,252 | 5.0 |
| Snacks | 499 | 2.0 | Appetizers, Snacks and Nuts | 354 | 1.4 |
| | | | Crackers | 101 | 0.4 |
| | | | Snack, Granola and Cereal Bars | 44 | 0.2 |
| Dairy Products | 370 | 1.5 | Dairy Products and Substitutes | 370 | 1.5 |
| Sweetened Drinks | 388 | 1.6 | Regular Carbonated Beverages | 127 | 0.5 |
| | | | Regular Non-carbonated Beverages | 261 | 1.0 |
| Prepared Entrees | 218 | 0.9 | Prepared Entrees | 203 | 0.8 |
| | | | Frozen Pizza | 15 | 0.1 |
| Other Food | 776 | 3.1 | Beer, Wine and Mixers | 116 | 0.5 |
| | | | Diet Carbonated Beverages | 19 | 0.1 |
| | | | Diet Non-carbonated Beverages | 15 | 0.1 |
| | | | Fruit Juices | 51 | 0.2 |
| | | | Sugarless Gum | 23 | 0.1 |
| | | | Canned Fruit | 0 | 0.0 |
| | | | Raisins and Other Dried Fruit | 0 | 0.0 |
| | | | Fresh Fruit | 0 | 0.0 |
| | | | Vegetables and Legumes | 15 | 0.1 |
| | | | Meat, Poultry and Fish | 44 | 0.2 |
| | | | Bread, Rolls, Waffles and Pancakes | 155 | 0.6 |
| | | | Other Food and Beverage | 338 | 1.4 |
| All Food Products | 5,390 | 21.6 | All Food Products | 5,390 | 21.6 |
| Games, Toys and Hobbies | 2,092 | 8.4 | Games, Toys and Hobbies | 2,092 | 8.4 |
| Screen / Audio Entertainment | 1,853 | 7.4 | Screen / Audio Entertainment | 1,853 | 7.4 |
| Sports and Exercise | 21 | 0.1 | Sporting Goods | 21 | 0.1 |
| | | | Exercise Equipment | 0 | 0.0 |
| Promos and PSAs | 7,270 | 29.2 | Promos | 7,065 | 28.3 |
| | | | PSAs | 205 | 0.8 |
| Other Nonfood | 8,314 | 33.3 | Dental Supplies | 240 | 1.0 |
| | | | Diets and Diet Aids | 58 | 0.2 |
| | | | Footwear | 99 | 0.4 |
| | | | Computer Hardware and Internet Services | 215 | 0.9 |
| | | | Computer Software (Non-game) | 12 | 0.0 |
| | | | Over-the-counter Medication | 656 | 2.6 |
| | | | Prescription Medication | 312 | 1.2 |
| | | | Other Nonfood Advertising | 6,722 | 27.0 |
| All Nonfood Products | 19,549 | 78.4 | All Nonfood Products | 19,549 | 78.4 |
| Total | 24,939 | | Total | 24,939 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Table C.3*

**Detailed Exposure to TV Advertising By Audience Share**

*Younger children ages 2–5*

| Category | All ads | | Share ≥ 20% | | Share ≥ 50% | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| Regular Cereal | 160 | 0.6 | 76 | 0.8 | 13 | 1.3 |
| Highly Sugared Cereal | 871 | 3.5 | 694 | 7.7 | 67 | 7.0 |
| Candy | 441 | 1.8 | 225 | 2.5 | 3 | 0.3 |
| Desserts and Dessert Ingredients | 51 | 0.2 | 22 | 0.2 | 0 | 0.0 |
| Cakes, Pies and Pastries | 95 | 0.4 | 75 | 0.8 | 3 | 0.3 |
| Regular Gum | 96 | 0.4 | 53 | 0.6 | 0 | 0.0 |
| Cookies | 160 | 0.6 | 101 | 1.1 | 0 | 0.0 |
| Ice Cream | 14 | 0.1 | 2 | 0.0 | 0 | 0.0 |
| Restaurants and Fast Food | 1,252 | 5.0 | 456 | 5.1 | 50 | 5.2 |
| Appetizers, Snacks and Nuts | 354 | 1.4 | 251 | 2.8 | 18 | 1.9 |
| Crackers | 101 | 0.4 | 70 | 0.8 | 0 | 0.0 |
| Snack, Granola and Cereal Bars | 44 | 0.2 | 10 | 0.1 | 0 | 0.0 |
| Dairy Products and Substitutes | 370 | 1.5 | 251 | 2.8 | 28 | 2.9 |
| Regular Carbonated Beverages | 127 | 0.5 | 21 | 0.2 | 0 | 0.0 |
| Regular Non-carbonated Beverages | 261 | 1.0 | 126 | 1.4 | 0 | 0.0 |
| Prepared Entrees | 203 | 0.8 | 105 | 1.2 | 5 | 0.6 |
| Frozen Pizza | 15 | 0.1 | 1 | 0.0 | 0 | 0.0 |
| Beer, Wine and Mixers | 116 | 0.5 | 2 | 0.0 | 0 | 0.0 |
| Diet Carbonated Beverages | 19 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| Diet Non-carbonated Beverages | 15 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| Fruit Juices | 51 | 0.2 | 0 | 0.0 | 0 | 0.0 |
| Sugarless Gum | 23 | 0.1 | 5 | 0.1 | 0 | 0.0 |
| Canned Fruit | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Raisins and Other Dried Fruit | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Fresh Fruit | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Vegetables and Legumes | 15 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| Meat, Poultry and Fish | 44 | 0.2 | 0 | 0.0 | 0 | 0.0 |
| Bread, Rolls, Waffles and Pancakes | 155 | 0.6 | 105 | 1.2 | 4 | 0.4 |
| Other Food and Beverage | 338 | 1.4 | 113 | 1.3 | 37 | 3.9 |
| All Food Products | 5,390 | 21.6 | 2,764 | 30.8 | 227 | 23.8 |
| Games, Toys and Hobbies | 2,092 | 8.4 | 1,710 | 19.0 | 217 | 22.8 |
| Screen / Audio Entertainment | 1,853 | 7.4 | 846 | 9.4 | 38 | 4.0 |
| Sporting Goods | 21 | 0.1 | 11 | 0.1 | 0 | 0.0 |
| Exercise Equipment | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Promos | 7,065 | 28.3 | 2,493 | 27.7 | 198 | 20.8 |
| PSAs | 205 | 0.8 | 82 | 0.9 | 16 | 1.6 |
| Dental Supplies | 240 | 1.0 | 65 | 0.7 | 46 | 4.8 |
| Diets and Diet Aids | 58 | 0.2 | 1 | 0.0 | 0 | 0.0 |
| Footwear | 99 | 0.4 | 33 | 0.4 | 0 | 0.0 |
| Computer Hardware and Internet Services | 215 | 0.9 | 49 | 0.6 | 0 | 0.0 |
| Computer Software (Non-game) | 12 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Over-the-counter Medication | 656 | 2.6 | 43 | 0.5 | 33 | 3.4 |
| Prescription Medication | 312 | 1.2 | 3 | 0.0 | 0 | 0.0 |
| Other Nonfood Advertising | 6,722 | 27.0 | 883 | 9.8 | 179 | 18.8 |
| All Nonfood Products | 19,549 | 78.4 | 6,220 | 69.2 | 727 | 76.2 |
| Total | 24,939 | | 8,985 | | 954 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

## C.3 Teens and Adults

These tables provide detailed information for teens and adults.

*Table C.4*
**Annual Exposure to TV Advertising By Product Category**
*Teens ages 12–17*

| Category | Ads | % | Detailed category | Ads | % |
|---|---|---|---|---|---|
| Cereal | 492 | 1.6 | Regular Cereal | 152 | 0.5 |
| | | | Highly Sugared Cereal | 340 | 1.1 |
| Desserts and Sweets | 806 | 2.6 | Candy | 488 | 1.6 |
| | | | Desserts and Dessert Ingredients | 44 | 0.1 |
| | | | Cakes, Pies and Pastries | 42 | 0.1 |
| | | | Regular Gum | 106 | 0.3 |
| | | | Cookies | 106 | 0.3 |
| | | | Ice Cream | 19 | 0.1 |
| Restaurants and Fast Food | 1,836 | 5.9 | Restaurants and Fast Food | 1,836 | 5.9 |
| Snacks | 332 | 1.1 | Appetizers, Snacks and Nuts | 218 | 0.7 |
| | | | Crackers | 57 | 0.2 |
| | | | Snack, Granola and Cereal Bars | 57 | 0.2 |
| Dairy Products | 260 | 0.8 | Dairy Products and Substitutes | 260 | 0.8 |
| Sweetened Drinks | 584 | 1.9 | Regular Carbonated Beverages | 289 | 0.9 |
| | | | Regular Non-carbonated Beverages | 295 | 0.9 |
| Prepared Entrees | 180 | 0.6 | Prepared Entrees | 155 | 0.5 |
| | | | Frozen Pizza | 25 | 0.1 |
| Other Food | 1,021 | 3.3 | Beer, Wine and Mixers | 276 | 0.9 |
| | | | Diet Carbonated Beverages | 36 | 0.1 |
| | | | Diet Non-carbonated Beverages | 22 | 0.1 |
| | | | Fruit Juices | 65 | 0.2 |
| | | | Sugarless Gum | 51 | 0.2 |
| | | | Canned Fruit | 0 | 0.0 |
| | | | Raisins and Other Dried Fruit | 0 | 0.0 |
| | | | Fresh Fruit | 0 | 0.0 |
| | | | Vegetables and Legumes | 22 | 0.1 |
| | | | Meat, Poultry and Fish | 72 | 0.2 |
| | | | Bread, Rolls, Waffles and Pancakes | 94 | 0.3 |
| | | | Other Food and Beverage | 383 | 1.2 |
| All Food Products | 5,512 | 17.7 | All Food Products | 5,512 | 17.7 |
| Games, Toys and Hobbies | 778 | 2.5 | Games, Toys and Hobbies | 778 | 2.5 |
| Screen / Audio Entertainment | 2,633 | 8.4 | Screen / Audio Entertainment | 2,633 | 8.4 |
| Sports and Exercise | 24 | 0.1 | Sporting Goods | 23 | 0.1 |
| | | | Exercise Equipment | 1 | 0.0 |
| Promos and PSAs | 8,007 | 25.7 | Promos | 7,803 | 25.0 |
| | | | PSAs | 204 | 0.7 |
| Other Nonfood | 14,235 | 45.6 | Dental Supplies | 307 | 1.0 |
| | | | Diets and Diet Aids | 132 | 0.4 |
| | | | Footwear | 190 | 0.6 |
| | | | Computer Hardware and Internet Services | 362 | 1.2 |
| | | | Computer Software (Non-game) | 20 | 0.1 |
| | | | Over-the-counter Medication | 927 | 3.0 |
| | | | Prescription Medication | 434 | 1.4 |
| | | | Other Nonfood Advertising | 11,863 | 38.0 |
| All Nonfood Products | 25,677 | 82.3 | All Nonfood Products | 25,677 | 82.3 |
| Total | 31,188 | | Total | 31,188 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Table C.5*

**Annual Exposure to TV Advertising By Product Category**

*Adults ages 18 and over*

| Category | Ads | % | Detailed category | Ads | % |
|---|---|---|---|---|---|
| Cereal | 477 | 0.9 | Regular Cereal | 286 | 0.5 |
| | | | Highly Sugared Cereal | 191 | 0.4 |
| Desserts and Sweets | 754 | 1.4 | Candy | 417 | 0.8 |
| | | | Desserts and Dessert Ingredients | 85 | 0.2 |
| | | | Cakes, Pies and Pastries | 24 | 0.0 |
| | | | Regular Gum | 63 | 0.1 |
| | | | Cookies | 134 | 0.3 |
| | | | Ice Cream | 31 | 0.1 |
| Restaurants and Fast Food | 2,546 | 4.9 | Restaurants and Fast Food | 2,546 | 4.9 |
| Snacks | 356 | 0.7 | Appetizers, Snacks and Nuts | 185 | 0.4 |
| | | | Crackers | 80 | 0.2 |
| | | | Snack, Granola and Cereal Bars | 92 | 0.2 |
| Dairy Products | 338 | 0.6 | Dairy Products and Substitutes | 338 | 0.6 |
| Sweetened Drinks | 479 | 0.9 | Regular Carbonated Beverages | 223 | 0.4 |
| | | | Regular Non-carbonated Beverages | 256 | 0.5 |
| Prepared Entrees | 323 | 0.6 | Prepared Entrees | 267 | 0.5 |
| | | | Frozen Pizza | 55 | 0.1 |
| Other Food | 1,939 | 3.7 | Beer, Wine and Mixers | 412 | 0.8 |
| | | | Diet Carbonated Beverages | 61 | 0.1 |
| | | | Diet Non-carbonated Beverages | 46 | 0.1 |
| | | | Fruit Juices | 170 | 0.3 |
| | | | Sugarless Gum | 52 | 0.1 |
| | | | Canned Fruit | 0 | 0.0 |
| | | | Raisins and Other Dried Fruit | 0 | 0.0 |
| | | | Fresh Fruit | 1 | 0.0 |
| | | | Vegetables and Legumes | 56 | 0.1 |
| | | | Meat, Poultry and Fish | 161 | 0.3 |
| | | | Bread, Rolls, Waffles and Pancakes | 118 | 0.2 |
| | | | Other Food and Beverage | 863 | 1.6 |
| All Food Products | 7,212 | 13.7 | All Food Products | 7,212 | 13.7 |
| Games, Toys and Hobbies | 414 | 0.8 | Games, Toys and Hobbies | 414 | 0.8 |
| Screen / Audio Entertainment | 2,323 | 4.4 | Screen / Audio Entertainment | 2,323 | 4.4 |
| Sports and Exercise | 47 | 0.1 | Sporting Goods | 43 | 0.1 |
| | | | Exercise Equipment | 4 | 0.0 |
| Promos and PSAs | 12,627 | 24.1 | Promos | 12,297 | 23.4 |
| | | | PSAs | 330 | 0.6 |
| Other Nonfood | 29,846 | 56.9 | Dental Supplies | 589 | 1.1 |
| | | | Diets and Diet Aids | 275 | 0.5 |
| | | | Footwear | 164 | 0.3 |
| | | | Computer Hardware and Internet Services | 676 | 1.3 |
| | | | Computer Software (Non-game) | 62 | 0.1 |
| | | | Over-the-counter Medication | 2,126 | 4.1 |
| | | | Prescription Medication | 1,263 | 2.4 |
| | | | Other Nonfood Advertising | 24,692 | 47.1 |
| All Nonfood Products | 45,257 | 86.3 | All Nonfood Products | 45,257 | 86.3 |
| Total | 52,469 | | Total | 52,469 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

# D Time of Children's Viewing

This appendix provides more detail related to the discussion in Section 3.2.

## D.1 Children 2–11

Table D.1 provides more detail on children's exposure to television advertising by time of day and by type of network.

*Table D.1*

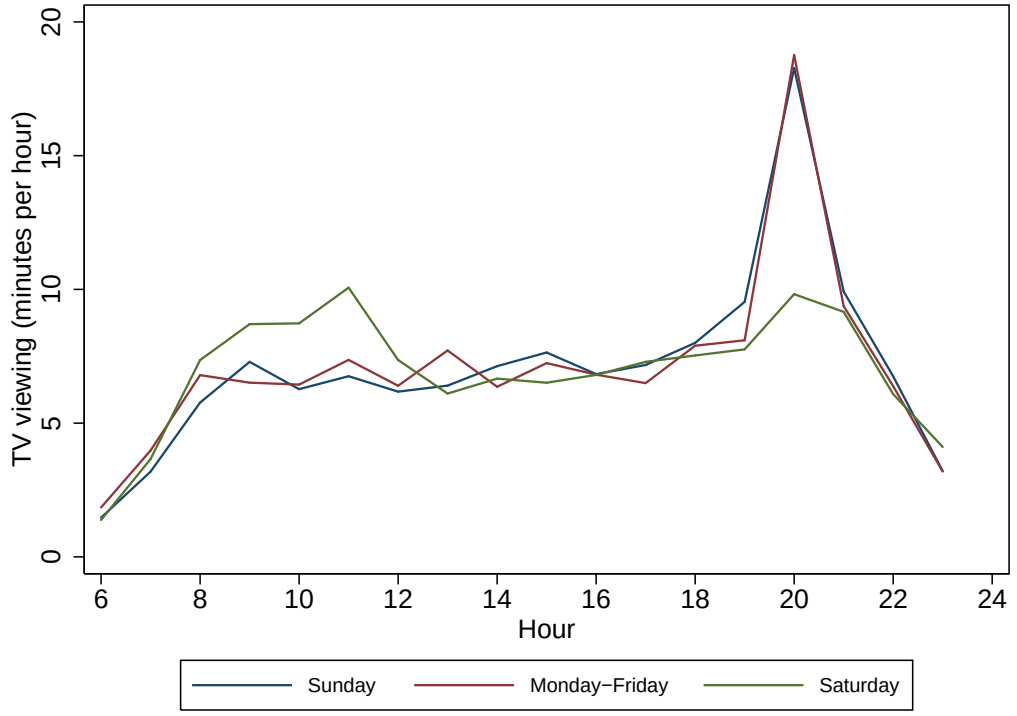
**Percent of Advertising Exposure By Time of Day**

*Children ages 2–11*

| Time period | Overall | | | Cable | | | Broadcast | | |
|---|---|---|---|---|---|---|---|---|---|
| | Sunday | Weekdays | Saturday | Sunday | Weekdays | Saturday | Sunday | Weekdays | Saturday |
| 12 am – 2 am | 0.63 | 2.80 | 0.74 | 0.88 | 3.77 | 0.99 | 0.23 | 1.25 | 0.35 |
| 2 am – 4 am | 0.33 | 1.66 | 0.40 | 0.51 | 2.45 | 0.61 | 0.04 | 0.39 | 0.05 |
| 4 am – 6 am | 0.23 | 1.13 | 0.23 | 0.37 | 1.69 | 0.36 | 0.02 | 0.24 | 0.03 |
| 6 am – 8 am | 0.48 | 3.71 | 0.60 | 0.69 | 4.16 | 0.66 | 0.15 | 2.99 | 0.50 |
| 8 am – 10 am | 1.24 | 4.98 | 2.05 | 1.47 | 6.15 | 1.50 | 0.86 | 3.12 | 2.93 |
| 10 am – 12 pm | 1.28 | 3.94 | 2.25 | 1.75 | 4.97 | 1.72 | 0.54 | 2.31 | 3.09 |
| 12 pm – 2 pm | 1.21 | 4.66 | 1.45 | 1.43 | 5.22 | 1.75 | 0.86 | 3.76 | 0.99 |
| 2 pm – 4 pm | 1.38 | 6.71 | 1.42 | 1.51 | 6.88 | 1.83 | 1.17 | 6.44 | 0.78 |
| 4 pm – 6 pm | 1.54 | 8.35 | 1.46 | 1.66 | 8.48 | 1.87 | 1.35 | 8.16 | 0.80 |
| 6 pm – 8 pm | 2.11 | 10.66 | 1.69 | 1.79 | 9.59 | 1.97 | 2.62 | 12.36 | 1.26 |
| 8 pm – 10 pm | 2.87 | 15.07 | 2.23 | 1.65 | 9.33 | 1.91 | 4.81 | 24.23 | 2.76 |
| 10 pm – 12 am | 1.19 | 6.00 | 1.30 | 1.09 | 6.12 | 1.24 | 1.36 | 5.81 | 1.39 |
| Daily total | 14.49 | 69.68 | 15.83 | 14.79 | 68.81 | 16.40 | 14.02 | 71.05 | 14.93 |
| Weekly exposure (ads per child) | | | 491 | | | 302 | | | 190 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Figure D.1*
**TV Viewing Over the Day**
*Younger children ages 2–5*

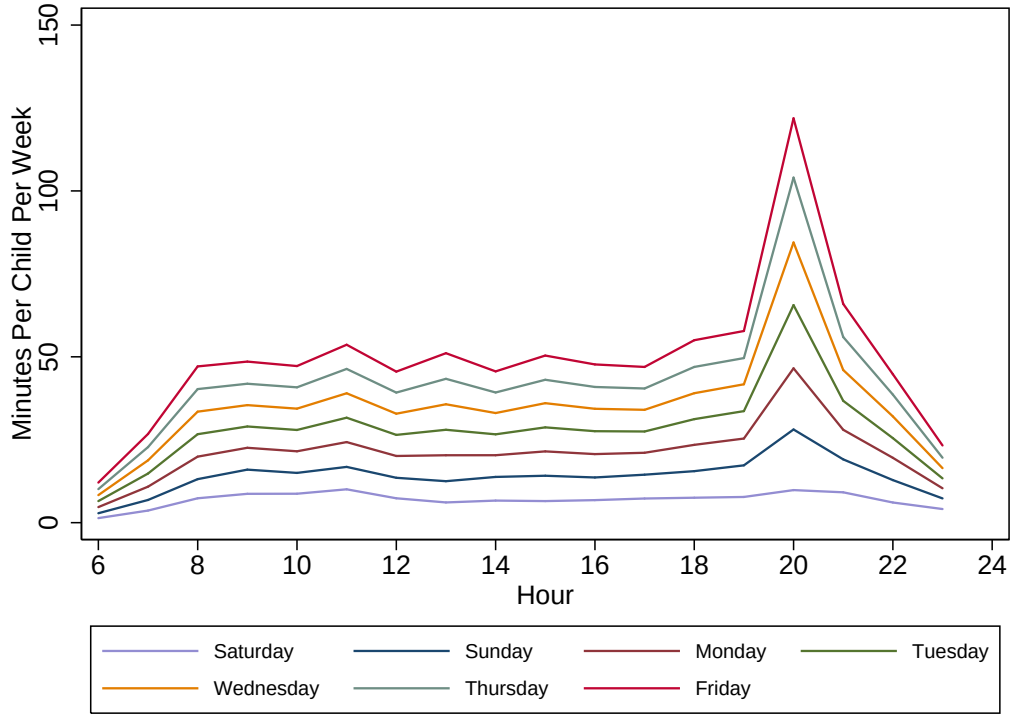



*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

## D.2 Younger Children 2–5

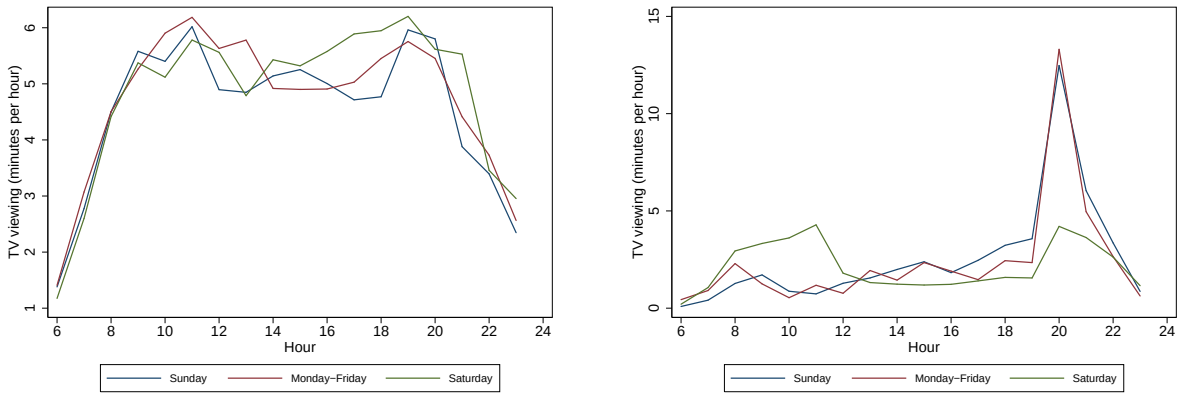
This section provides information for younger children comparable to that presented for all children in Section 3.2. In addition, as for all children above, we present a table with more detail on younger children's exposure to television advertising by time of day and by type of network.

*Figure D.2*
**Cumulative TV Viewing Per Hour Over the Week**
*Younger children ages 2–5*




*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

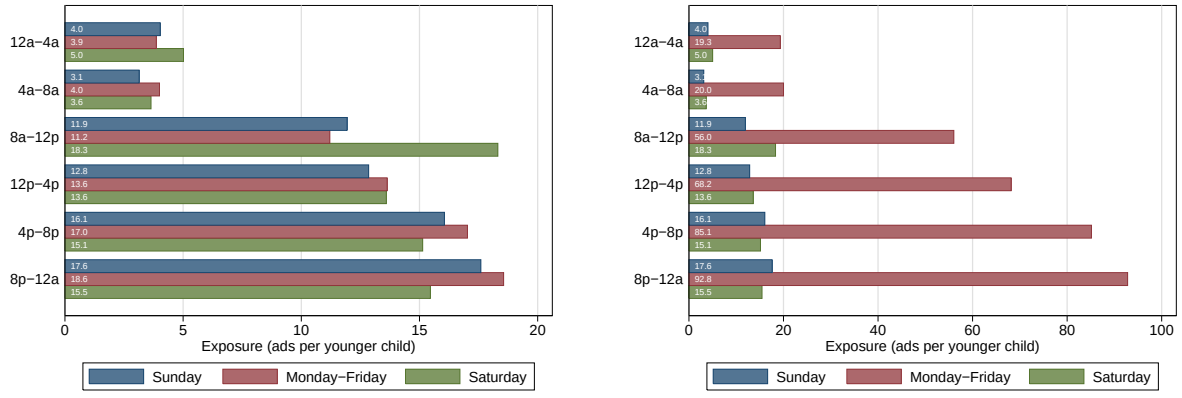
*Figure D.3*
**TV Viewing Over the Day**
*Younger children ages 2–5, cable (a) and broadcast (b)*




(a) (b)

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Graphs on different scales.

*Figure D.4*
**Average (a) and Total (b) Exposure to TV Advertising Over the Day**
*Younger children ages 2–5*



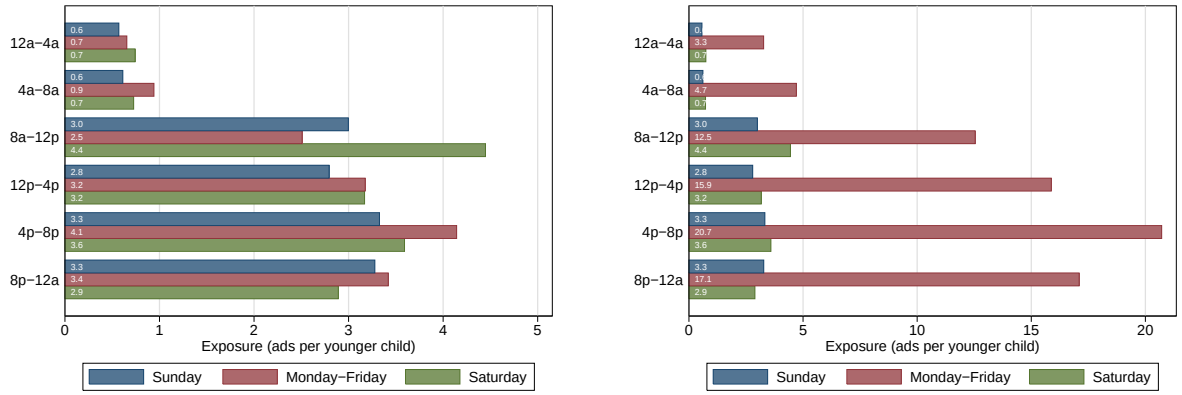

(a) (b)

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Graphs on different scales.

*Figure D.5*

**Average (a) and Total (b) Exposure to Food Advertising Over the Day**

*Younger children ages 2–5*



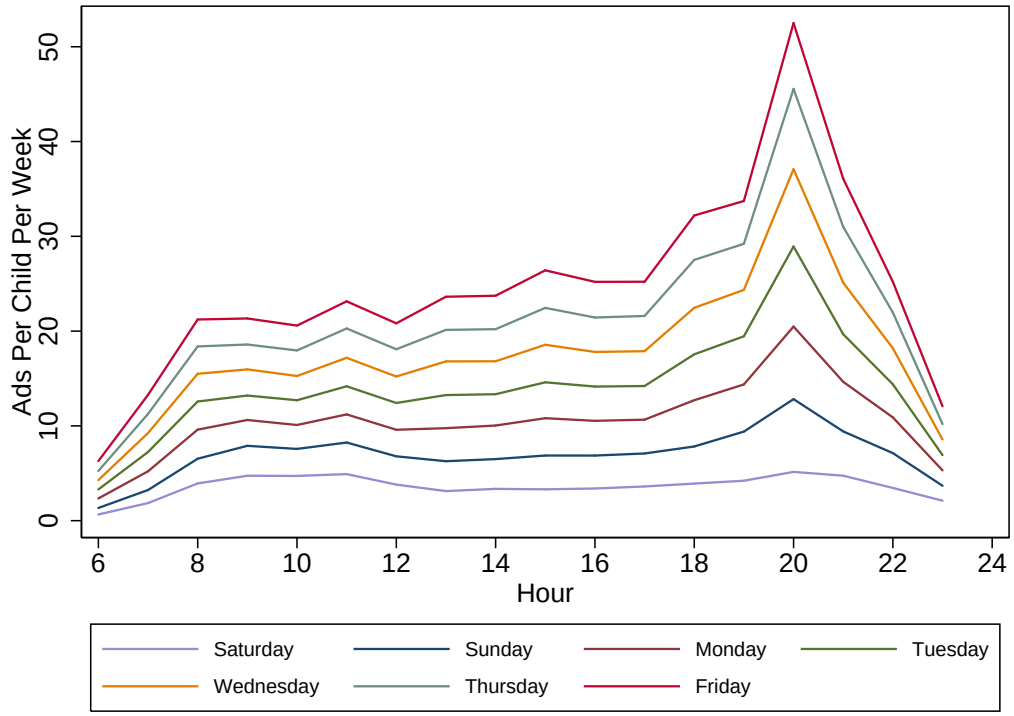

(a) (b)

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Graphs on different scales.

*Figure D.6*

**Cumulative Exposure to TV Advertising Per Hour Over the Week**

*Younger children ages 2–5*

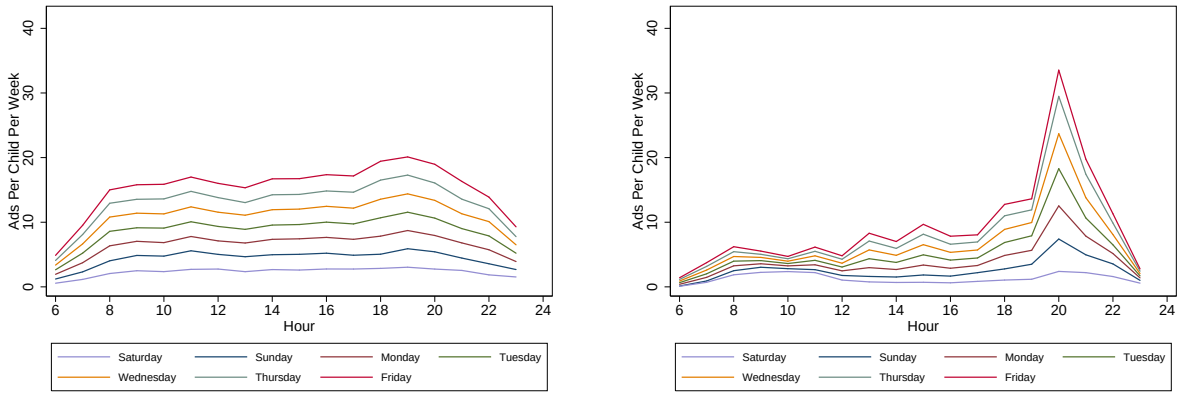



*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Figure D.7*

**Cumulative Exposure to TV Advertising Per Hour Over the Week**

*Younger children ages 2–5, cable (a) and broadcast (b)*




(a) (b)

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Table D.2*

**Percent of Advertising Exposure by Time of Day**

*Younger children ages 2–5*

| Time period | Overall | | | Cable | | | Broadcast | | |
|---|---|---|---|---|---|---|---|---|---|
| | Sunday | Weekdays | Saturday | Sunday | Weekdays | Saturday | Sunday | Weekdays | Saturday |
| 12 am – 2 am | 0.56 | 2.51 | 0.67 | 0.73 | 3.31 | 0.87 | 0.25 | 1.09 | 0.31 |
| 2 am – 4 am | 0.28 | 1.53 | 0.38 | 0.42 | 2.19 | 0.56 | 0.03 | 0.34 | 0.04 |
| 4 am – 6 am | 0.23 | 1.05 | 0.24 | 0.34 | 1.52 | 0.35 | 0.01 | 0.21 | 0.02 |
| 6 am – 8 am | 0.43 | 3.13 | 0.53 | 0.59 | 3.54 | 0.56 | 0.14 | 2.41 | 0.46 |
| 8 am – 10 am | 1.20 | 5.88 | 1.81 | 1.41 | 7.14 | 1.49 | 0.83 | 3.63 | 2.40 |
| 10 am – 12 pm | 1.29 | 5.84 | 2.02 | 1.72 | 7.34 | 1.65 | 0.53 | 3.15 | 2.67 |
| 12 pm – 2 pm | 1.28 | 6.56 | 1.45 | 1.49 | 7.05 | 1.66 | 0.91 | 5.68 | 1.06 |
| 2 pm – 4 pm | 1.40 | 7.69 | 1.39 | 1.54 | 7.64 | 1.72 | 1.16 | 7.78 | 0.81 |
| 4 pm – 6 pm | 1.45 | 7.62 | 1.46 | 1.49 | 7.95 | 1.80 | 1.39 | 7.03 | 0.86 |
| 6 pm – 8 pm | 1.90 | 10.18 | 1.70 | 1.65 | 9.31 | 1.92 | 2.36 | 11.75 | 1.30 |
| 8 pm – 10 pm | 2.58 | 13.87 | 2.07 | 1.49 | 8.27 | 1.73 | 4.54 | 23.91 | 2.68 |
| 10 pm – 12 am | 1.10 | 5.53 | 1.16 | 0.93 | 5.51 | 1.10 | 1.39 | 5.57 | 1.27 |
| Daily total | 13.72 | 71.40 | 14.88 | 13.81 | 70.77 | 15.42 | 13.55 | 72.54 | 13.91 |
| Weekly exposure (ads per younger child) | | | 478 | | | 307 | | | 171 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

# E Exposure by Size of Child Audience

In Section 3.4 we looked at how children's exposure to product ads varies over different types of shows, where shows are grouped by the share of children in the audience. Looking at shows based on the number of children watching provides additional insight. We group the shows based on the number of children watching — or the percentage of the population of children that watch the show. We consider (in addition to exposure on all shows) exposure on shows with at least 1.0 percent and at least 3.0 percent of children watching; or, approximately, shows with at least 394,800 children watching and shows with at least 1,184,400 children watching.[73] Only 4.5 percent of all ads are aired on shows that are watched by more than one percent of children. However, 51 percent of children's ad exposure is from shows in which one percent or more of children are watching. Only 0.9 percent of all ads are aired on shows that are watched by more than three percent of children. However, 19 percent of children's ad exposure is from these shows.[74]

This appendix presents results of this analysis for all children and for younger children.

[73] These numbers are calculated based on Nielsen-provided population figures for 2–11 year-olds for the fall of 2003.

[74] We find that nearly 93 percent of all television episodes are watched by fewer than one percent of children.

*Table E.1*
**Annual Exposure to TV Advertising By Child Audience Size**
*Children ages 2–11*

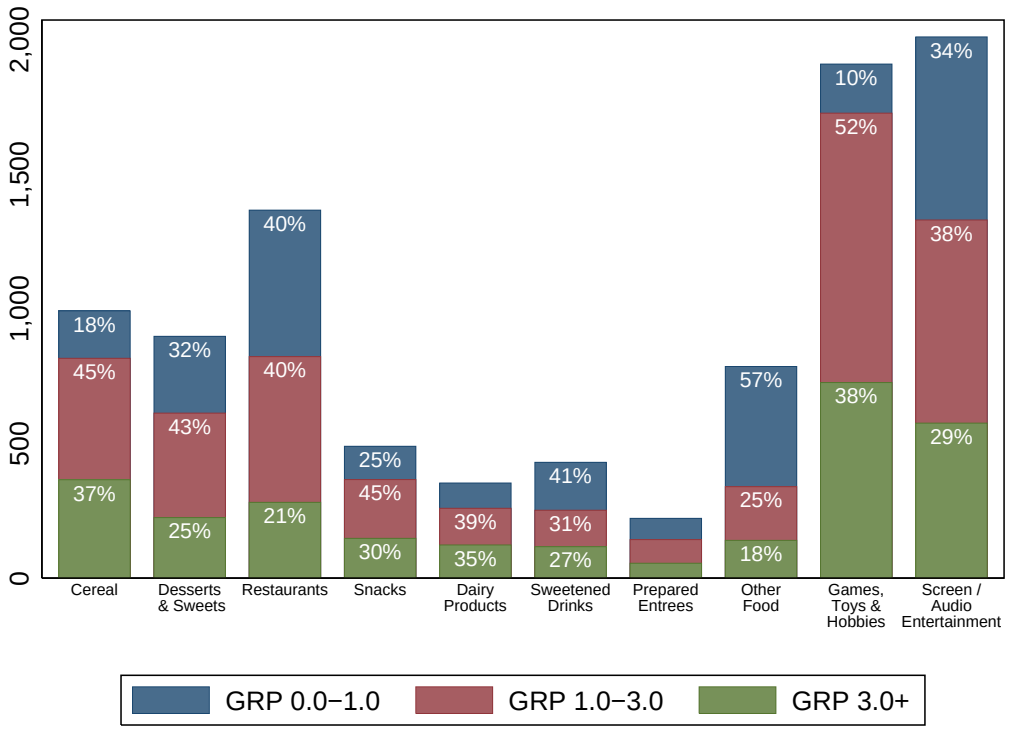
| Category | All ads | | GRP ≥ 1.0 | | GRP ≥ 3.0 | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| Cereal | 993 | 3.9 | 816 | 6.3 | 365 | 7.7 |
| Desserts and Sweets | 898 | 3.5 | 613 | 4.7 | 225 | 4.7 |
| Restaurants and Fast Food | 1,367 | 5.3 | 823 | 6.3 | 281 | 5.9 |
| Snacks | 490 | 1.9 | 366 | 2.8 | 148 | 3.1 |
| Dairy Products | 353 | 1.4 | 259 | 2.0 | 123 | 2.6 |
| Sweetened Drinks | 430 | 1.7 | 252 | 1.9 | 117 | 2.5 |
| Prepared Entrees | 222 | 0.9 | 143 | 1.1 | 55 | 1.2 |
| Other Food | 786 | 3.1 | 340 | 2.6 | 140 | 3.0 |
| All Food Products | 5,538 | 21.6 | 3,612 | 27.7 | 1,454 | 30.7 |
| Games, Toys and Hobbies | 1,909 | 7.5 | 1,727 | 13.2 | 726 | 15.3 |
| Screen / Audio Entertainment | 2,010 | 7.8 | 1,330 | 10.2 | 576 | 12.2 |
| Sports and Exercise | 24 | 0.1 | 13 | 0.1 | 7 | 0.1 |
| Promos and PSAs | 7,305 | 28.5 | 3,360 | 25.8 | 1,054 | 22.3 |
| Other Nonfood | 8,842 | 34.5 | 3,002 | 23.0 | 916 | 19.4 |
| All Nonfood Products | 20,091 | 78.4 | 9,432 | 72.3 | 3,279 | 69.3 |
| Total | 25,629 | | 13,044 | | 4,733 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Figure E.1*

**Annual Exposure to TV Advertising By Child Audience Size, Selected Categories**

*Children ages 2–11*



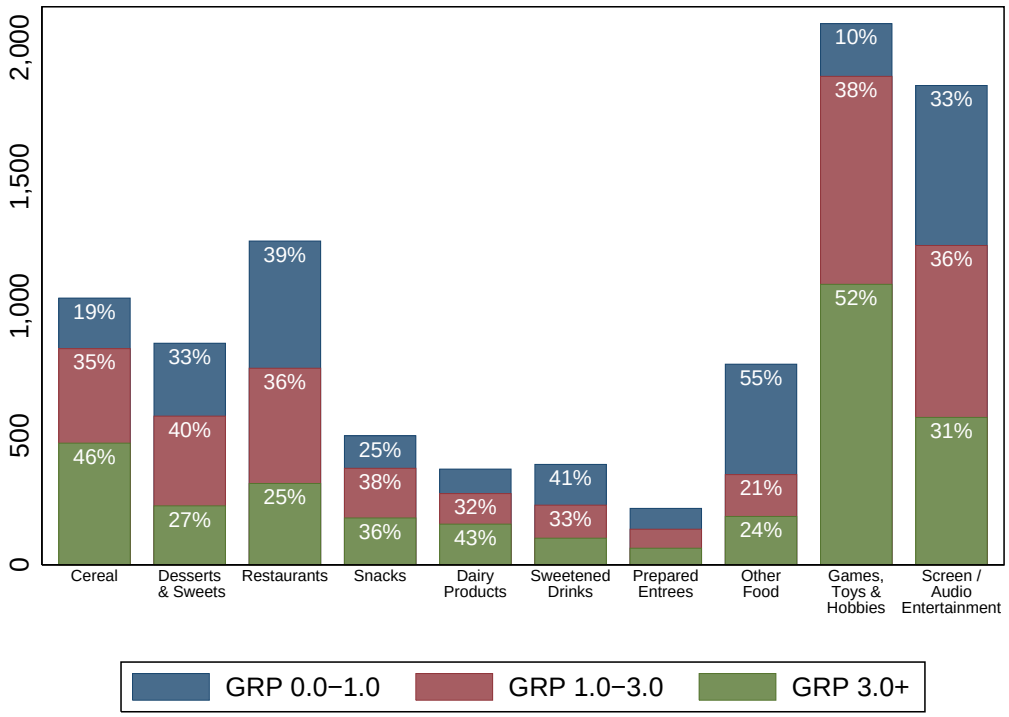

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Promos and PSAs and Other Nonfood Advertising omitted because they dominate the graph.

*Table E.2*
**Annual Exposure to TV Advertising By Audience Size**
*Younger children ages 2–5*

| Category | All ads | | GRP ≥ 1.0 | | GRP ≥ 3.0 | |
|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % |
| Cereal | 1,031 | 4.1 | 836 | 6.5 | 470 | 8.3 |
| Desserts and Sweets | 857 | 3.4 | 575 | 4.5 | 228 | 4.0 |
| Restaurants and Fast Food | 1,252 | 5.0 | 760 | 5.9 | 314 | 5.6 |
| Snacks | 499 | 2.0 | 373 | 2.9 | 181 | 3.2 |
| Dairy Products | 370 | 1.5 | 275 | 2.1 | 157 | 2.8 |
| Sweetened Drinks | 388 | 1.6 | 231 | 1.8 | 103 | 1.8 |
| Prepared Entrees | 218 | 0.9 | 138 | 1.1 | 64 | 1.1 |
| Other Food | 776 | 3.1 | 349 | 2.7 | 187 | 3.3 |
| All Food Products | 5,390 | 21.6 | 3,535 | 27.6 | 1,705 | 30.2 |
| Games, Toys and Hobbies | 2,092 | 8.4 | 1,888 | 14.7 | 1,084 | 19.2 |
| Screen / Audio Entertainment | 1,853 | 7.4 | 1,234 | 9.6 | 570 | 10.1 |
| Sports and Exercise | 21 | 0.1 | 12 | 0.1 | 6 | 0.1 |
| Promos and PSAs | 7,270 | 29.2 | 3,273 | 25.6 | 1,212 | 21.5 |
| Other Nonfood | 8,314 | 33.3 | 2,866 | 22.4 | 1,061 | 18.8 |
| All Nonfood Products | 19,549 | 78.4 | 9,273 | 72.4 | 3,933 | 69.8 |
| Total | 24,939 | | 12,809 | | 5,638 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Figure E.2*
**Annual Exposure to TV Advertising By Audience Size**
*Younger children ages 2–5*




*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.
*Note.* Promos and PSAs and Other Nonfood Advertising omitted because they dominate the graph.

# F How Size and Share of Audience are Related

This appendix provides more information related to the analysis in Section 3.5. We present a table similar to Table 3.7, except we show how ads *aired* vary by GRP and share alongside the analysis of exposure to ads. For younger children, we present tables comparable to those for all children in Section 3.5 as well as a table analyzing both ads aired and exposure to ads.

*Table F.1*

**Percent of Ads Aired and Exposure by Audience Size (GRP) and Audience Share**

*Children ages 2–11*

ALL ADS

Total ads aired 13,395,154

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 91.4 | 2.7 | 1.5 | 95.7 |
| 1.0 – 3.0 | 1.0 | 0.7 | 1.7 | 3.4 |
| ≥ 3.0 | 0.1 | 0.1 | 0.6 | 0.8 |
| Total | 92.6 | 3.5 | 3.9 | 100.0 |

Total exposure 25,629

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 41.2 | 5.3 | 2.5 | 49.1 |
| 1.0 – 3.0 | 8.6 | 5.9 | 17.9 | 32.4 |
| ≥ 3.0 | 3.2 | 1.9 | 13.4 | 18.5 |
| Total | 53.0 | 13.1 | 33.8 | 100.0 |

ADS ON CABLE

% ads aired 82.6

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 92.4 | 2.5 | 1.8 | 96.7 |
| 1.0 – 3.0 | 0.0 | 0.5 | 2.0 | 2.6 |
| ≥ 3.0 | 0.0 | 0.0 | 0.7 | 0.7 |
| Total | 92.4 | 3.0 | 4.5 | 100.0 |

% exposure 61.4

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 35.5 | 6.1 | 3.9 | 45.5 |
| 1.0 – 3.0 | 0.3 | 5.2 | 28.7 | 34.2 |
| ≥ 3.0 | 0.0 | 0.0 | 20.3 | 20.3 |
| Total | 35.8 | 11.3 | 52.9 | 100.0 |

ADS ON BROADCAST

% ads aired 17.3

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 86.9 | 3.9 | 0.4 | 91.2 |
| 1.0 – 3.0 | 5.9 | 1.6 | 0.2 | 7.6 |
| ≥ 3.0 | 0.7 | 0.3 | 0.1 | 1.2 |
| Total | 93.5 | 5.8 | 0.7 | 100.0 |

% exposure 38.6

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 50.4 | 4.2 | 0.3 | 54.9 |
| 1.0 – 3.0 | 21.8 | 7.0 | 0.9 | 29.6 |
| ≥ 3.0 | 8.3 | 4.9 | 2.3 | 15.5 |
| Total | 80.4 | 16.1 | 3.5 | 100.0 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Table F.2*
**Percent of Ad Exposure By Audience Size (GRP) and Audience Share**
*Younger children ages 2–5*

ALL ADS 24,939 ads

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 45.3 | 3.3 | 0.1 | 48.6 |
| 1.0 – 3.0 | 15.0 | 13.8 | 0.0 | 28.8 |
| ≥ 3.0 | 3.8 | 15.1 | 3.7 | 22.6 |
| Total | 64.0 | 32.2 | 3.8 | 100.0 |

ADS ON CABLE 64.2% exposure

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 38.2 | 4.9 | 0.1 | 43.2 |
| 1.0 – 3.0 | 7.3 | 20.9 | 0.0 | 28.2 |
| ≥ 3.0 | 0.3 | 22.6 | 5.7 | 28.6 |
| Total | 45.8 | 48.4 | 5.8 | 100.0 |

ADS ON BROADCAST 35.8% exposure

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 57.8 | 0.5 | 0.0 | 58.3 |
| 1.0 – 3.0 | 28.7 | 1.1 | 0.1 | 29.8 |
| ≥ 3.0 | 10.0 | 1.7 | 0.2 | 11.9 |
| Total | 96.5 | 3.2 | 0.3 | 100.0 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Table F.3*

**Percent of Food Ad Exposure By Audience Size (GRP) and Audience Share**

*Younger children ages 2–5*

ALL ADS 5,390 ads

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 30.8 | 3.5 | 0.1 | 34.4 |
| 1.0 – 3.0 | 14.6 | 19.3 | 0.0 | 34.0 |
| ≥ 3.0 | 3.2 | 24.3 | 4.1 | 31.6 |
| Total | 48.7 | 47.1 | 4.2 | 100.0 |

ADS ON CABLE 75.3% exposure

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 24.3 | 4.5 | 0.1 | 29.0 |
| 1.0 – 3.0 | 8.4 | 25.2 | 0.0 | 33.6 |
| ≥ 3.0 | 0.5 | 31.5 | 5.4 | 37.4 |
| Total | 33.3 | 61.2 | 5.5 | 100.0 |

ADS ON BROADCAST 24.7% exposure

| | Share | | | |
|---|---|---|---|---|
| GRP | 0–20 | 20–50 | ≥ 50 | Total |
| 0.0 – 1.0 | 50.7 | 0.3 | 0.0 | 51.0 |
| 1.0 – 3.0 | 33.6 | 1.4 | 0.1 | 35.1 |
| ≥ 3.0 | 11.4 | 2.3 | 0.2 | 13.9 |
| Total | 95.8 | 3.9 | 0.3 | 100.0 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Table F.4*

**Percent of Ads Aired and Exposure by Audience Size (GRP) and Audience Share**

*Children ages 2–5*

ALL ADS

Total ads aired 13,395,154

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 94.3 | 1.7 | 0.0 | 96.0 |
| 1.0 – 3.0 | 1.8 | 1.2 | 0.0 | 3.0 |
| ≥ 3.0 | 0.1 | 0.7 | 0.1 | 1.0 |
| Total | 96.3 | 3.6 | 0.2 | 100.0 |

Total exposure 24,939

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 45.3 | 3.3 | 0.1 | 48.6 |
| 1.0 – 3.0 | 15.0 | 13.8 | 0.0 | 28.8 |
| ≥ 3.0 | 3.8 | 15.1 | 3.7 | 22.6 |
| Total | 64.0 | 32.2 | 3.8 | 100.0 |

ADS ON CABLE

% ads aired 82.6

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 94.9 | 1.9 | 0.0 | 96.9 |
| 1.0 – 3.0 | 0.7 | 1.4 | 0.0 | 2.1 |
| ≥ 3.0 | 0.0 | 0.8 | 0.2 | 1.0 |
| Total | 95.6 | 4.2 | 0.2 | 100.0 |

% exposure 64.2

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 38.2 | 4.9 | 0.1 | 43.2 |
| 1.0 – 3.0 | 7.3 | 20.9 | 0.0 | 28.2 |
| ≥ 3.0 | 0.3 | 22.6 | 5.7 | 28.6 |
| Total | 45.8 | 48.4 | 5.8 | 100.0 |

ADS ON BROADCAST

% ads aired 17.3

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 91.6 | 0.4 | 0.0 | 92.0 |
| 1.0 – 3.0 | 7.0 | 0.2 | 0.0 | 7.2 |
| ≥ 3.0 | 0.8 | 0.1 | 0.0 | 0.9 |
| Total | 99.3 | 0.6 | 0.0 | 100.0 |

% exposure 35.8

| GRP | Share 0–20 | 20–50 | ≥ 50 | Total |
|---|---|---|---|---|
| 0.0 – 1.0 | 57.8 | 0.5 | 0.0 | 58.3 |
| 1.0 – 3.0 | 28.7 | 1.1 | 0.1 | 29.8 |
| ≥ 3.0 | 10.0 | 1.7 | 0.2 | 11.9 |
| Total | 96.5 | 3.2 | 0.3 | 100.0 |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

# G Seasonal Patterns in Advertising Exposure

These tables illustrate the seasonal variation in children's exposure to advertising. The major difference is that exposure to food advertising is much lower in November than other months, displaced primarily by Games, Toys and Hobbies and to a lesser extent by Screen/Audio Entertainment. Overall exposure to advertising is highest in November and lowest in the summer (May for children and July for younger children).

*Table G.1*
**Annual Exposure to Advertising Computed From Each Month**
*Children ages 2–11*

| Category | November | | February | | May | | July | |
|---|---|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % | Ads | % |
| Cereal | 563 | 2.1 | 1,193 | 4.6 | 1,056 | 4.4 | 1,159 | 4.6 |
| Desserts and Sweets | 316 | 1.2 | 1,140 | 4.4 | 1,101 | 4.6 | 1,035 | 4.1 |
| Restaurants and Fast Food | 1,138 | 4.1 | 1,430 | 5.5 | 1,328 | 5.6 | 1,572 | 6.2 |
| Snacks | 148 | 0.5 | 667 | 2.6 | 705 | 3.0 | 439 | 1.7 |
| Dairy Products | 220 | 0.8 | 426 | 1.6 | 562 | 2.4 | 206 | 0.8 |
| Sweetened Drinks | 127 | 0.5 | 362 | 1.4 | 659 | 2.8 | 573 | 2.3 |
| Prepared Entrees | 175 | 0.6 | 334 | 1.3 | 123 | 0.5 | 255 | 1.0 |
| Other Food | 696 | 2.5 | 760 | 2.9 | 749 | 3.1 | 940 | 3.7 |
| All Food Products | 3,382 | 12.3 | 6,311 | 24.2 | 6,282 | 26.4 | 6,178 | 24.5 |
| Games, Toys and Hobbies | 5,732 | 20.9 | 1,073 | 4.1 | 613 | 2.6 | 220 | 0.9 |
| Screen / Audio Entertainment | 2,787 | 10.2 | 1,559 | 6.0 | 1,707 | 7.2 | 1,988 | 7.9 |
| Sports and Exercise | 9 | 0.0 | 9 | 0.0 | 35 | 0.1 | 42 | 0.2 |
| Promos and PSAs | 7,271 | 26.5 | 7,428 | 28.4 | 6,673 | 28.0 | 7,850 | 31.2 |
| Other Nonfood | 8,235 | 30.0 | 9,735 | 37.3 | 8,482 | 35.7 | 8,916 | 35.4 |
| All Nonfood Products | 24,035 | 87.7 | 19,803 | 75.8 | 17,510 | 73.6 | 19,015 | 75.5 |
| Total | 27,417 | | 26,114 | | 23,792 | | 25,193 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.

*Table G.2*

**Annual Exposure to Advertising Computed From Each Month**

*Younger children ages 2–5*

| Category | November | | February | | May | | July | |
|---|---|---|---|---|---|---|---|---|
| | Ads | % | Ads | % | Ads | % | Ads | % |
| Cereal | 616 | 2.2 | 1,233 | 4.8 | 1,203 | 5.1 | 1,072 | 4.8 |
| Desserts and Sweets | 319 | 1.1 | 1,111 | 4.3 | 1,104 | 4.7 | 893 | 4.0 |
| Restaurants and Fast Food | 1,069 | 3.8 | 1,369 | 5.4 | 1,228 | 5.2 | 1,340 | 6.0 |
| Snacks | 157 | 0.6 | 685 | 2.7 | 757 | 3.2 | 396 | 1.8 |
| Dairy Products | 219 | 0.8 | 448 | 1.8 | 624 | 2.6 | 190 | 0.9 |
| Sweetened Drinks | 120 | 0.4 | 333 | 1.3 | 633 | 2.7 | 467 | 2.1 |
| Prepared Entrees | 181 | 0.6 | 338 | 1.3 | 124 | 0.5 | 230 | 1.0 |
| Other Food | 690 | 2.4 | 781 | 3.1 | 754 | 3.2 | 877 | 3.9 |
| All Food Products | 3,372 | 11.9 | 6,297 | 24.6 | 6,426 | 27.3 | 5,463 | 24.5 |
| Games, Toys and Hobbies | 6,441 | 22.8 | 1,113 | 4.3 | 618 | 2.6 | 195 | 0.9 |
| Screen / Audio Entertainment | 2,768 | 9.8 | 1,438 | 5.6 | 1,600 | 6.8 | 1,605 | 7.2 |
| Sports and Exercise | 7 | 0.0 | 8 | 0.0 | 33 | 0.1 | 37 | 0.2 |
| Promos and PSAs | 7,647 | 27.0 | 7,422 | 29.0 | 6,838 | 29.0 | 7,172 | 32.2 |
| Other Nonfood | 8,064 | 28.5 | 9,305 | 36.4 | 8,059 | 34.2 | 7,826 | 35.1 |
| All Nonfood Products | 24,927 | 88.1 | 19,285 | 75.4 | 17,149 | 72.7 | 16,835 | 75.5 |
| Total | 28,299 | | 25,582 | | 23,575 | | 22,299 | |

*Source.* Staff analysis of copyrighted Nielsen Media Research/Nielsen Monitor–Plus data; four weeks projected annually.